



**REGIONAL AND ECONOMIC SCIENCES**  
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**FINAL REPORT ON THE IN-PERSON SURVEY OF RECREATION  
VISITORS AT PROJECT 184 SITES IN THE  
EL DORADO NATIONAL FOREST  
SUMMER 1999**

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# INTRODUCTION

## **Focus of the Study**

During the summer of 1999, the Survey Research Center at California State University, Chico contracted with Resource Insights of Sacramento, California, to conduct an on-site survey of recreation visitors in the El Dorado National Forest. The focus of the study was recreation visitors at sites affected by Project 184 and included four lakes together with four associated stream corridors.

## **Questionnaire Development**

Thomas Wegge of Resource Insights developed the questionnaire for the on-site survey with input from the El Dorado Irrigation District, the U.S.D.A. Forest Service, and several interest groups. Personnel from the Survey Research Center pre-tested the questionnaire and provided suggested modifications to question wording and the ordering of individual questions. The questionnaire was finalized in May 1999 prior to the beginning of data collection on Memorial Day Weekend. A copy of the questionnaire is included in Appendix A. The following is a report of findings from the on-site survey data that was collected from recreation visitors in the El Dorado National Forest during the summer of 1999.

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# METHODS

## Sample Design and Sampling Protocols

The **first step in the process of sample design** was to determine the sample size for each of the eight recreation areas to be studied. Overall sampling error should be no more than +/-5.0% with 95% confidence. Minimum sample size was calculated on the basis of estimated levels of use at each of the eight areas provided by personnel from the El Dorado National Forest. Based on these use estimates, together with calculations for sample sizes needed to remain within the proposed sampling tolerances, the minimum sample sizes for each area and surveys completed during the survey period are presented in Table 1.

Based on the minimum sample sizes presented in Table 1, a total of 3,100 on-site interviews and mail surveys were scheduled for completion with recreation visitors of the eight outdoor recreation areas between May 29, 1999, and September 6, 1999. However, only 2,159 were completed. While collecting the surveys, only 91 eligible respondents refused to complete the survey. **This represents a refusal rate of 4.0%.** Reasons for refusals included (1) too busy to respond, (2) ready to leave the area, (3) ready to eat lunch or dinner, (4) just not interested, and (5) did not like the U.S. Forest Service.

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## Data Collection

Personnel from the Survey Research Center completed data collection for the on-site survey. A team of four trained interviewers was employed full-time and assigned to the project for the entire summer. Data were collected on 101 days between the beginning of Memorial Day Weekend and the end of Labor Day Weekend, 1999. The eight areas surveyed included Echo Lake, Caples Lake, Silver Lake, Lake Aloha, Caples Creek, Silver Fork of the American River, and South Fork of the American River.

Personnel from the El Dorado National Forest estimated the percentage of total recreation use for each sampling point in the eight study areas. Based on these use levels, a target for the number of completed interviews was calculated for each area.

**The sampling targets for each of the eight areas were not met during the survey period for several reasons.** This following is a short discussion of some of these reasons.

- Silver Lake and Caples Lake were frozen over at the beginning of the data collection period. As they thawed out, data collection began but was slow until the end of June. Extra weekend days and/or extra data collectors on scheduled days were added to approach targets. Rain and cold weather in early August slowed the effectiveness of the added effort.
- Echo Lake was frozen over for much of June. Data collection did not begin there until July 3<sup>rd</sup>. Some of each day from the middle of the survey period through the end was allocated to stops on the South Fork during the trips to and from Echo Lake.
- Caples Creek often had considerable down time between surveys. This time was used to assist with data collection on Silver Creek. A youth group that spent three weeks during the end of July and the beginning of August at Caples Creek in all but one of the dispersed camping sites complicated efforts to reach the target number of surveys.
- Pyramid Creek was consistently busy through much of the season. Some of each day allocated to data collection at Pyramid Creek was used for stops on the South Fork during the trips to and from Pyramid Creek beginning in mid-July. This effort was made to increase the number of surveys along the South Fork.
- Throughout the season, the Silver Fork did not have sufficient recreation utilization to result in the completion of a sufficient number of surveys to meet target. Since campers in the developed campgrounds were not included unless they were actually engaged in recreation activities near the water, the target number of surveys was not reached.
- Throughout the season, the South Fork did not have sufficient recreation utilization to result in the completion of a sufficient number of surveys to meet target. Since campers in the developed campgrounds were not included unless they actually engaged in recreation activities near the water, and Bridal Vail picnic area did not open until the weekend of 7 and 8 August, the target number of surveys was not reached during the survey period. If the swimming utilization had picked up as the survey team had been led to believe, it would have helped to reach target. If Bridal Vail Picnic Area had been open all summer, there would have been a better chance of meeting target.

Recreation use was lower than estimated and most samples were close to the targeted number. Therefore, the sampling tolerances for six of the areas are close to those originally calculated. The tolerances for Silver Lake, Caples Lake, Echo Lake, and Pyramid Creek are approximately +/-5% with 95% confidence. The tolerances for Silver Fork and South Fork are approximately +/-6.9%.

**Table 1. Minimum target sample size and total number of surveys collected as of September 8<sup>th</sup> for each recreation area included in the Sierra Recreation Visitors Survey for Project 184, El Dorado National Forest – summer of 1999.**

<b>Recreation Use Area</b>	<b>Estimated Use</b>	<b>Sample Size</b>	<b>Surveys Completed*</b>
Silver Lake	175,000	600	425
Caples Lake	25,000	400	407
Echo Lake	39,000	400	380
Lake Aloha*	3,000	250	24
Caples Creek	3,400	250	89
Silver Fork	22,500	400	233
South Fork	42,500	400	208
Pyramid Creek	17,000	400	393
<b>Total</b>	<b>327,400</b>	<b>3,100</b>	<b>2,159</b>

\*Lake Aloha cabin owners were surveyed by mail. Eight of the questionnaires did not specify the name of the area where the interview was conducted. The U.S.D.A. Forest Service, El Dorado National Forest, provided recreation use estimates.

### **Data Collection Protocol**

The interviewers counted the recreation visitors at each site and used a random numbers table to determine which of the enumerated recreation visitors were eligible for interviewers. Interviewers would approach the recreation visitor whose count matched the random numbers, briefly explain the survey, and ask him/her to complete the interview. This gave each recreation visitor encountered by interviewers on data collection days an equal chance of being selected for an interview. Only one person per group or party was interviewed.

The percentage of random numbers per 100 included on the random numbers tables was increased in mid-July in an attempt to compensate for the lower levels of use than were estimated by the U.S. Forest Service prior to the inception of the project and to

increase the number of eligible survey participants. In addition, data collection hours were changed to 10:00 AM to 6:00 PM on Monday through Friday in early August in an attempt to increase the number of eligible recreation visitors in the areas who could be surveyed. There were almost no recreation visitors before 10:00 AM. Throughout the survey period, most recreation visitors left the areas by 6:00 PM unless they were overnight visitors.

One data collector resigned as of July 18, 1999. Since data collection was much slower during the weekdays, the Survey Research Center did not replace this data collector with a full-time employee. Instead, the SRC hired two weekend replacement data collectors for Saturdays and Sundays. The Saturday schedule was 12:00 PM to 8:00 PM to take advantage of the later activities on Saturdays. The Sunday schedule was 8:00 AM to 4:00 PM, since most recreation visitors tend to return mid-day on Sundays. Beginning August 7th and 8th, the SRC added three data collectors for the remaining weekends including the three-day Labor Day weekend.

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### **Interviewer Protocol for Answering Questions**

The interviewer protocol for answering questions posed by recreation visitors was followed throughout the survey period. If recreation visitors asked simple questions that could easily be answered by the interviewers, such as “where are the nearest restrooms, or where do I apply for an overnight wilderness camping permit”, the interviewers would answer the questions. All other matters, including eligibility or requirements for wilderness permits, access, availability, or other questions regarding the management or use of the recreation areas, were referred to the U.S. Forest Service Information Center on Highway 50. A few questions were posed regarding possible damming of streams as an outgrowth of the survey. The interviewers explained that the data was to be used for measuring baseline recreation use in the areas and not for damming the streams.

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# FINDINGS

## Demographic Profile

### Household Composition

Recreation visitors to the Project 184 areas in the El Dorado National Forest during the summer of 1999 were asked a series of descriptive questions about themselves and their family composition. Table 2 shows the number of household members for survey respondents. The mean (average) household size was three (3) people. When recreation visitors were asked how many children under the age of 18 were living in their households, 55.7% said they had no persons under 18 in their households (Table 3).

### Disabilities

When the recreation visitors were asked if they had a disability, 113 (5.3%) said they had a disability (Table 4). A crosstabulation of responses by visitors to lakes versus visitors to stream corridors revealed no statistically significant differences in the percentages of visitors with disabilities who were interviewed at the lakes versus stream corridors. In other words, the percentage of visitors with disabilities who visited the lakes (5.2%) versus the stream corridors (5.4%) were almost identical.

### Year of Birth

A total of 11.5% of the visitors were born before 1940, and 18.8% were born between 1940 and 1949 (Table 5). The median (middle) year of birth reported was 1957, and the most frequently reported (mode) birth year was 1964.

### Ethnicity

Most (80.6%) of the visitors reported their ethnicity as “white.” The second largest ethnic group was Hispanic (6.4%) (Table 6).

### Education

Most (78.9%) of the recreation visitors who were interviewed in Project 184 sites during the summer of 1999 had at least completed some college. A majority (50.3%) held a college or a graduate or professional degree (Table 7).

### Household Income

A majority (52.1%) of the recreation visitors reported annual household incomes of \$50,000 or more, and 15.4% reported incomes of \$100,000 or more (Table 8). The median income bracket was \$60,000 to \$79,999 per year. A total of 19.7% of

those surveyed refused to disclose their household incomes.

**Gender**

A total of 61.9% of the recreation visitors surveyed in Project 184 areas during the summer of 1999 were male, and 38.1% were female (Table 9). A crosstabulation of respondent gender by visitors to lakes versus visitors to stream corridors revealed no statistically significant differences in the percentages of males versus females in these two types of areas.

**Summary**

The recreation visitors to Project 184 during the summer of 1999 were mostly White, well educated with median household incomes well above the state average for California.

**Table 2. Household size reported by recreation visitors to the Project 184 areas in the El Dorado National Forest - summer of 1999.**

<b>Number of Household Members</b>	<b>Number</b>	<b>Percent</b>	<b>Cumulative Percent</b>
1	174	8.2	8.2
2	801	37.5	45.7
3	400	18.7	64.4
4	462	21.6	86.1
5	222	10.4	96.5
6	52	2.4	98.9
7 or more	23	1.1	100.0
<b>Total</b>	<b>2134</b>	<b>100.0</b>	

**Table 3. Number of household members under the age of 18 reported by recreation visitors to the Project 184 areas in the El Dorado National Forest - summer of 1999.**

<b>Number of Household Members Under Age 18</b>	<b>Number</b>	<b>Percent</b>	<b>Cumulative Percent</b>
None	116	55.7	55.7
1	31	16.0	71.7
2	31	18.9	90.6
3	11	7.3	97.9
4 or more		2.1	100.0
<b>Total</b>	<b>209</b>	<b>100.0</b>	



**Table 4. Number of recreation visitors to the Project 184 areas in the El Dorado National Forest who reported having a disability - summer of 1999.**

<b>Are Recreation Visitors Disabled?</b>	<b>Number</b>	<b>Percent</b>
Yes	113	5.3
No	2026	94.7
<b>Total</b>	<b>2139</b>	<b>100.0</b>

**Table 5. Year of birth of recreation visitors to the Project 184 areas in the El Dorado National Forest - summer of 1999.**

<b>Year of Birth of Recreation Visitors</b>	<b>Number</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Refused to answer	3	.1	.1
1914	1	.0	.3
1915	1	.0	.3
1917	4	.2	.5
1918	1	.0	.6
1919	3	.1	.7
1920	5	.2	.9
1921	4	.2	1.1
1922	3	.1	1.3
1923	2	.1	1.4
1924	3	.1	1.5
1925	2	.1	1.6
1926	9	.4	2.0
1927	9	.4	2.5
1928	6	.3	2.7
1929	8	.4	3.1
1930	9	.4	3.5
1931	15	.7	4.2
1932	13	.6	4.9
1933	20	.9	5.8
1934	13	.6	6.4
1935	23	1.1	7.5
1936	18	.8	8.3
1937	26	1.2	9.6
1938	19	.9	10.5
1939	23	1.1	11.5
1940	32	1.5	13.1
1941	31	1.5	14.5
1942	34	1.6	16.1
1943	32	1.5	17.6

**Table 5. (cont'd.)**

<b>Year of Birth of Recreation Visitors</b>	<b>Number</b>	<b>Percent</b>	<b>Cumulative Percent</b>
1944	32	1.5	19.1
1945	24	1.1	20.3
1946	30	1.4	21.7
1947	49	2.3	24.0
1948	50	2.4	26.3
1949	55	2.6	28.9
1950	62	2.9	31.9
1951	51	2.4	34.3
1952	59	2.7	37.0
1953	67	3.2	40.2
1954	64	3.0	43.2
1955	70	3.3	46.5
1956	64	3.0	49.5
1957	74	3.5	53.0
1958	74	3.5	56.5
1959	52	2.5	58.9
1960	61	2.9	61.8
1961	70	3.3	65.1
1962	55	2.6	67.7
1963	70	3.3	71.0
1964	75	3.5	74.5
1965	57	2.7	77.2
1966	70	3.3	80.5
1967	55	2.6	83.1
1968	43	2.0	85.1
1969	50	2.4	87.5
1970	34	1.6	89.1
1971	34	1.6	90.7
1972	35	1.6	92.3
1973	26	1.2	93.5
1974	28	1.3	94.9
1975	19	.9	95.8
1976	19	.9	96.7
1977	17	.8	97.5
1978	21	1.0	98.5
1979	16	.8	99.2
1980	13	.6	99.8
1981	6	.3	100.0
<b>Total</b>	<b>2122</b>	<b>100.0</b>	

**Table 6. Ethnicity of recreation visitors to the Project 184 areas in the El Dorado National Forest - summer of 1999.**

<b>Ethnicity of Recreation Visitors</b>	<b>Number</b>	<b>Percent</b>
Native American or Alaska Native	41	2.0
Asian or Pacific Islander	87	4.2
Black or African American	14	.7
Hispanic	133	6.4
White	1684	80.6
Other	78	3.7
Refused to Answer	53	2.5
<b>Total</b>	<b>2090</b>	<b>100.0</b>

**Table 7. Education of recreation visitors to the Project 184 areas in the El Dorado National Forest - summer of 1999.**

<b>Education Levels of Recreation Visitors</b>	<b>Number</b>	<b>Percent</b>
High School Not Completed	40	1.9
High School Graduate	370	17.2
Some College	616	28.6
College Graduate	701	32.5
Graduate School or Professional Degree	384	17.8
Refused to answer	40	1.9
<b>Total</b>	<b>2151</b>	<b>100.0</b>

**Table 8. Household incomes of recreation visitors to the Project 184 areas in the El Dorado National Forest - summer of 1999.**

<b>Household Income of Recreation Visitors</b>	<b>Number</b>	<b>Percent</b>
Under \$10,000	37	1.7
\$10,000-19,999	54	2.5
\$20,000-29,999	108	5.0
\$30,000-39,999	170	7.9
\$40,000-49,999	237	11.0
\$50,000-59,999	219	10.2
\$60,000-79,999	342	15.9
\$80,000-99,999	227	10.6
\$100,000-200,000	275	12.8
More than \$200,000	55	2.6
Refused to Answer	422	19.7
<b>Total</b>	<b>2146</b>	<b>100.0</b>

**Table 9. Gender of recreation visitors to the Project 184 areas in the El Dorado National Forest - summer of 1999.**

<b>Gender of Recreation Visitors</b>	<b>Number</b>	<b>Percent</b>
Male	1297	61.9
Female	797	38.1
<b>Total</b>	<b>2094</b>	<b>100.0</b>

### **Recreation Activities and Motivations Profile**

Recreation visitors were asked a series of questions regarding their recreation activities and motivations. The following is a summary discussion of findings for these questions.

#### ***Participation in Recreation Activities***

As shown in Table 10, **relaxing (72.4%), hiking (57.4%), fishing (50.9%), and wildlife observation (42.9%) were the four activities with the highest participation rates.** Fishing (28.7%), hiking (26.6%), and relaxing (20.0%) were the three recreation activities that were most frequently cited as the primary activities for recreation visitors (Table 11).

#### ***Reasons for Choosing the Location***

When recreation visitors were asked their reasons for choosing the location where they were interviewed during the summer of 1999, **scenic beauty was named by 77.6%.** Another 60.1% said they chose the area for personal reasons, such as just liking the area, relaxing, or “the area was fun.” Other major reasons included convenient location (52.8%), to be near water (48.5%), repeat visits (42.4%), and fishing (37.8%) (Table 12). **The reasons most frequently cited as the main reason for choosing the location included scenic beauty (24.2%), personal reasons (20.4%), fishing (16.1%), and convenient location (15.1%) (Table 13).** A factor analysis of reasons for choosing the locations where visitors were interviewed found that visitors grouped into two distinct groups – returning anglers (fishermen) and recreation visitors who come to the area for reasons other than just fishing. A complete discussion of the findings from the factor analysis is included in Appendix B.

**Table 10. Types of recreation activities participated in by recreation visitors in the Project 184 area of the El Dorado National Forest - summer of 1999 (n = 2167).**

<b>Recreation Activities</b>	<b>Number</b>	<b>Percent</b>
Relaxing	1568	72.4
Hiking	1244	57.4
Fishing	1103	50.9
Wildlife Observation	929	42.9
Picnicking	791	36.5
Swimming	547	25.2
Landscape Photography	512	23.6
Sunbathing	490	22.6
Other Nature Study	311	14.4
Camping (Developed)	289	13.3
Camping (Primitive)	236	10.9
Motor Boating	157	7.2
Kayaking/Canoeing	113	5.2
Bicycling	99	4.6
Off-Highway Vehicles	66	3.0
Running/Jogging	46	2.1
Other Boating	44	2.0
Horseback Riding	18	0.8
Tubing	16	0.7
Winter Play	10	0.5

**Table 11. Primary recreation activities of recreation visitors in the Project 184 area of the El Dorado National Forest - summer of 1999 (n = 2167).**

<b>Primary Recreation Activities</b>	<b>Number</b>	<b>Percent</b>
Fishing	588	28.7
Hiking	546	26.6
Just relaxing	409	20.0
Camping (developed)	125	6.1
Camping (primitive)	106	5.2
Picnicking	84	4.1
Swimming	48	2.3
Kayaking/Canoeing	28	1.4
Motor Boating	23	1.1
Photography	19	.9
Driving Off-Highway Vehicles	13	.6
Sunbathing	11	.5
Wildlife Observation	10	.5
Bicycling	8	.4
Horseback Riding	6	.3
Other Nature Study	4	.2
Other Boating	3	.1
Sailing	2	.1
Water Skiing	1	.0
Running/Jogging	1	.0
No Primary Activity	14	.7
<b>Total</b>	<b>2049</b>	<b>100.0</b>

**Table 12. The reasons recreation visitors cited for choosing the particular location in the Project 184 area of the El Dorado National Forest to visit on their trip - summer of 1999 (n = 2167).**

<b>Reasons for Choosing the Location</b>	<b>Number</b>	<b>Percent</b>
Scenic Beauty	1682	77.6
Personal Reason: Just Like The Area; Relax; Fun	1303	60.1
Convenient Location	1144	52.8
To Be Near Water	1052	48.5
Repeat Visit	919	42.4
Fishing	819	37.8
Wanted To Try A New Area	360	16.6
To See Object Or Attraction	316	14.6
Good Facilities	307	14.2
Other Areas Are Too Crowded	285	13.2
Group Trip	285	13.2
Swimming	194	9.0
Other	428	19.8

**Table 13. The main reason recreation visitors cited for choosing the particular location in the Project 184 area of the El Dorado National Forest to visit on their trip - summer of 1999 (n = 2167).**

<b>Main Reason For Choosing The Location</b>	<b>Number</b>	<b>Percent</b>
Scenic Beauty	457	24.2
Personal Reasons	385	20.4
Fishing	305	16.1
Convenient Location	286	15.1
Repeat Visit	94	5.0
Group Trip	86	4.6
Try a New Area	80	4.2
To Be Near Water	78	4.1
See Object or Attraction	53	2.8
Other Areas Are Too Crowded	39	2.1
Swimming	14	.7
Good Facilities	10	.5
Other	2	.2
<b>Total</b>	<b>1889</b>	<b>100.0</b>

## Trip Profile

Recreation visitors were asked a series of questions to profile their trip to the Project 184 area of the El Dorado National Forest. The following is a summary of findings for those questions.

### *State and Country of Residence*

As shown in Table 14, **90.0% of the recreation visitors said they were from California** and 5.3% were from Nevada. The remaining 4.7% were from other states and foreign countries. Almost all (99.0%) said they were from the United States and 1.0% said they were residents of other countries (Table 15).

### *Trip Origin and Destination*

When asked if they started their trip from their city of residence, most (91.5%) said “yes” (Table 16). **About one-third (32.4%) indicated that the interview was conducted during their first trip to the area (Table 17).** A crosstabulation of responses to this question revealed that **visitors to the stream corridors were significantly more likely to say their visit was the first to the area (35.7%) than visitors to the lakes (29.9%) (Table 17a).**

Approximately half (50.5%) said the area they were visiting was the only destination for the trip they were making during the time the interview was conducted (Table 18). A crosstabulation of responses to this question by visitors interviewed at the lakes versus those interviewed in the stream corridors revealed that **a significantly larger percentage of visitors in the stream corridors (54.3%) said the area was their only destination than did visitors interviewed around the lakes (47.7%) (Table 18a).**

Of the 49.5% of visitors who said they had planned other destinations for their trips, 46.3% said the area they were visiting at the time of the interview was the first destination on their trip (Table 19), and 40.2% indicated that the area was the primary destination for their trip (Table 20). **A significantly larger percentage of visitors interviewed around the lakes said the area where they were interviewed was their primary destination than did visitors interviewed in the stream corridors (Table 20a).** Other popular destinations in Alpine, Amador, and El Dorado County included Lake Tahoe (23.7%), Caples Lake (6.7%), Silver Lake (6.1%), Kirkwood (5.3%), the Desolation Wilderness (3.9%), Echo Lake (3.7%), Fallen Leaf Lake (3.5%), and South Fork of the American River (3.3%) (Table 21).



When recreation visitors were asked what percentage of time they would spend on their trip at these other locations, answers varied from less than 10% to more than 90%. The mean (average) percentage was 37.0% (Table 22).

### **Travel Distance and Time**

Recreation visitors were asked how many hours of traveling time it took them to get to the location where they were interviewed from their house or their last overnight stop. **As shown in Table 23, 49.4% said they traveled less than 2 hours, and 76.8% had traveled less than 3 hours. The mean (average) travel time was 2.2 hours.** When they were asked the approximate distance in miles from their house or last overnight stop to the area where they were interviewed, 72.8% indicated that it was less than 100 miles (Table 24). The mean (average) distance traveled was 84 miles.

### **Overnight Visitors**

More than half (55.2%) of the recreation visitors said they were staying overnight in the area (Table 25). Most of those who stayed overnight said they were staying in a developed campground (35.6%) or a dispersed (primitive) campground (21.9%). Another 16.9% said they were staying in a recreation cabin (Table 26).

### **Facilities at Developed Campgrounds**

Recreation visitors who stayed in developed campgrounds were asked to rate five facilities/amenities in those campgrounds: restrooms, campsites, picnic areas, trails, and parking areas. As shown in Table 27, four of the facilities/amenities received mean (average) ratings above 4.2 except for restrooms. Restroom facilities received a mean rating of 3.71. A factor analysis of satisfaction ratings for the five types of facilities revealed that overall, visitors were generally either satisfied or dissatisfied with facilities at developed campgrounds. A detailed discussion of findings from this factor analysis is presented in Appendix B.

A series of four paired sample t-tests were utilized to compare mean ratings for restrooms with those for campsites, trails, parking, and picnic areas. **For each of these four facilities, the mean rating was significantly higher than the mean rating for restrooms.** The significance was .000 for campsites, parking and picnic areas, and .004 for trails. Therefore, **satisfaction ratings for restrooms were significantly lower than for other four types of facilities.**

A crosstabulation of ratings for restrooms by recreation visitors around the lakes and those in the stream corridors revealed no statistically significant differences in the ratings for by visitors in each of these types of areas. However, crosstabulations of ratings for the other four types of facilities revealed that **campsites received significantly higher ratings by visitors in the stream corridors (Table 27a); trails received significantly higher ratings by visitors to the lakes (Table 27b); and, parking received significantly higher ratings by visitors in the stream corridors (Table 27c).** The ratings for picnic facilities by visitors in the two types of areas were not statistically different.

When recreation visitors who were camped in developed campgrounds were asked what amenities or improvements they would like to see at the campground they were visiting, **showers (31.9%) and flush toilets (28.6%) were the two types of improvements most frequently listed.** Another 19.2% said they did not want other amenities or improvements in their campground (Table 28).

#### **Improvements at Dispersed Campgrounds**

Recreation visitors who camped in dispersed campgrounds were asked what amenities or improvements they would like to see in the campground they were visiting. As shown in Table 29, **trash collection (30.5%) and toilets (19.1%) were the most frequently cited.** Another 17.2% said they did not want any additional improvements or amenities.

#### **Lodging**

Recreation visitors who said they were staying in a lodge were asked if the facility where they were staying was their first choice. As shown in Table 30, 91.8% said “yes.”

#### **Party Composition**

**When recreation visitors were asked how many people were in their party, the average was 4.5 persons per party (Table 31).** Most (71.7%) came in one vehicle, though 16.8% said they had two vehicles in their party (Table 32).

#### **Recreation Equipment**

Recreation visitors were asked what equipment, if any, they brought with them to recreate at the location where they were interviewed. **More than half (53.5%) said they brought fishing equipment.** Other types of equipment included mountain bikes (5.8%), motorboats (5.0%), motor homes (4.7%), trailers (4.6%), rafts (3.3%), kayaks (2.5%), and canoes (2.0%) (Table 33).

**Table 14. State of residence of recreation visitors to Project 184 areas of the El Dorado National Forest - summer of 1999.**

<b>State of Residence of Recreation Visitors</b>	<b>Number</b>	<b>Percent</b>
California	1918	90.0
Nevada	113	5.3
Other	131	4.7
<b>Total</b>	<b>2132</b>	<b>100.0</b>

**Table 15. Country of residence of recreation visitors to Project 184 areas of the El Dorado National Forest - summer of 1999.**

<b>Country of Residence of Recreation Visitors</b>	<b>Number</b>	<b>Percent</b>
United States	2091	99.0
Other countries	21	1.0
<b>Total</b>	<b>2112</b>	<b>100.0</b>

**Table 16. Points of departure of recreation visitors to Project 184 areas of the El Dorado National Forest - summer of 1999.**

<b>Points of Departure of Recreation Visitors</b>	<b>Number</b>	<b>Percent</b>
Home	1901	91.5
Other	177	8.5
<b>Total</b>	<b>2078</b>	<b>100.0</b>

**Table 17. First trip to the area by recreation visitors to Project 184 areas of the El Dorado National Forest - summer of 1999.**

<b>Was This Your First Trip To This Area?</b>	<b>Number</b>	<b>Percent</b>
Yes	698	32.4
No	1457	67.6
<b>Total</b>	<b>2155</b>	<b>100.0</b>

**Table 17a. First trip to the area by recreation visitors to Project 184 areas of the El Dorado National Forest crosstabulated by visitors to lakes versus visitors to the stream corridors - summer of 1999.**

First Trip to the Area	Locations Where Interviews Were Completed		Total
	Lakes	Stream Corridors	
Yes	368 29.9%	328 35.7%	696 32.4%
No	863 70.1%	591 64.3%	1454 67.6%
<b>Total</b>	<b>1231</b> <b>100.0%</b>	<b>919</b> <b>100.0%</b>	<b>2150</b> <b>100.0%</b>

Pearson Chi-Square Significance = .004

**Table 18. Recreation visitors to Project 184 areas of the El Dorado National Forest who indicated the area they were visiting was their only destination - summer of 1999.**

Was This Area The Only Destination?	Number	Percent
This area was the only destination.	1080	50.5
This area was one of several destinations.	1060	49.5
<b>Total</b>	<b>2138</b>	<b>100.0</b>

**Table 18a. Recreation visitors to Project 184 areas of the El Dorado National Forest who indicated the area they were visiting was their only destination crosstabulated by visitors to lakes versus visitors to the stream corridors - summer of 1999.**

Was the Location the Only Destination?	Locations Where Interviews Were Completed		Total
	Lakes	Stream Corridors	
Only destination	581 47.7%	497 54.3%	1078 50.5%
One of several destinations	638 52.3%	418 45.7%	1056 49.5%
<b>Total</b>	<b>1219</b> <b>100.0%</b>	<b>915</b> <b>100.0%</b>	<b>2134</b> <b>100.0%</b>

Pearson Chi-Square Significance = .002

**Table 19. Recreation visitors to Project 184 areas of the El Dorado National Forest who indicated the area they were visiting was the first destination of their trip - summer of 1999.**

<b>Is This The First Destination of Your Trip?</b>	<b>Number</b>	<b>Percent</b>
Yes	555	46.3
No	644	53.7
<b>Total</b>	<b>1199</b>	<b>100.0</b>

**Table 20. Recreation visitors to Project 184 areas of the El Dorado National Forest who indicated the area they were visiting was the primary destination of their trip - summer of 1999.**

<b>Primary Trip Destination</b>	<b>Number</b>	<b>Percent</b>
Yes	463	40.2
No	690	59.8
<b>Total</b>	<b>1153</b>	<b>100.0</b>

**Table 20a. Recreation visitors to Project 184 areas of the El Dorado National Forest who indicated the area they were visiting was the primary destination of their trip crosstabulated by visitors to lakes versus visitors to the stream corridors - summer of 1999.**

<b>Primary Trip Destination</b>	<b>Locations Where Interviews Were Completed</b>		<b>Total</b>
	<b>Lakes</b>	<b>Stream Corridors</b>	
Yes	305	157	462
	<b>44.0%</b>	<b>34.4%</b>	<b>40.2%</b>
No	388	300	688
	<b>56.0%</b>	<b>65.6%</b>	<b>59.8%</b>
<b>Total</b>	<b>693</b>	<b>457</b>	<b>1150</b>
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Pearson Chi-Square Significance = .001

**Table 21. Other recreation areas in El Dorado, Amador, or Alpine County that recreation visitors to the Project 184 area expected to visit on their trip - summer of 1999.**

Other Recreation Areas	Number	Percent
Lake Tahoe	514	23.7
Caples Lake	145	6.7
Silver Lake	133	6.1
Kirkwood	114	5.3
Desolation Wilderness	84	3.9
Echo Lake	81	3.7
Fallen Leaf Lake	76	3.5
South Fork	71	3.3
Woods Lake	56	2.6
Blue Lakes	46	2.1
Silver Fork	46	2.1
Caples Creek	38	1.8
Hope Valley	36	1.7
Lake Aloha	27	1.2
Lake Margaret	16	.7
Mokelumne Wilderness	10	.5
Schneider Camp	4	.2
Martin Meadows	4	.2
Showers Lake	4	.2
No Others	27	1.2

**Table 22. Percent of recreation visitors' time spent on their trip at these other locations in El Dorado, Amador, or Alpine County – summer of 1999.**

Percent of Time	Number	Percent
Less than 10%	350	32.7
10-19%	153	14.3
20-29%	109	10.2
30-39%	28	2.6
40-49%	17	1.6
50-59%	84	7.9
60-69%	29	2.7
70-79%	68	6.4
80-89%	44	4.1
90% or more	187	17.5
<b>Total</b>	<b>1069</b>	<b>100.0</b>

Note: Mean (average) percentage of time = 37.0%.

**Table 23. Number of hours traveled by recreation visitors to the El Dorado National Forest Project 184 areas – summer of 1999.**

<b>Number of Hours Traveled</b>	<b>Number</b>	<b>Percent</b>
Less than 1 hour	221	10.3
At least 1 hour but less than 2 hours	840	39.1
At least 2 hours but less than 3 hours	588	27.4
At least 3 hours but less than 4 hours	209	9.7
At least 4 hours but less than 5 hours	188	8.7
At least 5 hours but less than 6 hours	48	2.2
6 hours or more	55	2.6
<b>Total</b>	<b>2149</b>	<b>100.0</b>

Note: Mean (average) travel time = 2.2 hours.

**Table 24. Number of miles traveled by recreation visitors from their homes or last overnight stop to the El Dorado National Forest Project 184 areas – summer of 1999.**

<b>Number of Miles Traveled</b>	<b>Number</b>	<b>Percent</b>
Less than 50	818	39.3
50-99	696	33.5
100-149	237	11.4
150-199	156	7.5
200-249	103	5.0
250-299	21	1.0
300 or more	49	2.3
<b>Total</b>	<b>2080</b>	<b>100.0</b>

Note: The mean (average) number of miles traveled = 84 miles.

**Table 25. Recreation visitors who stayed overnight in the area during their visit to the El Dorado National Forest Project 184 areas – summer of 1999.**

<b>Stayed Overnight In The Area</b>	<b>Number</b>	<b>Valid Percent</b>
Yes	1158	55.2
No	940	44.8
<b>Total</b>	<b>2098</b>	<b>100.0</b>

**Table 25a. Recreation visitors who stayed overnight in the area during their visit to the El Dorado National Forest Project 184 areas crosstabulated by visitors to lakes versus visitors to the stream corridors – summer of 1999.**

Stayed Overnight	Locations Where Interviews Were Completed		Total
	Lakes	Stream Corridors	
Yes	692 57.5%	464 52.1%	1156 55.2%
No	511 42.5%	427 47.9%	938 44.8%
<b>Total</b>	<b>1203</b> <b>100.0%</b>	<b>891</b> <b>100.0%</b>	<b>2094</b> <b>100.0%</b>

Pearson Chi-Square Significance = .013

**Table 26. Types of overnight accommodations used by recreation visitors to the El Dorado National Forest Project 184 areas – summer of 1999.**

Types of Accommodations	Number	Percent
Lodge	82	6.9
Developed Campground	426	35.6
Dispersed (Primitive) Campground	262	21.9
Recreation Cabin	202	16.9
Other	225	18.7
<b>Total</b>	<b>1197</b>	<b>100.0</b>

**Table 27. Ratings for facilities/amenities at developed campgrounds where recreation visitors to the El Dorado National Forest Project 184 areas were staying overnight – summer of 1999.**

Type of Facility	Quality Ratings					Mean Rating
	1 (Poor)	2	3	4	5 (Excellent)	
Restrooms (n=417)	4.8%	9.1%	22.3%	37.4%	26.4%	3.71
Campsites (n=422)	.7%	1.2%	7.6%	32.0%	58.5%	4.46
Picnic Areas (n=293)	.7%	2.7%	11.6%	31.1%	53.6%	4.34
Trails (n=366)	1.4%	3.8%	11.7%	35.0%	48.1%	4.25
Parking Areas (n=451)	3.3%	4.0%	10.2%	33.5%	49.0%	4.21



**Table 27a. Ratings for campsites at developed campgrounds where recreation visitors to the El Dorado National Forest Project 184 areas were staying overnight crosstabulated by visitors to lakes versus visitors to the stream corridors – summer of 1999.**

Campsites	Locations Where Interviews Were Completed		Total
	Lakes	Stream Corridors	
1 (Poor)	1	2	3
	.4%	1.2%	.7%
2	3	2	5
	1.2%	1.2%	1.2%
3	26	6	32
	10.1%	3.7%	7.6%
4	91	44	135
	35.3%	26.8%	32.0%
5 (Excellent)	137	110	247
	<b>53.1%</b>	<b>67.1%</b>	<b>58.5%</b>
<b>Total</b>	<b>258</b>	<b>164</b>	<b>422</b>
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Pearson Chi-Square Significance = .017

**Table 27b. Ratings for trails at developed campgrounds where recreation visitors to the El Dorado National Forest Project 184 areas were staying overnight crosstabulated by visitors to lakes versus visitors to the stream corridors – summer of 1999.**

Trails	Locations Where Interviews Were Completed		Total
	Lakes	Stream Corridors	
1 (Poor)	3	2	5
	1.3%	1.4%	1.4%
2	4	10	14
	1.8%	7.2%	3.8%
3	18	25	43
	7.9%	18.1%	11.7%
4	79	49	128
	34.6%	35.5%	35.0%
5 (Excellent)	124	52	176
	<b>54.4%</b>	<b>37.7%</b>	<b>48.1%</b>
<b>Total</b>	<b>228</b>	<b>138</b>	<b>366</b>
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Pearson Chi-Square Significance = .001

**Table 27c. Ratings for parking at developed campgrounds where recreation visitors to the El Dorado National Forest Project 184 areas were staying overnight crosstabulated by visitors to lakes versus visitors to the stream corridors – summer of 1999.**

Trails	Locations Where Interviews Were Completed		Total
	Lakes	Stream Corridors	
1 (Poor)	10	5	15
	3.6%	2.9%	3.3%
2	14	4	18
	5.0%	2.4%	4.0%
3	33	13	46
	11.7%	7.6%	10.2%
4	102	49	151
	36.3%	28.8%	33.5%
5 (Excellent)	122	99	221
	43.4%	58.2%	49.0%
<b>Total</b>	<b>281</b>	<b>170</b>	<b>451</b>
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Pearson Chi-Square Significance = .037

**Table 28. Amenities or improvements preferred at *developed campgrounds* where recreation visitors to the El Dorado National Forest Project 184 areas were staying overnight – summer of 1999 (n=426).**

Amenity or Improvement	Number	Percent
Showers	136	31.9
Flush Toilets	122	28.6
Interpretive Program	41	9.6
Sanitation Dump Station	37	8.7
Multi-Family Units	20	4.7
Grills	18	4.2
Other	88	20.7
None	82	19.2

**Table 29. Amenities or improvements preferred at *dispersed campground areas* where recreation visitors to the El Dorado National Forest Project 184 areas were staying overnight – summer of 1999 (n=262).**

<b>Amenity or Improvement</b>	<b>Number</b>	<b>Percent</b>
Trash Collection	80	30.5
Toilets	50	19.1
Potable Water	19	3.4
Tables	16	6.1
Road Improvements	14	5.3
Fire Rings	12	4.6
Security	10	3.8
Other	32	12.2
None	45	17.2

**Table 30. Was the overnight lodging used by recreation visitors to the El Dorado National Forest Project 184 areas their first choice – summer of 1999?**

<b>Was This The First Choice Lodging</b>	<b>Number</b>	<b>Valid Percent</b>
Yes	1037	91.8
No	93	8.2
<b>Total</b>	<b>1130</b>	<b>100.0</b>

**Table 31. Sizes of recreation parties from which recreation visitors were interviewed in the El Dorado National Forest Project 184 areas– summer of 1999.**

<b>Number of People in the Recreation Party</b>	<b>Number</b>	<b>Percent</b>	<b>Cumulative Percent</b>
1	170	8.0	8.0
2	729	34.4	42.4
3	263	12.4	54.8
4	314	14.8	69.6
5	158	7.4	77.0
6	157	7.4	84.4
7	71	3.3	87.8
8	73	3.4	91.2
9	26	1.2	92.5
10	38	1.8	94.2
11	12	.6	94.8
12	29	1.4	96.2
13	6	.3	96.5
14	8	.4	96.8
15	15	.7	97.5
16 or more	52	2.1	100.0
<b>Total</b>	<b>2121</b>	<b>100.0</b>	

Note: Mean (average) party size = 4.5 people.

**Table 32. Number of vehicles in recreation parties from which recreation visitors were interviewed in the El Dorado National Forest Project 184 areas– summer of 1999.**

<b>Number of Vehicles in the Recreation Party</b>	<b>Number</b>	<b>Percent</b>	<b>Cumulative Percent</b>
None	8	.4	.4
1	1475	71.7	72.1
2	345	16.8	88.9
3	113	5.5	94.4
4	45	2.2	96.6
5	29	1.4	98.0
6 or more	41	2.0	100
<b>Total</b>	<b>2056</b>	<b>100.0</b>	

**Table 33. Types of recreation equipment brought on trips by recreation visitors in the Project 184 area of the El Dorado National Forest - summer of 1999 (n = 2167).**

<b>Types of Recreation Equipment</b>	<b>Number</b>	<b>Percent</b>
Fishing Equipment	1155	53.3
Mountain Bikes	125	5.8
Motor Boat	109	5.0
Motor Home	101	4.7
Trailer	100	4.6
Raft	72	3.3
Kayak	55	2.5
Canoe	43	2.0
Motorcycles	25	1.2
Jet Skis	9	0.4
Other	384	17.7

## Site Characteristics

Recreation visitors were asked a series of questions about the site characteristics of the location where they were recreating on the day they were interviewed in the summer of 1999. The following is a summary discussion of findings regarding site characteristics.

### *Amount of Time at the Location*

When recreation visitors were asked how long they had spent at the location where they were interviewed on the day of the interview, times varied from .30 hour to 19.50 hours (Table 34). **The mean (average) time spent was 4.5 hours.** A one way analysis of variance (ANOVA) for the average times spent by lake visitors versus stream visitors revealed no statistically significant differences in the average amount of time spent at the locations on lakes versus stream corridors.

### *Location of Parking*

Visitors were asked if they parked at or near the particular location where they were interviewed. Almost all (94.1%) parked close (Table 35). A crosstabulation of responses to this question by visitors interviewed around the lakes versus those interviewed in the stream corridors revealed that visitors in the stream corridors were significantly more likely to say they parked close than were visitors around the lakes (Table 35a). Other parking locations are shown in Table 36.

### *Repeat Visitation*

Recreation visitors were asked if they had visited the particular location where they were interviewed at other times prior to the interview. Most (69.0%) said “yes” (Table 37). Those who had made prior visits were asked how many trips they had made to the location during the past 12 months. As shown in Table 38, most (82.1%) had made 6 or fewer trips. The average number of trips was 5.1. When visitors were asked how many of those trips had been made during October and/or November of 1998, 45.3% said “none” (Table 39). The remaining 54.7% said that one or more of their trips during the past 12 months had been made during October and/or November.

For those who had previously visited the location where they were interviewed, but not within the past 12 months, were asked how many years it had been since their last visit. Most (76.3%) said that it had been four years or less since their last visit (Table 40).

### **Satisfaction with Features**

Visitors were asked to rate their satisfaction with four features at the location they were visiting. These included water levels, visual quality (landscape), parking, and facilities. As shown in Table 41, ratings for all four features were above 4.0 on a 5-point scale. Visual quality (4.93) and water level (4.70) both received particularly high ratings.

### **Changes or Improvements**

#### **For Lake Areas**

When recreation visitors to the four lakes were asked what changes or improvements they would like to see made, the five most frequently preferred were more picnic tables (10.8%), more hiking trails (8.0%), interpretive programs (6.2%), road bike trails (5.3%), and a dump station (4.2%) (Table 42). Another 29.0% cited some other lake improvements. A summary of those is presented in Table 43.

### **Changes or Improvements**

#### **For River Corridor Areas**

Recreation visitors who were interviewed along the four river corridors were asked what changes or improvements they would like to see at the location where they were interviewed during the summer of 1999. As shown in Table 44 the five most preferred included disabled access (19.6%), hiking trails (10.1%), day use areas (6.9%), mountain bike trails (5.9%), and access (3.9%). In addition, 44.6% listed some other types of improvements. Those are summarized in Table 45.

### **Water Conditions**

Recreation visitors were asked if the water conditions on the day of their interview allowed them to participate in all of their planned activities. As shown in Table 46, 96.8% answered “yes”. The 3.2% who said “no” were asked what activities were not possible because of water conditions. A crosstabulation of responses to this question by time of the season (May-June, July, and August-September) revealed no statistically significant differences in response patterns based on the month that the interview was conducted. In addition, a crosstabulation of responses by lake visitors versus stream corridor visitors revealed no significant differences in responses regarding water conditions. As shown in Table 47, five of the six activities most frequently cited by the 67 recreation users were water-related. These included swimming (33 or 49.3%), fishing (14 or 20.9%), kayaking/canoeing (10 or 14.9%), motor boating (9 or 13.4%), and other boating (4 or 6.0%).

**Crowding**

Visitors were asked if they saw about as many people as they would have expected to see on the day they were interviewed, more people than they expected to see, or fewer people than they expected to see at the location where they were interviewed. As shown in Table 48, 45.0% saw about as many as they expected, 24.4% said they saw more than they expected, and 29.7% said they saw fewer than expected. A crosstabulation of responses to this question by the months that visits were made revealed that **a significantly larger percentage of visitors in July and August-September (through Labor Day) said they saw more people than they expected to see (Table 48a).**

When visitors were asked if they saw about as many people as they would liked to see, more people than they would have liked to see, or fewer people than they would have liked to see, a majority (54.8%) said they saw about as many as they would have liked to see. About a third (36.8%) said they saw more than they would have like to see, and 8.4% said they saw fewer than they would have liked (Table 49). A crosstabulation of responses by the months that visits were made revealed that **a significantly larger percentage of visitors in July and August-September (through Labor Day) said they saw more people than they would have liked to see (Table 49a).** A crosstabulation of responses by lake visitors versus stream corridor visitors revealed that **a significantly larger percentage of lake visitors said they saw more people than they would have like to see than did stream corridor visitors (Table 49b).**

**Table 34. Amounts of time that recreation visitors had spent at the location they were interviewed on the day of the interview in the Project 184 area of the El Dorado National Forest - summer of 1999.**

<b>Number of Hours Spent (to the nearest 1/10<sup>th</sup>)</b>	<b>Number</b>	<b>Percent</b>	<b>Cumulative Percent</b>
.30	1	.2	.2
.50	3	.5	.7
.70	1	.2	.8
.80	2	.3	1.2
1.10	2	.3	1.5
1.20	1	.2	1.7
1.30	18	3.0	4.7
1.40	3	.5	5.2



**Table 34. (cont'd.)**

<b>Number of Hours Spent (to the nearest 1/10<sup>th</sup>)</b>	<b>Number</b>	<b>Percent</b>	<b>Cumulative Percent</b>
1.50	63	10.6	15.7
1.60	1	.2	15.9
1.70	1	.2	16.1
1.80	15	2.5	18.6
1.90	3	.5	19.1
2.10	1	.2	19.3
2.20	1	.2	19.4
2.30	13	2.2	21.6
2.40	3	.5	22.1
2.50	78	13.1	35.2
2.60	2	.3	35.5
2.70	2	.3	35.8
2.80	15	2.5	38.4
2.90	1	.2	38.5
3.10	1	.2	38.7
3.20	4	.7	39.4
3.30	16	2.7	42.0
3.40	3	.5	42.5
3.50	67	11.2	53.8
3.60	1	.2	53.9
3.80	7	1.2	55.1
3.90	1	.2	55.3
4.10	1	.2	55.4
4.30	9	1.5	57.0
4.50	47	7.9	64.8
4.80	9	1.5	66.3
5.10	2	.3	66.7
5.30	15	2.5	69.2
5.40	4	.7	69.8
5.50	46	7.7	77.6
5.70	1	.2	77.7
5.80	10	1.7	79.4
5.90	2	.3	79.7
6.20	2	.3	80.1
6.30	5	.8	80.9
6.40	1	.2	81.1
6.50	20	3.4	84.4
6.60	1	.2	84.6
6.80	2	.3	84.9
6.90	1	.2	85.1

**Table 34. (cont'd.)**

<b>Number of Hours Spent (to the nearest 1/10<sup>th</sup>)</b>	<b>Number</b>	<b>Percent</b>	<b>Cumulative Percent</b>
7.20	2	.3	85.4
7.30	8	1.3	86.8
7.40	1	.2	86.9
7.50	18	3.0	89.9
8.10	1	.2	90.1
8.30	2	.3	90.5
8.50	9	1.5	92.0
8.70	1	.2	92.1
8.80	1	.2	92.3
9.30	1	.2	92.5
9.50	2	.3	92.8
9.80	2	.3	93.1
10.50	5	.8	94.0
10.80	1	.2	94.1
11.30	2	.3	94.5
11.50	5	.8	95.3
11.80	1	.2	95.5
12.10	1	.2	95.6
12.50	3	.5	96.1
12.80	2	.3	96.5
13.30	1	.2	96.6
13.50	4	.7	97.3
13.80	1	.2	97.5
14.30	4	.7	98.2
14.50	3	.5	98.7
14.80	1	.2	98.8
15.50	4	.7	99.5
17.50	1	.2	99.7
19.50	2	.4	100.0
<b>Total</b>	<b>597</b>	<b>100.0</b>	

Note: The mean (average) time spent at the location on the day of the interview = 4.5 hours.

**Table 35. Parking locations of recreation visitors in the Project 184 area of the El Dorado National Forest - summer of 1999.**

<b>Parking Location</b>	<b>Number</b>	<b>Percent</b>
Parked close	1979	94.1
Parked elsewhere & walked	124	5.9
<b>Total</b>	<b>2103</b>	<b>100.0</b>

**Table 35a. Parking locations of recreation visitors in the Project 184 area of the El Dorado National Forest crosstabulated by visitors to lakes versus visitors to the stream corridors - summer of 1999.**

Locations Where Visitors Parked	Locations Where Interviews Were Completed		Total
	Lakes	Stream Corridors	
Parked close	1093 91.3%	882 97.8%	1975 94.1%
Parked elsewhere & walked	104 8.7%	20 2.2%	124 5.9%
<b>Total</b>	<b>1197</b> <b>100.0%</b>	<b>902</b> <b>100.0%</b>	<b>2099</b> <b>100.0%</b>

Pearson Chi-Square Significance = .000

**Table 36. Other parking locations of recreation visitors in the Project 184 area of the El Dorado National Forest - summer of 1999.**

Other Parking Locations	Number	Percent
Parked at campsite	5	.2
Ran shuttle	1	.0
Park and Ride	1	.0
Bus	3	.1
Taking boat across lake to car in parking lot	1	.0
Canoed	3	.1
Motor boated to shore from boat launch	3	.1
Backpacked	11	.5
Hitch hiked	2	.1
Parked at marina	1	.0
Dropped off & picked up	5	.2
Walked from cabin	3	.1
Walked from hiking club	1	.0

**Table 37. Recreation visitors who have made prior trips to the locations where they were interviewed in the Project 184 area of the El Dorado National Forest - summer of 1999.**

Have Recreation Visitors Been To This Location In The Past	Number	Percent
Yes	1446	69.0
No	649	31.0
<b>Total</b>	<b>2095</b>	<b>100.0</b>

**Table 38. Number of prior trips made by recreation visitors to the locations where they were interviewed in the Project 184 area of the El Dorado National Forest - summer of 1999.**

<b>Number of Prior Trips</b>	<b>Number</b>	<b>Percent</b>	<b>Cumulative Percent</b>
1	305	29.8	29.8
2	188	18.4	48.2
3	137	13.4	61.6
4	88	8.6	70.2
5	67	6.5	76.7
6	55	5.4	82.1
7	21	2.1	84.2
8	17	1.7	85.8
9	8	.8	86.6
10	33	3.2	89.8
11	6	.6	90.4
12	20	2.0	92.4
13	1	.1	92.5
14	4	.4	92.9
15	18	1.8	94.6
17	1	.1	94.7
19	3	.3	95.0
20	12	1.2	96.2
21	1	.1	96.3
22	1	.1	96.4
24	4	.4	96.8
25	11	1.1	97.8
26	1	.1	97.9
30	9	.9	98.8
34	1	.1	98.9
36	1	.1	99.0
50	2	.2	99.2
52	1	.1	99.3
59	1	.1	99.4
60	2	.2	99.6
66	1	.1	99.7
80	1	.1	99.8
89	1	.1	99.9
90	1	.1	100.0
<b>Total</b>	<b>1023</b>	<b>100.0</b>	

Note: The mean (average) number of prior trips = 5.1.

**Table 39. Number of trips that were made to the locations where recreation visitors were interviewed in the Project 184 area of the El Dorado National Forest during October and/or November 1998.**

<b>How Many Trips Were Made in October/November 1998?</b>	<b>Number</b>	<b>Percent</b>	<b>Cumulative Percent</b>
None	248	45.3	45.3
1	162	29.6	74.8
2	53	9.7	84.5
3	29	5.3	89.8
4	15	2.7	92.5
5	16	2.9	95.4
6	13	2.4	97.8
7	1	.2	98.0
8	2	.4	98.4
9	1	.2	98.5
10	5	.9	99.5
16	1	.2	99.6
20	2	.4	100.0
<b>Total</b>	<b>548</b>	<b>100.0</b>	

**Table 40. Number of years since the most recent prior visit to the locations where recreation visitors were interviewed in the Project 184 area of the El Dorado National Forest - summer of 1999.**

<b>How Many Years Since the Last Visit?</b>	<b>Number</b>	<b>Percent</b>	<b>Cumulative Percent</b>
1	134	35.3	35.3
2	100	26.3	61.6
3	37	9.7	74.9
4	19	5.0	76.3
5	21	5.5	81.8
6	5	1.3	83.2
7	7	1.8	85.0
8	5	1.3	86.3
10	18	4.7	91.1
11 or more	34	8.9	100.0
<b>Total</b>	<b>438</b>	<b>100.0</b>	

Note: Mean (average) number of years = 3.4.

**Table 41. Satisfaction ratings for features at locations where recreation visitors to the El Dorado National Forest Project 184 areas were interviewed – 1999.**

Type of Feature	Quality Ratings					Mean Rating
	1 (Very Dissatisfied)	2	3	4	5 (Very Satisfied)	
Water Levels (n=2111)	.5%	1.2%	6.1%	12.1%	80.1%	4.70
Visual Quality (Landscape) (n=2144)	.3%	.4%	1.7%	7.6%	89.8%	4.93
Parking (n=2082)	3.7%	5.1%	11.4%	20.9%	58.8%	4.28
Facilities (n=1419)	5.7%	7.3%	14.2%	24.5%	48.3%	4.03

**Table 41a. Satisfaction ratings for water levels at locations where recreation visitors to the El Dorado National Forest Project 184 areas were interviewed crosstabulated by visitors to lakes versus visitors to the stream corridors – summer of 1999.**

Quality Ratings	Locations Where Interviews Were Completed		Total
	Lakes	Stream Corridors	
1 (Very Dissatisfied)	4 .3%	7 .8%	11 .5%
2	6 .5%	20 2.2%	26 1.2%
3	38 3.2%	90 10.0%	128 6.1%
4	100 8.3%	154 17.1%	254 12.0%
5 (Very Satisfied)	1057 <b>87.7%</b>	632 <b>70.0%</b>	1689 80.1%
<b>Total</b>	<b>1205</b> <b>100.0%</b>	<b>903</b> <b>100.0%</b>	<b>2108</b> <b>100.0%</b>

Pearson Chi-Square Significance = .000

**Table 41b. Satisfaction ratings for visual quality at locations where recreation visitors to the El Dorado National Forest Project 184 areas were interviewed crosstabulated by visitors to lakes versus visitors to the stream corridors – summer of 1999.**

Quality Ratings	Locations Where Interviews Were Completed		Total
	Lakes	Stream Corridors	
1 (Very Dissatisfied)	2 .2%	4 .4%	6 .3%
2	1 .1%	8 .9%	9 .4%
3	15 1.2%	22 2.4%	37 1.7%
4	51 4.2%	110 12.1%	161 7.5%
5 (Very Satisfied)	1155 <b>94.4%</b>	768 <b>84.2%</b>	1923 90.0%
<b>Total</b>	<b>1224</b> <b>100.0%</b>	<b>912</b> <b>100.0%</b>	<b>2136</b> <b>100.0%</b>

Pearson Chi-Square Significance = .000

**Table 41c. Satisfaction ratings for parking at locations where recreation visitors to the El Dorado National Forest Project 184 areas were interviewed crosstabulated by visitors to lakes versus visitors to the stream corridors – summer of 1999.**

Quality Ratings	Locations Where Interviews Were Completed		Total
	Lakes	Stream Corridors	
1 (Very Dissatisfied)	65 5.5%	12 1.3%	77 3.7%
2	78 6.6%	28 3.1%	106 5.1%
3	149 12.6%	89 9.9%	238 11.5%
4	225 19.1%	208 23.2%	433 20.8%
5 (Very Satisfied)	663 <b>56.2%</b>	561 <b>62.5%</b>	1224 58.9%
<b>Total</b>	<b>1180</b> <b>100.0%</b>	<b>898</b> <b>100.0%</b>	<b>2078</b> <b>100.0%</b>

Pearson Chi-Square Significance = .000

**Table 41d. Satisfaction ratings for facilities at locations where recreation visitors to the El Dorado National Forest Project 184 areas were interviewed crosstabulated by visitors to lakes versus visitors to the stream corridors – summer of 1999.**

Quality Ratings	Locations Where Interviews Were Completed		Total
	Lakes	Stream Corridors	
1 (Very Dissatisfied)	43 4.4%	38 8.8%	81 5.7%
2	61 6.2%	41 9.5%	102 7.2%
3	153 15.6%	48 11.1%	201 14.2%
4	280 28.5%	66 15.2%	346 24.4%
5 (Very Satisfied)	446 <b>45.4%</b>	240 <b>55.4%</b>	686 48.4%
<b>Total</b>	<b>983</b> <b>100.0%</b>	<b>433</b> <b>100.0%</b>	<b>1416</b> <b>100.0%</b>

Pearson Chi-Square Significance = .000

**Table 42. Changes or improvements desired at the *four lakes* where recreation visitors to the El Dorado National Forest Project 184 areas were interviewed – summer of 1999 (n=1236 lake visitors).**

Change or Improvement	Number	Percent
More Picnic Tables	134	10.8
More Hiking Trails	99	8.0
Interpretive Program	77	6.2
Bike Trails (Road)	66	5.3
Dump Station	52	4.2
Equestrian Camps	41	3.3
Boat Ramp	39	3.2
Group Camps	35	2.8
Bike Trails (Mountain)	32	2.6
Floating Docks	22	1.8
Bike Trails (Both)	6	0.5
Other Lake Improvements	359	29.0



**Table 43. Other improvements desired at the *four lakes* where recreation visitors to the El Dorado National Forest Project 184 areas were interviewed – summer of 1999 (n=1236 lake visitors).**

<b>Other Lake Improvements</b>	<b>Number</b>	<b>Percent</b>
Better Restrooms/Restroom Maintenance	71	5.7
Parking/Parking Improvements	32	2.6
More Fish	30	2.4
Handicapped Access	28	2.3
Potable Water/Drinking Fountains	19	1.5
Trash Cans	13	1.1
Better Marked Trails	10	0.8
More Campgrounds	10	0.8
Other Lake Improvements	146	40.7

**Table 44. Changes or improvements desired along the *four river corridors* where recreation visitors to the El Dorado National Forest Project 184 areas were interviewed – summer of 1999 (n=923 visitors along four river corridors).**

<b>Change or Improvement</b>	<b>Number</b>	<b>Percent</b>
Disabled Access	181	19.6
Hiking Trails	93	10.1
Day Use Areas	64	6.9
Mountain Bike Trails	54	5.9
Access	36	3.9
Group Camps	26	2.8
Equestrian Camps	17	1.8
Equestrian Camps	41	3.3
OHV Staging Area	10	1.1
Other River Corridor Improvements	412	44.6

**Table 45. Other changes or improvements desired along the *four river corridors* where recreation visitors to the El Dorado National Forest Project 184 areas were interviewed – summer of 1999 (n=923 visitors along four river corridors).**

<b>Other Lake Improvements</b>	<b>Number</b>	<b>Percent</b>
Better/More Restrooms/Restroom Maintenance	115	27.9
Trash Pickup	87	21.1
Better Trail Markings	43	10.4
Port-A-Johns	27	6.6
Better Parking	15	3.6
More/Improved Signs	12	2.9
Other Improvements	113	27.4

**Table 46. Did water conditions permit recreation visitors to the El Dorado National Forest Project 184 areas to participate in all of their planned activities – summer of 1999?**

<b>Water Conditions Allowed Participation In All Planned Activities</b>	<b>Number</b>	<b>Percent</b>
Yes	2039	96.8
No	67	3.2
<b>Total</b>	<b>2106</b>	<b>100.0</b>

**Table 47. Types of recreation activities that recreation visitors could not participate in during their visits to locations in the Project 184 area of the El Dorado National Forest because of water conditions - summer of 1999 (n = 67).**

<b>Recreation Activities</b>	<b>Number</b>	<b>Percent</b>
Swimming	33	49.3
Hiking	16	23.9
Fishing	14	20.9
Kayaking/Canoeing	10	14.9
Motor Boating	9	13.4
Other Boating	4	6.0
Relaxing	3	4.5
Sailing	2	3.0
Wildlife Observation	1	1.5
Picnicking	1	1.5
Photography	1	1.5
Sunbathing	1	1.5
Nature Study	0	0.0
Camping (Developed)	0	0.0
Camping (Primitive)	0	0.0
Water Skiing	1	1.5
Bicycling	0	0.0
Off-Highway Vehicles	0	0.0
Running/Jogging	1	1.5
Horseback Riding	0	0.0
Tubing	0	0.0
Winter Play	1	1.5

**Table 48. Number of other people that recreation visitors expected to see during their visits to locations in the Project 184 area of the El Dorado National Forest - summer of 1999 (n = 2153).**

<b>Number of People Expected to See</b>	<b>Number</b>	<b>Percent</b>
About as Many	988	45.9
More	526	24.4
Fewer	639	29.7
<b>Total</b>	<b>2153</b>	<b>100.0</b>

**Table 48a. Number of other people that recreation visitors expected to see during their visits to locations in the Project 184 area of the El Dorado National Forest crosstabulated by month of visit - summer of 1999 (n = 2153).**

Number of Other People That Visitors Expected to See	Month of Visit			Total
	May - June	July	August - September	
About as many	212 54.4%	386 54.4%	551 55.5%	1149 54.9%
More	123 <b>31.5%</b>	285 <b>40.2%</b>	371 <b>37.4%</b>	779 37.2%
Fewer	55 14.1%	38 5.4%	71 7.2%	164 7.8%
<b>Total</b>	<b>390</b> <b>100.0%</b>	<b>709</b> <b>100.0%</b>	<b>993</b> <b>100.0%</b>	<b>2092</b> <b>100.0%</b>

Pearson Chi-Square Significance = .000

**Table 49. Number of other people that recreation visitors would have liked to see during their visits to locations in the Project 184 area of the El Dorado National Forest - summer of 1999 (n = 2153).**

Number of People Visitors Would Have Liked To See	Number	Percent
About as Many	1181	54.8
More	792	36.8
Fewer	180	8.4
<b>Total</b>	<b>2153</b>	<b>100.0</b>

**Table 49a. Number of other people that recreation visitors would have liked to see during their visits to locations in the Project 184 area of the El Dorado National Forest crosstabulated by month of visit - summer of 1999 (n = 2153).**

Number of People Visitors Would Have Liked To See	Month of Visit			Total
	May - June	July	August - September	
About as many	186 47.8%	329 46.3%	451 45.4%	966 46.2%
More	73 <b>18.8%</b>	200 <b>28.2%</b>	237 <b>23.9%</b>	510 24.4%
Fewer	130 33.4%	181 25.5%	305 30.7%	616 29.4%
<b>Total</b>	<b>389</b> <b>100.0%</b>	<b>710</b> <b>100.0%</b>	<b>993</b> <b>100.0%</b>	<b>2092</b> <b>100.0%</b>

Pearson Chi-Square Significance = .003

**Table 49b. Number of other people that recreation visitors would have liked to see during their visits to locations in the Project 184 area of the El Dorado National Forest crosstabulated by visitors to lakes versus visitors to the stream corridors - summer of 1999 (n = 2153).**

Number of People Visitors Would Have Liked To See	Locations Where Interviews Were Completed		Total
	Lakes	Stream Corridors	
About as many	531 43.3%	456 49.5%	987 45.9%
More	324 <b>26.4%</b>	199 <b>21.6%</b>	523 24.3%
Fewer	372 30.3%	267 29.0%	639 29.7%
<b>Total</b>	<b>1227</b> <b>100.0%</b>	<b>922</b> <b>100.0%</b>	<b>2149</b> <b>100.0%</b>

Pearson Chi-Square Significance = .008

**Interviewer  
Observations**

Interviewers were asked to assess whether recreation visitors who were interviewed had any difficulty hearing the questions. As shown in Table 50, 96.6% of the respondents appeared to have no difficulty hearing the interview, 1.9% had some difficulty, and 1.5% had great difficulty. Interviewers were also asked to how well the respondent understood the questions. As shown in Table 51, 94.7% understood without any probing (explanations), and 4.8% understood but required probing.

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**Table 50. Interviewers’ assessments of the abilities of recreation visitors to hear the questions during the interviews conducted in the Project 184 area of the El Dorado National Forest – summer of 1999.**

<b>Difficulty Hearing Questions</b>	<b>Number</b>	<b>Percent</b>
Great difficulty	32	1.5
Some difficulty	39	1.9
No difficulty	2011	96.6
<b>Total</b>	<b>2082</b>	<b>100.0</b>

**Table 51. Interviewers’ assessments of recreation visitors’ understanding of the questions presented during the interviews conducted in the Project 184 area of the El Dorado National Forest – summer of 1999.**

<b>Understanding of Questions</b>	<b>Number</b>	<b>Percent</b>
Understood all questions without probing	1970	94.7
Understood all questions but required probing	99	4.8
Failed to understand some questions with probing	10	.5
Failed to understand many of the questions	2	.1
<b>Total</b>	<b>2081</b>	<b>100.0</b>

## **APPENDIX A**

### **In-Person Visitor Survey Questionnaire Project 184, El Dorado National Forest Summer 1999**

# In-Person Visitor Survey

Date: \_\_\_\_\_

Vehicle Count: \_\_\_\_\_

Interviewer: \_\_\_\_\_

Location: \_\_\_\_\_

Start time: \_\_\_\_\_

Weather Conditions: \_\_\_\_\_

## INTRODUCTION AND QUALIFYING QUESTIONS

“Hello. I’m [name] from the Survey Research Center at Cal State Chico. We are conducting a study of recreation users at (location) to find out about the different ways that people use this area. This information will help the Forest Service better manage recreation areas in the El Dorado National Forest, and will be used as part of the re-licensing for the El Dorado Hydro-electric Project.” It only takes about ten minutes for the interview.

1. Are you age 18 or older?

**NO → discontinue and say “Thank you for your time, but for statistical purposes, we can only interview a person age 18 or over. We appreciate your cooperation”.**

**YES → Go to Q.2.**

2. Have you participated in a survey at (location) this summer?

**YES → discontinue and say “Thank you for your time, but for statistical purposes, we can only interview a person one time. We appreciate your cooperation”.**

**NO → Go to Q.3**

3. Does you or any members of your family own a recreation cabin here at (location)?

**YES → (Discontinue and say,) “Thank you for your time, but we will be conducting a separate survey of recreation cabin owners at the end of the season. We appreciate your cooperation.”**

**NO → Go to Q.4.**

4. Is this your first trip to (location)?

**YES → (Continue interview)**

**NO → (If NO)**

Not counting this trip, about how many visits have you made during the past 12 months, than is since [Date Last Year]? \_\_\_\_\_



**(If the persons resists completing the survey) “Is there a time when I can come back later this morning/afternoon to talk with you?” (If NO, discontinue and say) “Thank you for your time”.**

**PART A – ACTIVITY AND MOTIVATION PROFILE**

**(Give information card to respondent.)**

5. In which of these activities did you (or do you plan to) participate at (location) during your visit today?

- |                     |                      |                  |                   |
|---------------------|----------------------|------------------|-------------------|
| Hiking              | Swimming             | Horseback riding | Kayaking/canoeing |
| Sailing             | Wildlife observation | Bicycling        | Driving vehicles/ |
| Motor boating       | Other nature study   | Sunbathing       | motorcycles       |
| Water skiing        | Landscape            | Picnicking       | off-highway       |
| Other boating       | Photography          | Running/jogging  | Just relaxing     |
| Camping (primitive) | Fishing              |                  | Tubing            |
| Camping (developed) |                      |                  | Winter play       |

6. Were there any other outdoor recreation activities that you participated in?

YES → Note activity, ask “Any Other?” \_\_\_\_\_  
 NO → Continue

7. Of the activities you mentioned, which one would you consider your primary activity while visiting (location)? (That is, the main activity that you participated in while you were here.)

- |                     |                      |                  |                   |
|---------------------|----------------------|------------------|-------------------|
| Hiking              | Swimming             | Horseback riding | Kayaking/canoeing |
| Sailing             | Wildlife observation | Bicycling        | Driving vehicles/ |
| Motor boating       | Other nature study   | Sunbathing       | motorcycles       |
| Water skiing        | Photography          | Picnicking       | off-highway       |
| Other boating       | Fishing              | Running/jogging  | Just relaxing     |
| Camping (primitive) |                      |                  | Tubing            |
| Camping (developed) |                      |                  | Winter play       |

Other (specify: \_\_\_\_\_) No primary activity

8. For which of the following reasons did you choose (location) as a place to visit on this trip?

- |                     |                             |                            |
|---------------------|-----------------------------|----------------------------|
| Convenient location | Scenic beauty               | Personal reason: just like |
| the                 |                             |                            |
| Good facilities     | To see object or attraction | area, relax, fun           |
| Group trip          | Wanted to try new area      | Be near water              |
| Fishing             | Swimming                    | Other (specify: _____)     |
| Repeat visit        | Other areas too crowded     |                            |

**(If multiple reasons, ask:)**

8.1. **Which one** of these reasons would you say is the **main reason** for choosing (location)?

- |                     |                             |                            |
|---------------------|-----------------------------|----------------------------|
| Convenient location | Scenic beauty               | Personal reason: just like |
| Good facilities     | To see object or attraction | the area, relax, fun       |
| Group trip          | Wanted to try new area      | Be near water              |
| Fishing             | Swimming                    | Other (specify: _____)     |
| Repeat visit        | Other areas too crowded     | Other (specify: _____)     |

**PART B – TRIP PROFILE**

**These next few questions are about your trip.**

9. First, where do you live, that is, where is your permanent home?

City/Town \_\_\_\_\_ State \_\_\_\_\_

Zip code \_\_\_\_\_ Country \_\_\_\_\_

10. Did you start this trip from (name of city/town from Q. 9)?

YES

NO → 10.1 Where did you start your trip?

City/Town \_\_\_\_\_ State \_\_\_\_\_

Zip code \_\_\_\_\_ Country \_\_\_\_\_

11. When did you leave (point of departure) to begin this trip?

Month & Day: \_\_\_\_\_

Time (military): \_\_\_\_\_

11.1. When do you expect to arrive back at home from this trip?

Month & Day: \_\_\_\_\_

Time (military): \_\_\_\_\_

12. Is (location) your only destination on this trip or is it one of several places that you will be visiting?

Only destination → Go to Q.13

One of several → Go to Q 12.1.

12.1. Is (location) your first destination on this trip?

YES → Go to Q. 12.2

NO → 12.1.1 What destination did you go to last before coming here?

Name: \_\_\_\_\_

City/Town

State

(Go to Q. 12.2)

12.2. Is (location) the primary destination of your trip?

YES

NO

12.3. Besides (location), what other recreation areas in El Dorado, Amador, or Alpine County did you or do you expect to visit on this trip? (check all that apply)

Caples Lake

Echo Lake

Lake Aloha

Desolation Wilderness

Fallen Leaf Lake

Mokelumne Wilderness

Kirkwood

Caples Creek

Silver Fork of the American River

Lake Margaret

No others

South Fork of the American River

Hope Valley

Lake Tahoe

Schneider Camp

Martin Meadows

Silver Lake

Showers Lake

Blue Lakes area

Woods Lake

Bear Lake

Red Lake

Other (specify: \_\_\_\_\_)

12.4. About what percent of your time on this trip will you be spending at (location)?  
\_\_\_\_\_ %

13. When did you first arrive at (location)?

Month & Day: \_\_\_\_\_

Time (military): \_\_\_\_\_

14. When do you plan to leave (location)?

Month & Day: \_\_\_\_\_

Time (military): \_\_\_\_\_

15. How many hours of traveling time did it take for you to get to (location) from your house or your last overnight stop?

\_\_\_\_\_ hours

16. About how far in miles is it from your house or last overnight stop to (location)?

\_\_\_\_\_ miles

17. Are you staying overnight in the area?

NO (Go to Q19)

YES → 17.1 Where are you staying? (Specify lodge or campground, or where the recreation cabin is located)

Lodge (where? \_\_\_\_\_) → Go to Q18

Developed campground (where? \_\_\_\_\_) → Go to Q17.1.1

Dispersed (primitive) camping (where? \_\_\_\_\_) Go to Q17.1.3

Recreation cabin (where? \_\_\_\_\_) → Go to Q18

Other (what and where: \_\_\_\_\_) → Go to Q18

17.1.1 On a scale of 1 to 5 with 1 being poor and 5 being excellent, how would you rate the following facilities/amenities at (campground where staying)?

	1 (poor)	2	3	4	5 (excellent)	Not Applicable
Restrooms	1	2	3	4	5	NA
Campsites	1	2	3	4	5	NA
Picnic areas	1	2	3	4	5	NA
Trails	1	2	3	4	5	NA
Parking areas	1	2	3	4	5	NA

17.1.2 What amenities or improvements would you like to see at (name of developed campground)? (Check all that apply.)

Interpretive program

Sanitation dump station

Flush toilets

Showers

Grills

Multifamily units

None

Other (specify: \_\_\_\_\_)

17.1.3 What amenities or improvements would you like to see at (name of dispersed campground area)?

Tables	Trash collection
Fire rings	Security
Toilets	Road improvements
Potable water	Other (specify: _____)
None	

18. Was staying at (area identified in Q17) your first choice for your overnight stay?

YES → Go to Q.19

NO → 18.1 Where did you want to stay? \_\_\_\_\_

19. Including yourself, how many people are in your party? \_\_\_\_\_

19.1 Is your party traveling in more than one vehicle?      NO      YES

19.1.1 If YES, how many vehicles are in your party? \_\_\_\_\_

19.2 What equipment, if any, did you bring with you to recreate at (location)? (Check all that apply.)

Fishing equipment  
Motor boat  
Canoe  
Kayak  
Raft  
Jet skis  
Mountain bikes  
Motorcycles  
Motor home  
Trailer  
Other (Specify: \_\_\_\_\_)  
None

#### PART C – SITE CHARACTERISTICS

20. About how long (in hours and minutes) did you spend (or expect to spend) here, (on the lake/river, at this location, along the trail) today? (Since Midnight)

\_\_\_\_\_ hours      \_\_\_\_\_ minutes

21. Did you park at or near this particular location today, or did you park elsewhere and walk here?

Parked close      Parked elsewhere & walked here      Other \_\_\_\_\_

22. Have you ever been to (location) before?

YES → Go to Q. 22.1

NO → Go to Q. 23

22.1 Not counting this trip, how many trips have you made to (location) over the past 12 months, that is since (date last year)? \_\_\_\_\_

[If no visits in past 12 months, ask Q. 22.1.1]

22.1.1 How many years ago was your last visit to (location)? \_\_\_\_\_ → Go to Q. 23

22.2 How many of these trips were made last October and November? \_\_\_\_\_

23. Now I'd like to ask you about how satisfied you are with the following features of your visit to (location) today. On a scale of 1 to 5 with 1 being very dissatisfied and 5 being very satisfied, how satisfied would you say you are with:

	1 (Very dissatisfied)	2	3	4	5 (Very satisfied)	Not Applicable
Water levels	1	2	3	4	5	NA
Visual quality (landscape)	1	2	3	4	5	NA
Parking	1	2	3	4	5	NA
Facilities	1	2	3	4	5	NA

23.1 What changes or improvements would you like to see at (location)? (check all that apply)

**[CATEGORIES FOR LAKE SURVEYS]**

- Intpretive programs
- Equestrian camps
- Group camps
- Bike trail (specify road or mountain bike)
- More picnic tables
- More hiking trails
- Boat ramp
- Floating docks
- Dump Station
- Other
- (specify: \_\_\_\_\_)
- None

**[CATEGORIES FOR RIVER SURVEYS]**

- Group camps
- Equestrian camps
- Day use areas
- Access
- OHV staging area
- Mountain bike trails
- Hiking trails
- Accessible facilities for people with with disabilities
- Other
- (specify: \_\_\_\_\_)
- None

23.2 Did the water conditions today allow you to participate in all of your planned activities?

YES

NO → 23.2.1 Which activities were you not able to participate in? (Check all that apply.)

Hiking	Swimming	Horseback riding	Kayaking/canoeing
Sailing	Wildlife observation	Bicycling	Driving vehicles/ motorcycles
Motor boating	Other nature study	Sunbathing	off-highway
Water skiing	Photography	Picnicking	Just relaxing
Other boating	Fishing	Running/jogging	Tubing
Camping (primitive)			Winter play
Camping (developed)			

Other (specify: \_\_\_\_\_)

24. Did you see about as many people as you expected to see today, more people than you expected to see, or fewer people than you expected to see at (on the lake/river, at this location, along the trail) today?

ABOUT AS MANY

MORE

FEWER

25. Did you see about as many people as you would have liked to see, more people than you would have liked to see, or fewer people than you would have liked to see at (on the lake/river, at this location, along the trail) today?

ABOUT AS MANY

MORE

FEWER

#### PART D – DEMOGRAPHIC PROFILE

26. Finally, these last few questions are for statistical purposes only. You don't have to answer those that you do not feel comfortable answering. How many people live in your household?

PEOPLE \_\_\_\_\_

26.1 Of these household members, how many are under the age of 18 years old?

27. Do you have a disability?

YES

NO

28. In what year were you born? \_\_\_\_\_

29. Which cultural or ethnic group do you most closely identify with?

Native American or Alaskan native

Asian or Pacific Islander

Black or African American, not of Hispanic origin

Hispanic

White, not of Hispanic origin

Other \_\_\_\_\_

Refused to answer.

30. Please stop me when I read the category that best describes the highest education level that you have completed.

High school not completed

High school graduate

Some college

College graduate

Graduate school or professional degree

Refused to answer.

31. Please stop me when I read the category that best describes your annual household income.

Under \$10,000

\$10,000-\$19,999

\$20,000-\$29,999

\$30,000-\$39,999

\$40,000-\$49,999

\$50,000-\$59,999

\$60,000-\$79,999

\$80,000-\$99,999

\$100,000-\$200,000

More than \$200,000

Refused to answer.

32. Would you like to ask any questions or make any comments about (location) or our survey?



**Thank you for helping us with the survey. Have an enjoyable visit!**

Finish Time: \_\_\_\_\_

\*\*\*\*\*

### Interviewer Observations

A1. Respondent's Gender

Male

Female

A2. Did the respondent have any difficulty hearing the questions?

Yes, great difficulty

Yes, some difficulty

No, none at all

A3. How well did the respondent

Understood all questions without probing.

Understood all questions but required probing.

Failed to understand some questions even with probing.



Failed to understand many of the questions.

## **APPENDIX B**

### **Factor Analyses of Data for Selected Questions**

## Factor Analysis of Satisfaction and Use Items from the EID On-Site Interviews – Summer of 1999

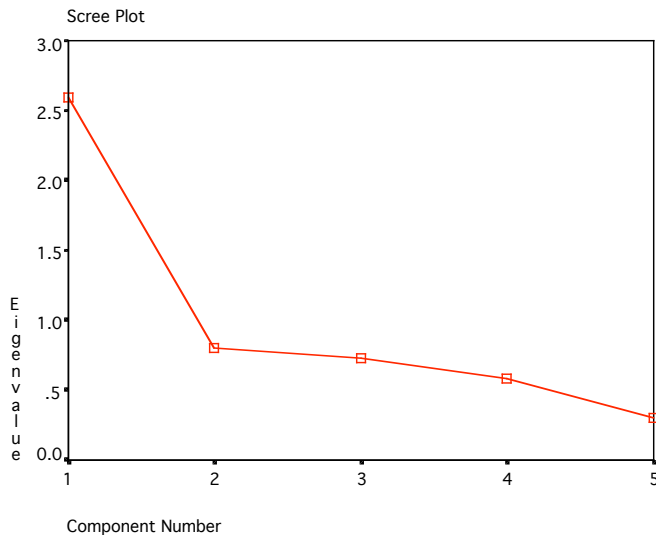
A principle components factor analysis was conducted on the 5 items (q17.1.1a - q17.1.1e) relating to user satisfaction of the recreational facility currently being used by the respondent. Scores were on a 5 point Likert scale with 1 = very dissatisfied; 5 = very satisfied.

Examination of the eigenvalues and the Scree Plot clearly show that a single factor solution is most reasonable. Only one of the eigenvalues is greater than 1.0 and in the plot it appears well above the scree. Below are presented both the table of eigenvalues and the Scree Plot.

**Total Variance Explained**

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	2.593	51.853	51.853
2	.798	15.951	67.804
3	.733	14.665	82.469
4	.578	11.568	94.037
5	.298	5.963	100.000

Extraction Method: Principal Component Analysis.



The results of this analysis show that a unified factor of general satisfaction best accounts for the variance in the five questions, explaining 51.8% of the variance. Presented below is the component matrix. Larger numbers indicate greater contribution to the generalized factor. Factor scores were computed for future analyses.

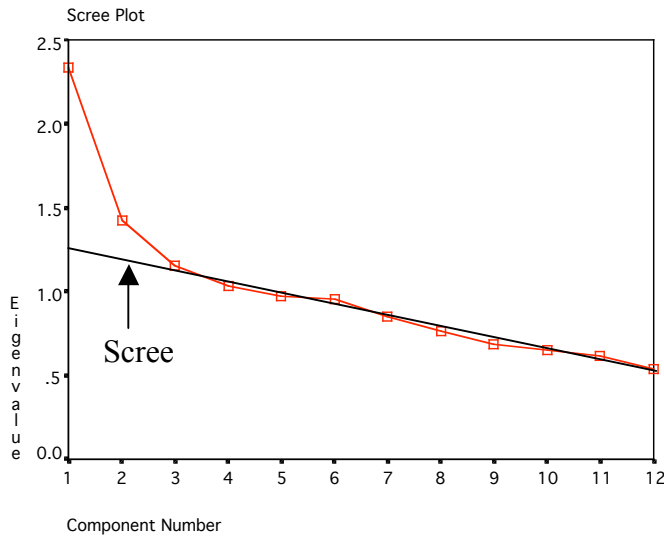
Component Matrix		
		FACTOR
Label	Var	1
restrooms	Q17.1.1A	0.576016
campsites	Q17.1.1B	0.801277
picnic areas	Q17.1.1C	0.837213
trails	Q17.1.1D	0.612519
parking	Q17.1.1E	0.736692

**A second factor analysis was performed on items related to reasons for using the current facility (q8a - q8l)** 1= mentioned; blank = not mentioned. The original items needed to be recoded into rq8a-rq8l) as 0/1 data with 1= mentioned and 0= not mentioned. The results of the preliminary analysis show 4 factors with eigenvalues greater 1.0 (the default cutoff in SPSS). Examination of the Scree Plot reveals a somewhat different structure with only two factors being above the "Scree Line." It should be observed that the eigenvalues for factor 3 and factor 4 are minimally above the cut-point. Consequently both the 4 Factor Solution and the 2 Factor Solution will be presented and examination of the factor loadings will determine which solution makes the most sense. Presented below are the table of eigenvalues and the Scree Plot.

**Total Variance Explained**

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	2.338	19.482	19.482
2	1.426	11.886	31.368
3	1.158	9.653	41.021
4	1.032	8.596	49.617
5	.971	8.096	57.713
6	.959	7.989	65.702
7	.855	7.123	72.825
8	.768	6.401	79.226
9	.688	5.731	84.957
10	.655	5.457	90.414
11	.616	5.134	95.548
12	.534	4.452	100.000

Extraction Method: Principal Component Analysis.



Presented first is the 4 Factor Solution. Items highlighted in yellow indicate factor loadings of greater than .35. When considering the definition of a factor dually loaded items should not be included. Factor 1 relates to the returning fisherman with "fishing" and "repeat visit" having high positive loadings and "try new area" having a strong negative loading. The other three factors do not seem so well defined. Factor 2 relates to beauty and being around the water. Factor 3 focuses on good facilities and less crowding and Factor 4 relates to convenience of location.

Four Factor Solution (Eigenvalues > 1.0)					
Rotated Component Matrix					
		FACTORS			
Label	Var	1	2	3	4
convenient location	RQ8A	-0.066961	0.256511	0.165165	-0.740773
good facilities	RQ8B	0.261039	0.203526	0.462337	-0.120238
group trip	RQ8C	0.012842	0.156258	0.450555	0.600524
fishing	RQ8D	0.50945	0.066199	-0.011794	0.176334
repeat visit	RQ8E	0.708288	0.259876	0.164511	0.050167
scenic beauty	RQ8F	0.119736	0.734722	0.037553	-0.082711
see attraction/object	RQ8G	-0.363406	0.511201	-0.258055	0.260505
try new area	RQ8H	-0.699887	0.178602	0.026229	0.163119
swimming	RQ8I	-0.077513	0.055482	0.733525	-0.036541
less crowded	RQ8J	0.068867	0.008404	0.564533	0.079772
personal reasons	RQ8K	0.444787	0.55049	0.144518	-0.008841
be near water	RQ8L	-0.022958	0.570433	0.320192	-0.140908

The 2 Factor Solution presented below shows a generalized factor as Factor 1, but Factor 2 in this new solution is nearly identical to Factor 1 in the previous solution relating to the return trip

fisherman. The 2 Factor Solution accounts for 31.4% of the variance. The Factor Scores from this solution have been saved for future analyses.