

7.7 Visitor Use and Impact Study Plan

The Visitor Use and Impact Study will consist of collecting primary data (survey, questionnaires, observations) and reviewing existing data sources to obtain specific information on Project-related issues. The primary data will be used to evaluate the benefits and impacts of the Project.

7.7.1 Pertinent Issue Questions

The Visitor Use and Impact Study Plan addresses the following recreational resource issue questions:

20. What is the level of Project induced recreation (e.g., What would the recreational opportunities be today if the project were not built)?
31. What are the benefits of recreation associated with the UARP?
35. How is recreator behavior affected by Project operations?
37. What are the current and projected user conflicts related to recreation at or in the vicinity of the Project?
38. What are project related reservoir fluctuations that impact reservoir recreation?
41. What are the combined impacts to recreation relative to flows and reservoir levels of the UARP and Project 184 (Silver Creek confluence downstream)?
43. How do Project operations affect site qualities at developed recreation sites (e.g. lake levels)?
44. What are the effects of Project facilities and operations on wilderness values?
62. What are the existing and future use estimates for Project-related recreation?
63. What is the existing level of public information and interpretation about Project-related aspects and recreational opportunities, and is it adequate?
64. What are the opportunities for angling at Project waters and what is the level of angler satisfaction?

7.7.2 Background

The forested Sierra Nevada setting where the Project is located provides the backdrop for a variety of recreational activities. The Project, in particular, contributes to the recreational settings in the ENF by providing reservoirs for a spectrum of recreational uses including boating, watersports, fishing, and swimming. It also provides access to and flow regimes in bypass reaches that have created recreational fishing opportunities. Project roads and powerline corridors also provide access. The Project vicinity can be described as three geographical areas based on the similarities of the character of the land and the types of recreation that occur in the area. These areas are:

1) High Country—Upstream of the northeast shore of Loon Lake to Rubicon Reservoir. This area has no developed recreation facilities and includes area designated as wilderness. There are two Project reservoirs where visitors enjoy activities such as camping, fishing, hiking and swimming. Summer is the main season of use and consists mainly of dispersed activities where visitors must provide for their own comfort and conveniences. The Rubicon OHV trail, is a popular attraction in this area and it receives a high level of use. The area is also accessed by the Rubicon Trail where mountain bikes, pack stock and hikers are allowed up to the wilderness boundary; past the wilderness boundary, access is restricted to pack stock and hiking. Visitors enjoy the high mountain setting characterized by stands of high elevation vegetation such as lodgepole pine and red fir with spectacular views of large granite outcroppings.

2) Crystal Basin—Area including Loon Lake, Gerle Creek, Union Valley and Ice House reservoirs. Project reservoirs provide locations for flatwater recreation activities and aesthetically pleasing sites for camping and day use activities. Developed Project facilities for camping and day use are located in this area to accommodate recreation at the Project reservoirs. They include paved roads, boat launches, and paved bike trails; campgrounds have water, vault toilets, paved access roads and spurs, tables and fire rings and grills. These amenities, the lakeside setting and a well-developed network of roads that provide extensive access throughout the Crystal Basin make this area the most heavily used area for recreation use on the ENF. Recreation users also come to the Project vicinity for other attractions such as OHV, equestrian and hiking trail use. In addition to the recreation use at numerous developed facilities, dispersed camping occurs along reservoir shorelines and roads in the Crystal Basin and dispersed day use occurs from people staying at Project facilities and recreating at other locations on the Forest (e.g. Wrights Lake). The main access is by the Ice House Road, which is plowed by SMUD allowing year-round

recreational use and winter sports opportunities such as snow camping, snow play and cross country skiing. Another main route of access to the area is the recently paved Wentworth Springs Road. There are also informal access points along the access roads that provide access to the Project stream reaches. The vegetation in the area is mostly stands of mixed conifers.

3) Canyonlands—Downstream of Union Valley dam to White Rock PH including Junction, Camino, Brush Creek, and Slab Creek reservoirs. This area includes steep canyons at the lower elevations in the Project (1,200-4,450 ft.). The vegetation type is mainly oak woodland with conifers occurring at the higher elevations. These Project reservoirs are small, difficult to access and provide a challenging and remote setting where visitors must provide for their own comfort and conveniences. Consequently, recreation use at these reservoirs is low and consists mainly of dispersed camping, fishing and OHV use. The only developed recreation facilities in this area are primitive boat launch sites at Junction, Brush Creek and Slab Creek reservoirs. There are informal access points to Silver Creek via Bryant Springs Road and Jay Bird Road, and the SFAR via Meadow Lane, Mosquito Road, North Canyon Road and Forebay Road near Camino Powerhouse.

7.7.3 Study Objectives

The objectives of this study include:

- Documenting use levels
- Identifying the parameters that determine impacts on recreation (e.g., indicators, thresholds)
- Identifying evaluation criteria for assessing impacts
- Designing survey tools to address the issues
- Determining demand for different recreational opportunities in the Project Vicinity
- Answering the pertinent issue questions identified in 7.7.1

7.7.4 Study Area and Sampling Locations

The study area will include the three geographical areas described in 7.7.2. Sampling locations within these areas will include developed Project recreation facilities and certain locations of recurring dispersed use close to Project reservoirs. The selection of which recreation facilities to include will be based on the need to achieve a statistically representative sample for each survey question. This may include sampling locations at the following developed facilities:

Crystal Basin-- Northshore Campground, Red Fir Group Campground, Pleasant Campground, Loon Lake Day Use Area, Loon Lake Campground, Loon Lake Group Campgrounds, Loon Lake Equestrian Campground, Loon Lake Equestrian Group Campground, Loon Lake Chalet, Loon Lake Wilderness Trailhead, Gerle Creek Campground, Airport Flat Campground, Gerle Creek Day Use Area, Angel Creek Day Use Area, Yellowjacket Campground, Wolf Creek Campground, Camino Cove Campground, West Point Campground, Jones Fork Campground, Lone Rock Campground, Fashoda Campground and Day Use Area, Sunset Campground, Big Silver Campground, Azalea Cove Campground, Wench Creek Campground, Ice House Campgrounds, Northwind Campground, Strawberry Point Campground, Ice House Day Use Area, Crystal Basin Information Station, Cleveland Corral Information Station, and all developed boat launch facilities at Loon Lake, Gerle Creek, Union Valley and Ice House reservoirs.

Canyonlands --primitive boat launches at Junction, Brush Creek and Slab Creek reservoirs.

For winter use, the study area will include winter recreation parking areas commonly plowed by SMUD in consultation with the ENF.

Impacts from dispersed use are of concern to the ENF staff and it is necessary to characterize this type of use in terms of: (1) unmet demand (i.e., are these visitors drawn to the Project then displaced because they cannot be accommodated at the existing Project recreation facilities) or user preference (i.e., are they choosing to recreate in a dispersed manner regardless of the availability of developed facilities), (2) level of use and (3) the primary recreation activities of the dispersed users. Identification of dispersed recreation locations will be consistent with the methodology described in the Recreation Supply Study. The identified dispersed recreation sites will include all

identified sites within one-quarter of a mile of Project reservoirs (including locations or river access points in the High Country, Crystal Basin and Canyonlands), as well as other sites beyond the one-quarter mile zone identified in consultation with the ENF and other interested participants, and agreed to by SMUD.

7.7.5 Information Needed From Other Studies

Dispersed recreation use locations will be obtained from the Recreation Supply Study. Recommended resource measures from other TWG's based on their investigation of resource damage at identified Project related recreation sites.

7.7.6 Study Methods And Schedule

RECREATION USER INTERVIEWS (Summer)-Interviews using questionnaires developed by the Licensee in consultation with the ENF and other interested stakeholders will be conducted at the sample locations described in 7.7.4 during the 2002 recreation season. Interviews may be conducted between 10am and 8pm or earlier depending on the type of use, on two of the three summer holiday weekends [Memorial Day (Fri-Mon), July 4th (Thurs-Sun) and Labor Day (Fri-Mon)]; two non-holiday weekends (Fri-Sun) and two non-holiday weekdays (a day of the week from Mon. through Thurs.) between May 1 and Sept. 16, for a total of 16 days. The actual survey dates will be randomly selected. The Licensee will attempt to obtain interviews from separate parties on each sample day at each developed recreation facility. The number of interviews conducted at the selected recreation sites will develop statistically representative samples. When the dispersed camping sites are identified, the Licensee, in consultation with the ENF and any other interested stakeholders, will determine the number of interviews that will be completed at these sites. The number of interviews will be based on the need to achieve a statistically representative sample. General information to be obtained from the interviews would include, as appropriate: 1) number of people in the party, 2) number of vehicles in the party, 3) origin of trip 4) length of stay, 5) primary trip destination, 6) other destinations visited on the trip, 7) 1st visit or return visit, 8) primary and other recreation activities and locations during visit, 9) user satisfaction (including quality of experience relative to expectations, facilities condition, fishing success, level of recreation information and interpretation), 10) perception of crowding, 11) perceived need for additional facilities or amenities, 12) perceived conflicts between uses, 13) difficulties due to Project operations (i.e., lake level, stream flows), 14) other locations where visitors may go for similar recreation experiences, and 15) general comments. Individual questionnaires may be tailored for use at different types of developed recreation facilities to gain specific site information. Additional information to be obtained at dispersed sites will include whether visitors had intended to recreate in a dispersed manner or if they would have preferred to stay in a developed facility. Surveys conducted at trailheads will include questions relative to assessing the Project relative to wilderness values. Methods may include self-administered [windshield] or interview surveys at trailheads, informal river access points or sites where dispersed day use activity is observed (i.e., areas where cars are parked along roads, pull-outs, stream crossings). The interview questions and sampling locations relating to angling will be reviewed by the Aquatics TWG prior to conducting the interviews.

RECREATION USER INTERVIEWS (Winter)-A questionnaire developed by the Licensee in consultation with the ENF and other interested stakeholders will be provided throughout the winter season 2002-2003 at the Loon Lake Chalet for both day use and overnight visitors (one per party) to voluntarily complete. The Licensee will monitor the return rate of the questionnaires during the season and if less than 20% of the overnight parties reserved to use the chalet by Jan. 1, 2003 have completed the questionnaire, the Licensee will conduct the questionnaires in a face-to-face manner during the remainder of the winter use period of 2003. If needed, face-to-face interviews would be conducted on Saturday of President's Holiday weekend and three other Saturdays between January and March 2003; the Licensee would attempt to interview one overnight visitor and two day use visitors from separate parties on each survey date.

Appropriate surveys will be conducted to assess winter recreation along Ice House Road (use levels, types of activities, needs, conflicts and user satisfaction) in the Crystal Basin.

USE LEVELS-

1) Developed Sites (Crystal Basin)-determine summer and shoulder-season use levels at each developed Project recreation facility from ENF concessionaire and fee demo data. Other sources of information to be reviewed will include ENF recreation data, National recreation use data to be gathered in 2003 (newly instituted) and any available ENF information on, Van Vleck, Lyons, and Wrights Lake trails. Determine winter use levels at Loon Lake Chalet and Ice House Road from ENF data and observations at plowed parking areas on Ice House Road. If the use data for the Loon Lake Chalet is unavailable or insufficient, direct observations will be conducted on President's Holiday weekend (Fri-Mon), four non-holiday weekends (Fri-Sun) and three non-holiday weekdays (a day of the week from Mon-Thurs) between Dec. 2002 and March 2003. Observations will be completed once a day between noon and 4pm and will include the number of visitors observed, their activities, and the number of vehicles present in the parking area. Developed Sites (Canyonlands)-determine use levels by direct observations at the primitive boat launches at Slab Creek, Brush Creek and Junction reservoirs on the three summer holiday weekends (as defined above), two non-holiday weekends and two non-holiday weekdays (as defined above) between April 15 and November 15 in 2002. Observations will be completed once or twice a day between 6 am and 8 pm will include the number of visitors observed, their activities, and the number of vehicles present.

2) Identified Dispersed Sites-determine use levels by direct observations on the three summer holiday weekends (as defined above), two non-holiday weekends (as defined above) and two non-holiday weekdays (as defined above) will have a similar sampling schedule as developed areas depending on location. Observations will be completed at sites with recurrent overnight use between 5pm and 8pm on the Saturday of each survey weekend and the selected weekdays. At identified dispersed day use sites and informal river access points, the observations will document the number of visitors observed and the number and types of vehicles observed. Observations will be completed between noon and 8pm on the Saturday of each survey weekend and the selected weekdays.

3) Lake Surface-if available, review existing boat count information from El Dorado Co. Sheriff's Dept., CDBAW or other existing sources. If boat count data is unavailable or inadequate, perform aerial boat counts of the Project reservoirs in the Crystal Basin and Canyonlands on Saturday or Sunday of the July 4th weekend in 2002 and one other Saturday on a non-holiday weekend in July or August 2002.

VISUAL ASSESSMENT-The Licensee will make a visual assessment and make note of any resource damage observed that appears to be related to recreation use at the sample locations and actual site of recreation activity (i.e., angling site relative to where vehicles are located).

7.7.7 Analysis

Information will be used to determine the level of use at Project reservoirs, stream bypass reaches and identified dispersed sites, visitor satisfaction and identify additional facilities or opportunities that visitors may desire. It will also be used to characterize the nature of the dispersed use as it may or may not relate to the Project and identify sites related to the Project where there is resource damage caused by recreation use. This information will be provided to other resource TWG's for further investigation. Interview responses will be used to identify user conflicts and provide data for the carrying capacity study. Ultimately, this information will be used in the Recreation Needs Assessment and to develop the Recreation Plan for the Project.

7.7.8 Study Output

The study output will be mostly a narrative report with tables displaying use data and summary of questionnaire responses. It will be organized by geographical location (High Country, Crystal Basin and Canyonlands) and include the issue questions addressed, objectives, study area, methods, results, analysis, discussion and conclusions. Maps that show the locations of the developed recreation facilities, the dispersed sites and any resource damage related to recreation use in the study area may also be included in the report. The report will be prepared in a format that allows the information to be inserted directly into the Licensee-prepared Draft Environmental Assessment that will be submitted to the FERC with the Licensee's application for a new license.

7.7.9 Preliminary Estimated Study Cost

SMUD's consultant estimates that this study will cost \$180,600 ± 20 percent.

7.7.10 Recreation and Aesthetics TWG Endorsement

This study plan was approved on February 22, 2002 by the following entities of the TWG: ENF, SWRCB, American River Recreation Association, PCWA, NPS, BLM and SMUD. This study plan will be sent out to other members of the Recreation and Aesthetics TWG for their consideration.

The Plenary Group approved this study plan on March 6, 2002. The participants at the meeting who said they could "live with" the study plan were: Taxpayers of EDC, ENF, Camp Lotus/ARRA, SMUD, EDC, PG&E, EDC Citizens for Water, PCWA, NPS, BLM, CDFG, California Outdoors, and SWRCB. None of the participants at the meeting said they could not "live with" the study plan.

7.7.11 Literature Cited

None