

STUDY PLAN RR-1
TURLOCK IRRIGATION DISTRICT
AND
MODESTO IRRIGATION DISTRICT

DON PEDRO PROJECT
FERC NO. 2299

Recreation Facility Condition, Public Accessibility, and Recreation Use Assessment Study Plan

RELICENSING PARTICIPANTS' COMMENTS

<u>Comment No.</u>	<u>RWG Meeting Date</u>	<u>Comment</u>	<u>Response</u>
<u>General Comments:</u>			
<u>1</u>	<u>08/24/2011</u>	<u>It was suggested to rename the Study Plan.</u>	<u>See revised name.</u>
<u>2</u>	<u>08/24/2011</u>	<u>It was suggested to include reference to the "Topline Report".</u>	<u>See Section 5.3.5.1</u>
<u>Section-Specific Comments:</u>			
<u>3</u>	<u>08/24/2011</u>	<u>Section 5.3.3.5: A suggestion was made that the study plan should include an attachment that details visitor survey protocol— e.g. time of day, how surveyors will approach parties.</u>	<u>The Districts will prepare and include this information in the study plan for the Updated Study Plan document.</u>
<u>4</u>	<u>08/24/2011</u>	<u>Attachment A: A suggestion was made that the study should include an inventory of dispersed recreation sites beyond the immediate shoreline if these lands are being used by recreationists.</u>	<u>The use impact evaluation form (last 2 pages of Attachment A) provides for assessment of impacts to all areas being used by recreationists.</u>
<u>5</u>	<u>08/24/2011</u>	<u>Attachment B: RPs requested opportunity to provide suggested revisions to the recreation survey instrument.</u>	<u>The Districts will compile any comments received on the survey instrument by September 8 for review and discussion at the September 14 RWG meeting.</u>

Deleted: and

STUDY PLAN RR-1

TURLOCK IRRIGATION DISTRICT
AND
MODESTO IRRIGATION DISTRICT

DON PEDRO PROJECT
FERC NO. 2299

Recreation Facility Condition, Public Accessibility, and Recreation Use Assessment Study
Plan

Deleted: and

Deleted:

Deleted: July

Deleted: 2011

Related Study Requests: BLM-03, 07; NPS-01

(See RP General Comment 1 & 2)

1.0 Project Nexus

The Federal Energy Regulatory Commission (FERC) regulations require that the license application include a description of the existing recreation measures or facilities to be continued and maintained, during the term of the new license, new measures or facilities proposed by the applicant for the purpose of enhancing recreational opportunities at the project, and measures to ensure the safety of the public in its use of project lands and waters. In addition, recreation is a recognized project purpose at FERC-licensed projects under Section 10(a) of the Federal Power Act.

2.0 Resource Agency Management Goals

Turlock Irrigation District (TID) and Modesto Irrigation District (MID) (or collectively, the Districts) believe the U.S. Department of Interior, Bureau of Land Management (BLM) has interests in public access and use of lands managed by BLM on and near Don Pedro Reservoir. The BLM Sierra Resource Management Plan (SRMP) was implemented in February 2008 and is nearly identical to the Proposed SRMP and Final Environmental Impact Statement published June 8, 2007. Detailed management resolutions (i.e., management activities, mitigations, and project design features) for public lands are outlined in the SRMP, and some goals are specific to recreation. Two recreation goals outlined in the SRMP are: (1) ensure the continued availability of outdoor recreational opportunities while protecting other resources and uses; and (2) ensure adequate river flows for boating, fishing, swimming, etc. Additionally, five recreation objectives are also detailed: (1) develop recreation management strategies for large blocks of BLM land in wild and scenic river corridors; (2) develop recreation sites that meet public health and safety standards; (3) mitigate conflicts between competing uses; (4) maintain existing visitor center, campground, trail, and day-use facilities to accepted BLM standards; and (5) manage recreation for a remote experience on the wild segments of the North Fork American, Tuolumne, and Merced rivers pursuant to the Wild and Scenic Rivers Act (BLM 2008).

Deleted: and

3.0 Study Goals

The goal of the recreation facility condition, public accessibility, and recreation use assessment is to provide information about the need for maintenance or enhancement of existing recreation facilities to support current and future demand for public recreation at the Project. The objectives of the study are to:

Deleted: assessment and

Deleted: evaluation

- assess the condition of existing developed recreation facilities at the Don Pedro Project,
- estimate present capacity of recreation facilities at the Project to support present and future demand for public recreation (i.e., facility carrying capacity),
- describe the preferences, attitudes, and characteristics of the Project’s recreation users, and
- collect information about current Project recreation activities and future demand for activities.

4.0 Existing Information and Need for Additional Information

All recreation activities at the Project are managed by the Don Pedro Recreation Agency (DPRA). Operationally, the DPRA is a department within TID. It is an agency sponsored by the Districts and City and County of San Francisco (CCSF). DPRA is managed by a Board of Control. Funding for routine operation and maintenance is provided by the recreation fees it charges. Capital funding is provided by the Districts and CCSF.

Project recreation predominantly occurs at the three developed recreation sites on the reservoir:

- Fleming Meadows Recreation Area
- Blue Oaks Recreation Area
- Moccasin Point Recreation Area

Developed toilet facilities are operated and maintained at 12 remote locations where recreation use is known to be concentrated. All developed facilities at these 15 locations will be included in this assessment (Figure 5.1-1).

Deleted: 11

Deleted: 14

DPRA operates and maintains all these developed recreation facilities and routinely assesses the need for maintenance, repair, and replacement. This study will supplement information on existing Project recreation facility condition and accessibility already available from DPRA.

Regarding an assessment of visitor use of the Project, there is sufficient information to estimate overall use of the Project in Visitor Days. DPRA counts visitors entering the developed recreation facilities at gated and staffed entry kiosks. DPRA also estimates the number of people who access the reservoir from roadside pullouts and other informal access points. The spatial distribution of boating activity on the reservoir is available from data collected in 2002 and 2003, and from DPRA routine patrols. Additional information is needed on use levels for individual activities, user satisfaction, latent demand, and current and future recreation needs. This information can be obtained by conducting a Recreation Use Assessment.

5.0 Study Methods

This study will assess the condition of existing developed recreation facilities within the Don Pedro Project operated by DPRA (Figure 5.1-1). Participation rates in various recreation activities, user satisfaction, latent demand, and current and future recreation needs will also be assessed.

5.1 Study Area

This study will take place at Don Pedro Reservoir in Tuolumne County, California. The study area consists of developed recreation sites and facilities at three locations: Fleming Meadows, Blue Oaks, and Moccasin Point recreation areas on Don Pedro Reservoir, as well as 12 remote facilities where toilets are maintained (Table 5.1-1 and Figure 5.1-1).

Table 5.1-1 Summary of recreation facilities and other on-site amenities at Don Pedro Project-developed recreation areas.

Amenities	Moccasin Point RA	Blue Oaks RA	Fleming Meadows RA
<i>Project Recreation Facilities</i>			
Camping Units - Total	96	195	267
With water and electric hookups	18	34	90
Picnic Areas -Total	2	1	2
Group Picnic Sites	1	1	1
Boat Launch Ramp	1	1	1
Fish Cleaning Stations	1	1	1
Comfort Stations - Total	8	11	14
With hot showers	2	5	5
<i>Additional On-Site Recreation Amenities</i>			
Concession Store	Yes	No	Yes
Swimming Lagoon	No	No	Yes
Volleyball / Softball Area	No	No	Yes
Marina	Yes	No	Yes
Amphitheatre	No	No	Yes
Houseboat Mooring	Yes	No	Yes
Boat Rentals	Yes	No	Yes
Houseboat Rentals	Yes	No	Yes
Boat Repair Yard	No	Yes	No
Gas and Oil	Yes	No	Yes
Sewage Dump Station	Yes	Yes	Yes

Fleming Meadows Recreation Area consists of 267 campsites (90 with water, sewer and electric hookups), 1 group picnic area, 2 picnic areas (includes one group picnic area, 1 boat launch ramp, 1 fish cleaning station, and 14 comfort stations (5 with showers). Additional on-site amenities include a concession store, swimming lagoon, volleyball and softball areas, marina, amphitheater, houseboat mooring, boat rentals, houseboat rentals, boat repair yard, gas and oil, and a sewage dump station.

Deleted: and

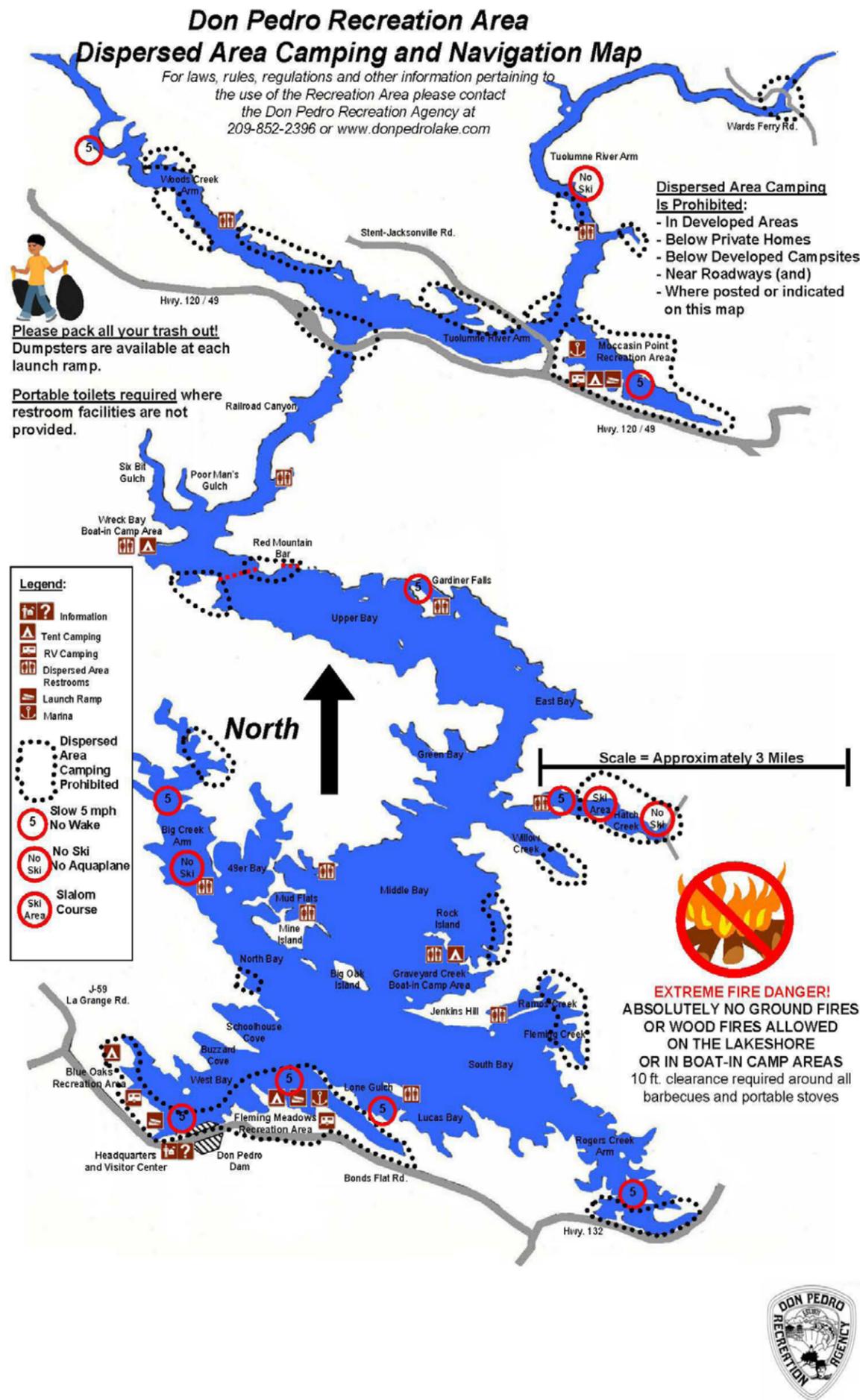


Figure 5.1-1 Developed facilities to be inventoried and evaluated for the Don Pedro Project recreation facility condition, public accessibility, and recreation use assessment.

Deleted: and

Blue Oaks Recreation Area consists of 195 camp sites (34 with water and electric hookups), 1 group picnic/campground, 1 boat launch ramp, 1 fish cleaning station, and 11 comfort stations (5 with hot showers). Additional on-site amenities include a boat repair yard and a sewage dump station.

Moccasin Point Recreation Area consists of 96 campsites (18 with water, sewer and electric hookups), 2 picnic areas (1 is a group picnic area), 1 boat launch ramp, 1 fish cleaning station, and 8 comfort stations (2 with a hot shower). Additional on-site amenities include houseboat moorings, boat rentals, houseboat rentals, gas and oil facilities, and a sewage dump station.

Twelve remote locations where dispersed recreation (including shoreline camping) is managed will be included in the facility inventory. Shoreline camping is prohibited within the developed recreation areas, along the shoreline adjacent to developed roadways and housing areas, and certain environmentally sensitive areas.

5.2 General Concepts

The following general concepts apply to the study:

- Personal safety is an important consideration of each fieldwork team. The Districts and their consultants will perform the study in a safe manner.
- Field crews may make minor modifications in the field to adjust to and to accommodate actual field conditions and unforeseeable events. Any modifications made will be documented and reported in the draft study reports.

5.3 Study Methods

The study methods will consist of six steps. These include: (1) an inventory and evaluation of the recreation facilities for condition, Americans with Disabilities Act (ADA) compliance, and use impacts; (2) identifying recreation uses and visitor attitudes, beliefs, and preferences at Project recreation resource areas; (3) estimating the current recreation use at Project recreation resource areas; (4) identifying future use and demand opportunities; and (5) analyzing the data and preparing the report. Each of the steps is described below.

5.3.1 Step 1A – Inventory and Evaluate the Existing Recreation Facilities for Condition, ADA Compliance, and Use Impacts

The Districts will inventory and evaluate the Project's developed recreation facilities (above ground systems only¹) listed in Table 5.1-1 and at the land based and floating toilet locations identified in Figure 5.1-1. This will include four subtasks: (1) a complete inventory of developed recreation facilities associated with the Project including campgrounds, boat launches, marinas, swimming lagoon, picnic areas, signs, and interpretive displays; (2) an assessment of the condition of each component (tables, fire rings, restrooms, walkways, parking areas, roads, etc.) of the developed recreation facilities; (3) an assessment of whether each component complies

¹ The Districts will only evaluate the above-ground facilities and systems at each of the sites listed in Table 5.1-1. Below-ground facilities and systems such as water distribution and septic systems are monitored as part of routine operation and maintenance; and repaired as needed.

with current ADA accessibility guidelines; and (4) an assessment of the use impacts at each recreation facility. Each of the subtasks is described below.

5.3.1.1 Inventory Recreation Facilities

The Districts will inventory the number and type of recreation facilities at the Project recreation facilities as noted in Section 5.3.1. Photographs will be taken as appropriate as either a representative photograph of similar facilities or of each one-of-a-kind facility. Facilities of interest include picnic sites, campsites, restrooms, walkways, parking areas/spaces, boat launch ramps, boat docks/marinas, and recreation signs.

All signs will be inventoried and each type of sign will be photographed and documented (e.g., type of sign, condition, text, location etc.). The content of signage will be checked for clarity, consistency, and appropriate and understandable wording. In addition (where applicable), The Districts will note incidental information in the vicinity of the developed recreation facilities such as user-created roads and approximate trail lengths; user-created sites; available parking, and any informal fire rings. Representative photographs will be taken as appropriate. The Districts will use a basic inventory form (an example form is provided in Attachment A).

5.3.1.2 Facility Condition Assessment

The Districts will conduct a qualitative assessment of the condition of developed recreation facilities and signs at the facilities listed in Table 5.1-1. The assessment categories are poor, fair, and good condition. Table 5.3.1-1 provides evaluation criteria that will be used by type of recreation facility feature.

Table 5.3.1-1 Facility site condition evaluation categories and criteria.

Variable	Condition Evaluation Categories and Criteria		
	0 – Poor	1 - Fair	2 - Good
Roads & Parking (circulation and condition of surface paving)	All surfaces are in disrepair and need of immediate reconditioning or replacement. Current conditions create safety hazards.	Need for improved maintenance and repair in some areas. No major safety concerns.	All surfaces in excellent condition and well maintained. No rehabilitation required within the next 5-10 years.
Recreation Site Amenities (condition of vehicle spur, picnic tables, fire ring/grills, boat ramps, etc.)	Facilities require immediate repair or replacement. Little evidence of recent maintenance.	Some facilities damaged or in need of replacement. Could be accommodated through routine maintenance.	Facilities generally in good condition and well maintained.
Recreation Site Buildings (condition of restrooms, maintenance buildings, and other structures)	Structures in disrepair requiring immediate attention. Significant rehabilitation likely. Problems could include rot, leaks, and sagging roofs.	Some structures need minor repairs, such as painting or replacement of roof/shingles. Repairs should be made, but are not needed immediately.	All structures appear in sound, well maintained condition. No significant problems observed.
Signs (presence/condition of project and recreation signs)	Signs do not exist or require immediate repair or replacement.	Some signs damaged or in need of replacement.	Signs generally in good condition and well maintained.

Based on the rating of each variable/site component in the table above, an overall facility evaluation score will be calculated using the following scale.

- Score = 8: Excellent condition
- Score = 6 to 7: Good condition - requiring routine care/maintenance
- Score = 3 to 5: Fair condition - may require some rehabilitation
- Score = 0 to 2: Poor condition - requires immediate rehabilitation work or replacement

In addition, photographic documentation of some facilities (e.g., picnic tables, fire rings) will illustrate a representative range of conditions at each site. The Districts will use a condition form to evaluate each facility, and an example form is provided in Attachment A. The use impact form may be modified based on further review of existing information and field reconnaissance.

5.3.1.3 Accessibility Assessment

The Districts will assess the developed recreation facilities in Table 5.1-1 for their compliance with the ADA and Architectural Barriers Act Accessibility Guidelines (ABAAG) developed by the U.S. Access Board (USAB 2004). The Districts will evaluate each facility based on these standards and use a rating system to categorize the level of accessibility at each facility: inaccessible, partially accessible, and fully accessible. A rating will be assigned using the evaluation criteria in Table 5.3.1-2.

Table 5.3.1-2 Level of accessibility categories and rating system.

Variable	Accessibility Categories		
	0 – Inaccessible	1 – Partially Accessible	2 - Accessible
ADA Compliance (presence of accessible facilities and other ABAAG factors)	Little or no consideration for handicap accessibility. Clearly not in compliance with ADA/ ABAAG standards.	Some handicap facilities, but in disrepair or not up to current ADA/ ABAAG standards (e.g., slopes too steep, docks inaccessible, etc).	High quality of accessibility. Facilities appear fully consistent with current ADA/ ABAAG standards.

An example of the ADA accessibility compliance checklist for outdoor recreation facilities is contained in Attachment A, including an example of schematic guides to support the evaluations. These checklists will be modified to address the specific standards for each of the applicable guidelines – ADA or ABAAG – as needed. In addition, recreation facilities will be assessed for their ability to provide opportunities for persons with disabilities to participate in the Project's primary recreation opportunities (including boating and camping).

5.3.1.4 Assessment of Recreation Use Impacts

The Districts will also assess the recreation use impacts at each of the recreation facilities (see Table 5.1-1). The recreation use impact evaluation at each facility is categorized as low, moderate, or high depending on the amount and dispersion of use impact signs (Table 5.3.1-3). Signs of use impact typically include the presence of litter, dumping, tree cutting, inadequate vegetation clearances around fire pits/rings, visible off-highway vehicle (OHV) use/tracks, trampled vegetation, bare ground, compacted soils, erosion, human waste, toilet paper, etc.

Table 5.3.1-3 Recreation use impact categories and rating system.

Variable	Use Impact Categories		
	0 – Low	1 – Moderate	2 - High
Recreation Use Impact	Few, if any signs of use impact are observed at each site	Several signs of use impact but not extensive or widespread impacts	Extensive signs of use impact; widespread use with many impacts evident

In some instances, selecting a single impact category may not be practical, and as a result, the impact level may span two categories (i.e., low-to-moderate or moderate-to-high). This broader categorization may be used when a site or facility has satellite areas where impact conditions vary significantly from the majority of the site/facility.

5.3.2 Step 1B – Inventory and Evaluate Recurrent Dispersed Shoreline Recreation Use Locations Along the Don Pedro Reservoir Shoreline

The Districts will inventory and evaluate the recurrent dispersed shoreline recreation use locations within the FERC Project Boundary. Specifically, this step includes identifying recurrent dispersed recreation use locations; and assessing the use impacts at the location.

The Districts will conduct a single field survey of the Don Pedro Reservoir shoreline by boat to identify locations that show signs of recurrent dispersed shoreline recreation use. When such a location is observed, a land-based evaluation of the recreation use impacts at the location will be conducted as outlined in Section 5.3.1.4 above, including completing the evaluation form (Attachment A). At each location, the Districts will photograph and map the location with a GPS device. The Districts will also identify any user-created trails adjacent to the identified recurrent recreation use sites.

5.3.3 Step 2 – Identify Recreation Uses and Visitor Attitudes, Beliefs, and Preferences

The Districts will conduct observations and visitor surveys to gather information from visitors at each of the facilities listed in Table 5.1-1.

5.3.3.1 Survey Development

The visitor survey will address the study objectives identified in Section 3.0. Survey topics will address items such as visitors' perceptions of the following:

- Existing and desired recreation facilities
- Reservoir water levels on experience
- Satisfaction with shoreline access and opportunities
- Comparison of Don Pedro Project recreation resources to other regional recreation resource areas that provide similar recreation opportunities
- Personal safety
- Crowding
- Conflict
- Visitor's actual and desired primary destination and activities
- Actual and desired activities

- Constraints or barriers to participation that are potentially within the Districts' control (e.g. lawlessness, trail conditions, campfire use, private property conflict and trespass, parking access and fees)
- Ways to enhance their recreation experience

The draft survey instrument is provided in Attachment B. The survey content will be refined in consultation with Relicensing Participants. Prior to survey implementation, the survey instrument will be pre-tested in the field with recreation users, and, refined for clarity, if necessary.

5.3.3.2 Field Reconnaissance, Logistics, and Preparation

This step will involve logistical preparation for existing use data collection, including: developing draft data forms and associated databases; developing field work logistics and protocols; field crew training; selection of sampling dates; pre-testing field logistics and protocols, and revising schedules, logistics, or protocols based on preliminary findings.

5.3.3.3 Sampling Approach and Data Collection

The target population the Districts will focus on is based on the overall Project recreation use estimate for 2010, which was approximately 400,000 Visitor Days. The total survey sample size for the Project will be at least 384 surveys.

The Districts will make every attempt to secure the target number of surveys. However, even after following survey protocol, there may be sites where the target cannot be met. The Districts will continuously monitor the survey returns, and if survey targets are not being met at survey sites, the sampling frequency will be re-evaluated to determine if additional efforts should be made at these survey sites. Also, for all survey sites, the Districts will continue the survey effort throughout the established seasons, even if the target survey numbers have been met, and will make every effort to achieve the survey target goals.

Pre-Test Survey Instrument

The Districts will conduct a pre-test of the survey questionnaire. The pre-test will include a total of 10 to 15 completed surveys, with the intent to receive feedback on readability, length, and general understanding of survey content. If necessary, minor changes to the survey instrument may be made to make the survey easier to complete and/or understand.

Sampling Frequency

The sampling frequency will be divided into two categories – peak season and off-peak season. The peak season for all recreation use and activities on the Project is April 1 through September 30. The off-peak season is October 1 through March 31.

The monthly sampling frequency for the peak season will be:

- Two randomly selected weekday days per month
- Two randomly selected weekend days (Saturday and Sunday) per month
- One pre-selected holiday day for each three-day holiday weekend (3 holiday days total) (Memorial Day, Independence Day, and Labor Day holiday weekends)

The monthly sampling frequency for the off-peak season will be:

- Two randomly selected weekday days per month
- Two randomly selected weekend days (Saturday and Sunday) per month

To identify visitors' attitudes, beliefs, and preferences at Project recreation resource areas, the Districts will conduct a roving use survey. During the survey, the surveyors will also conduct a recreation observation survey (see Section 5.3.3.4) and a visitor survey (see Section 5.3.3.5) at all the recreation facilities identified in Table 5.1-1. The survey sample will be stratified by recreation area, type of day (weekdays, non-holiday weekends, and holiday weekends), and time of day. The Districts' surveyors will vary the times each survey site is visited to ensure a range of visitation times and potential user groups over the course of the survey period. To ensure the Districts' surveyors visit the facilities/sites at different times, the surveyors will visit each facility following the same circuit or route, but will start at the next facility on the circuit for each successive survey day.

5.3.3.4 Observation Survey

During the observation survey, the Districts' surveyor will count and record the time, date, location, number of vehicles, vehicles with trailers and the type of trailer, vehicles with racks for boats, trailers, boats, people, day groups, overnight groups, and the types of recreation activities. The surveyor will also record the percent occupancy by location. Observations will be made, and recorded by site and area to include parking outside provided parking areas, and the number and type of boats at the boat launch facilities. This data will be used to identify the types of recreation activities in which visitors participate. Once the counts are completed, the surveyor will also administer an on-site recreation visitor questionnaire survey to randomly selected recreation visitors (Section 5.3.3.5).

5.3.3.5 Visitor Survey *(See RP Comment 3)*

The visitor survey will collect visitor perceptions, attitudes, and satisfaction levels on current resource conditions (i.e. users' feelings towards current water or use levels), visitors' zip codes, user characteristics, recreational activities, recreation facility development, management concerns, and overall recreation experiences. For all survey efforts, the number of refusals will be recorded. The visitor survey will be administered on-site.

Recreation researchers will train surveyors on random selection techniques for choosing groups at a site and participants within groups, introduction strategies, recording, and tracking refusals. Only members of a group who are 18 years or older will be asked to complete a survey. A target

number of users to be surveyed during each period will be established based on target survey completions for the entire recreation season for each recreation area.

5.3.4 Step 3 – Estimate Current Recreation Use

Data routinely collected by DPRA will form the basis of an estimate of the number of Visitor Days (one person for all or part of one day) to the Don Pedro Project. Results of the observation and visitor survey (Section 5.3.3) will be used to characterize participation in various activities.

5.3.5 Step 4 – Identify Future Use and Demand Opportunities

The Districts will identify the future use and demand opportunities from three perspectives: (1) assessing the existing unmet demand; (2) assessing future recreation demand; and (3) assessing the regional uniqueness or significance of the Project for recreation. Each of these perspectives is described in detail below.

5.3.5.1 Existing Unmet Demand Assessment

Existing recreation use does not always represent the total existing recreation demand because there may be constraints that limit participation. While there are many potential constraints on recreation use (e.g., lack of free time, cost, geographic distance, lack of skills or equipment), a subset of participation constraints may be closely associated with site-specific management (e.g., limited access to lands or water, use limits or full occupancies at facilities, project operations that eliminate or diminish the quality of experiences and opportunities, or lack of information about available recreation opportunities). To assess the general level of unmet demand for the Project recreation resources, the Districts will perform the three subtasks described below.

Assess National, Statewide, and Regional Unmet Recreation Demand Information

The Districts will review and summarize relevant information from the [2011 Outdoor Recreation Participation Topline Report \(Outdoor Foundation 2011\)](#) and the 2007 California Public Attitudes Outdoor Recreation Survey (CDPR 2007). In addition, the Districts will contact the California Department of Parks and Recreation (CDPR) and request access to the raw data to determine if the sample size is statistically valid to be used to develop a more regional or even local estimate of unmet demand; and to identify potential constraints that limit participation. If available, other sources of Project vicinity and Project region demand will be assessed. The focus of this assessment will be to identify possible recreation activities with substantial unmet demand with a qualitative discussion of participation constraints and whether these constraints are likely affected by Project operations and maintenance.

Collect Unmet Project Recreation Demand Information

The Districts will collect additional unmet recreation demand information from Project visitors in visitor surveys. The visitor surveys will ask visitors if there are any reservoir-based recreation activities they are interested in participating in at the Project, but cannot because of some form of barrier or other existing condition.

Identify Potential Activities with High Unmet Demand at the Project

The Districts will identify potential activities with high unmet demand at the Project based on the review of unmet demand information derived from the C DPR, the Project visitor survey, Project monitoring data, and any other regional unmet demand sources (if any). Analysis will also attempt to identify likely barriers or constraints to participation, and whether those are related to Project operations or recreation management decisions.

5.3.5.2 Future Recreation Demand Assessment

This element of the study will provide information regarding the projected future recreation use in the Project over the next 30-50 years. Projecting the future is a speculative activity, especially over a long period. These projections, though, can be useful for general planning purposes to identify potential management issues that may occur in the future. This approach will include four subtasks.

Review Existing Recreation Use Trends

Since past use often helps predict future use, the Districts will review trends of recent Project recreation use. Likely sources of Project use will be: DPR A reports; California fishing license sales; and boating vessel registrations (for the counties where the majority of Project visitors originate from); local fishing guide activity; and recreation equipment sales (where available).

Review Existing Population and Recreation Activity Participation Projections

The Districts will summarize existing information on future projections from the California Department of Finance on projected population growth rates of the counties where the majority of the Project visitors originate. The Districts will also research projections from other available sources such as the U.S. Department of Agriculture, Forest Service (USFS) (i.e. Cordell et al. 1999) and other appropriate sources on future projections.

Review Reasonably Foreseeable Events that May Influence Future Use

Reasonably foreseeable events in the watershed may reasonably be expected to influence recreation use in the watershed over the license period. If an event is determined to be reasonably foreseeable, the Districts will make a qualitative assessment of its potential effect on future recreation use (if feasible).

Estimate Future Recreation Use over the License Period

Based on historical trends, future growth projections, and likely foreseeable actions in the watershed, the Districts will use professional judgment to estimate Project recreation use and facility utilization over the next 30-50 years. These estimates will only provide a general indication of how recreation use is expected to change over the license period. For the Project recreation use estimate projection, the Districts will rely on the population growth rates where the majority of Project visitors reside to project use. For the facility utilization projections (campgrounds and boat launch parking areas), the Districts will rely on the activity participation indices developed by the USFS for developed camping and motorized boating (Cordell et al. 1999).

5.3.5.3 Regional Uniqueness and Significance Assessment

This component of the study will assess the regional uniqueness and significance of the Project's primary recreation opportunities in three subtasks.

Review Results of Visitor Questionnaires

The Districts will review the results of the visitor questionnaires. The Districts anticipate that boating, water sports (water skiing, wakeboarding, etc.), camping, fishing, picnicking, and swimming will likely be among the top water-related recreation activities at the Project.

Identify Regional Recreational Opportunities

The Districts will identify the geographic draw of the Project's top primary recreation opportunities identified in the task above. The Districts will assess the geographic extent of visitors' origins and location of the alternative recreation resource areas where visitors participate in their primary recreation activities. The Districts will identify regional alternatives for comparable facilities or areas from sources such as guidebooks, on-line web resources, state and national parks, BLM, USFS, and county tourism sources.

Assess the Uniqueness and Significance of the Project-Related Recreation Opportunities

First, the Districts will analyze the visitor responses to a survey question that asks visitors to rate the relative uniqueness of the Project reservoir. The question has pre-set responses using a 5-point scale with a rating of 1 meaning the reservoir provided an "extremely common" opportunity and a rating of 5 meaning the reservoir provided an "extremely unique" opportunity. Based on the average responses, the Districts will categorize the relative uniqueness of the Project using the following categories.

- Rating of 1.0 = extremely common
- Rating of 1.1 to 2.0 = common
- Rating of 2.1 to 3.0 = somewhat common
- Rating of 3.1 to 4.0 = somewhat unique
- Rating of 4.1 to 4.9 = unique
- Rating of 5.0 = extremely unique

Second, for the Project's most popular primary recreation activities, the Districts will identify if these recreation opportunities are of local, regional, or state significance. Licensees will determine the level of significance based on the county where visitors reside based on the following definitions.

- Local Significance: visitors from Tuolumne County (where the Project is located)
- Regional Significance: visitors from counties surrounding Tuolumne County)
- State-Wide Significance: visitors from all other counties outside of the local and regional counties

In addition, the Districts will describe what is unique and special about the most popular recreation opportunities based on the comments provided by the visitors.

5.3.6 Step 5 – Data Analysis and Report Preparation

5.3.6.1 Data Analysis

The survey responses provide a rich source of information about visitor use patterns, characteristics, preferences, and perceptions. Following data entry and comprehensive QA/QC procedures, the Districts will address the study objectives and issues through analysis of the responses to questionnaires and observation data. Descriptive statistics will be employed to explain visitor responses to each of the survey questions. Additional statistics may be utilized to check for differences between various recreation groups (e.g., motorized versus non-motorized users; shoreline anglers versus boating anglers). Survey analyses will likely focus on the following perspectives:

- Day users
- Overnight users
- Developed facility users
- Dispersed users
- User groups defined by primary recreation activity (e.g., boaters, anglers, hikers, backpackers, bicyclers)
- Motorized versus non-motorized recreationists

Observation use data will address the types and frequency of use occurring within each Project recreation resource area.

6.0 Schedule

The facility condition and recreation use assessment is planned for 2012.

7.0 Consistency of Methodology with Generally Accepted Scientific Practices

The methods presented in this study plan are consistent with those used in recent relicensings in California, including most recently for the Merced Irrigation District's Lake McClure and McSwain Reservoir. Additional surveys with similar methodology include the Yuba-Bear/Drum-Spaulding Project's Lake Spaulding, Rollins Reservoir, Bowman Lake, Jackson Meadows Reservoir, Fordyce Lake, and Lake Valley Reservoir.

8.0 Deliverables

The Districts will prepare a report on recreation facility condition and public accessibility for inclusion in the Initial Study Report to be filed on or before January 4, 2013.

9.0 Level of Effort and Cost

Study Plan implementation cost will be provided in the Revised Study Plan.

10.0 References

California Department of Parks and Recreation (CDPR). 2007. California Outdoor Recreation Plan 2007, An Element of the California Outdoor Recreation Planning Program. California State Parks. Sacramento, CA.

Cordell, Ken H, Betz, C., Green, G.T., Mou, S., Leeworthy, V.R., Wiley, P.C., Barry, J.J., and Hellerstein, D. 1999. Outdoor Recreation for 21st America. A report to the nation: A national survey on recreation and the environment. Venture Publishing, Inc. State College, PA.

[Outdoor Foundation. 2011. Outdoor Recreation Participation Topline Report 2011. Boulder, CO.](#)

U.S. Access Board (USAB). 2004. Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines (ABAAG). Washington, D.C. 304 pp.

U.S. Department of Interior, Bureau of Land Management (BLM). 2008. Sierra Resource Management Plan and Record of Decision. U.S. Department of the Interior, Bureau of Land Management Mother Lode Field office, El Dorado Hills, California. pp. 26-27.

ATTACHMENT A

SAMPLE FACILITY EVALUATION FORMS
(Inventory, Condition, Accessibility, and Use Impact (See RP Comment 4))

ATTACHMENT B

SAMPLE VISITOR SURVEY INSTRUMENT (See RP Comment 5)