

STUDY DESCRIPTION RR-1
Project Recreation Use and Visitor Surveys
September 14, 2026

This Study Description is developed to inform information gaps identified by Calaveras County Water District (CCWD) for the relicensing of its North Fork Stanislaus River Hydroelectric Project (Project).¹

STUDY AREA

The Study Area includes Project recreation sites and use areas within the FERC Project Boundary at New Spicer Meadow Reservoir, North Fork Diversion Dam, and Bear Creek Diversion Dam - all located on National Forest System (NFS) lands managed by the Stanislaus National Forest (STF). Table 1 identifies the study sites.

Table 1. RR-1 study sites.

Project Impoundment	Site
New Spicer Meadow Reservoir	New Spicer Meadow Campground
	New Spicer Meadow Group Campground
	New Spicer Meadow Boat Launch and Day Use Area
	Forest Road 7N01 roadside use between New Spicer Meadow Group Campground and New Spicer Meadow Dam
	North Fork Diversion Tunnel Outlet
North Fork Diversion Dam	Diversion dam
	Locked gate on Forest Road 7N17B
Beaver Creek Diversion Dam	Diversion dam

STUDY METHODS

Excluding Data Summary Development (i.e., Reporting), the Study consists of one step: Recreation Use and Visitor Surveys, which includes Observation Surveys and Visitor Surveys.

Step 1 - Recreation Use and Visitor Surveys

CCWD will conduct observation surveys and visitor surveys to gather information related to recreation uses, opportunities, and preferences at the four study sites listed above, which is common practice (Malvestuto 1996, Pollock et al. 1994, Salant and Dillman 1994, Watson et al. 2000, Forest Service 1995). Table 2 identifies the specific study sites and type of data collection that CCWD will employ at New Spicer Meadow Reservoir, North Fork Diversion Dam, and Beaver Creek Diversion Dam.

¹ In addition to the details provided in this study description, study implementation will also follow the "*Concepts and Practices Applicable to All Relicensing Studies*" developed by CCWD.

Table 2. Survey data collection methods by study site.

Study Site	Visitor Input Data Collection	Use Data Collection	
		Method	Parameter
NEW SPICER MEADOW RESERVOIR			
New Spicer Meadow Campground	Visitor survey	Reservation records	▪ Daily occupancy
New Spicer Meadow Group Campground	Visitor survey	Reservation records	▪ Daily occupancy
New Spicer Meadow Boat Launch and Day Use Area	Visitor survey	Observation survey	▪ Vehicles (parking areas) ▪ Picnic sites (day use area) ▪ Shoreline users (day use area)
Forest Road 7N01 roadside use between New Spicer Meadow Group Campground and New Spicer Meadow Dam	Visitor survey	Observation survey	▪ Vehicles (roadside pullouts) ▪ Shoreline users
DIVERSION DAMS			
North Fork Diversion Dam	Visitor survey	Observation survey	▪ Vehicles (locked gate) ▪ Shoreline users (impoundment)
Bear Creek Diversion Dam	Visitor survey	Observation survey	▪ Vehicles (impoundment) ▪ Shoreline users (impoundment)

Observation Surveys

During observation surveys, a CCWD surveyor will count and record the time, date, location, and the use parameters Listed in Table 2 by type of recreation facility/feature. Observations will be made and recorded by site and area to include parking outside provided parking areas. For camping use at Project campgrounds, CCWD will rely on reservation records to document campsite occupancy. Observation survey data and campground reservation records will be used to identify the Project recreation use levels.

Visitor Surveys

Once the CCWD surveyor completes the Observation Surveys at each site listed in Table 2, the surveyor will administer an on-site recreation visitor questionnaire survey (visitor survey) to randomly selected recreation visitors. 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), recreational activities, recreation facility development, management concerns, and overall recreational experiences specific to the recreation site and Project impoundment the visitor is intercepted at (i.e., New Spicer Meadow Reservoir, North Fork Diversion Dam impoundment, or Beaver Creek Diversion Dam impoundment). The visitor survey will also ask general questions of each visitor surveyed (e.g., zip code, visitor and group characteristics, history of recreation use at the Project impoundment, etc.).

CCWD will collect non-response bias during visitor survey collection, whereby CCWD's surveyor will collect the following information from visitors who refuse to complete the survey – refusal reason and their observed recreation activity. For all survey efforts, the number of refusals will be recorded.

CCWD will administer the visitor survey on-site where recreation visitors are readily visible and willing to participate. The visitor survey will be provided in English. The visitor survey will address visitor use characteristics and preferences including:

- Recreation activity participation
- Recreation group size
- Satisfaction with existing recreation facilities
- Preference for improved or additional recreation facilities
- Reservoir water levels and their experience
- Crowding and user conflicts
- Constraints or barriers to participation

The survey instrument is provided in Attachment A, which is an example for visitors intercepted at New Spicer Meadow Reservoir study sites. Prior to survey implementation, the survey instrument will be pre-tested in the field (up to 10 completed surveys) with recreation users with the intent to receive feedback on readability, length, and general understanding of survey content. If necessary, CCWD will make minor changes to the survey instrument to refine the survey for clarity, legibility, and/or ease of completion.

Mail-back Windshield Surveys

CCWD will prioritize conducting in-person visitor surveys whenever visitors are readily available. However, CCWD will utilize a mail-back windshield visitor survey at study sites where recreation visitors are not typically present, but their vehicles are (e.g., boat launch and day-use parking areas, shoreline areas with roadside parking, diversion dams). In these cases, a mail-back version of the visitor survey will be left on vehicle windshields with self-addressed envelopes and postage for convenient response and return.

Methodology at North Fork and Beaver Creek Diversion Dams

CCWD will implement modified observation and visitor survey methods at the North Fork and Beaver Creek Diversion Dam impoundment study sites as these are more remote locations without developed recreation facilities, where visitors are less centralized and may be more difficult to locate or access. CCWD will implement the following methodology at each impoundment.

North Fork Diversion Dam

Vehicles cannot access the North Fork Diversion Dam as the road (Forest Road 7N17B) has a locked gate approximately 0.6 mile from the impoundment. Thus, CCWD will visit the locked gate on Forest Road 7N17B and observe if any vehicles are parked directly at the gate leading to the North Fork Diversion Dam. At the locked gate, CCWD will conduct an observation survey for vehicles observed directly at the gated area. If vehicles are observed parked at the gate, then CCWD will walk to the impoundment and observe if visitors are readily available/visible from the

roadway and diversion dam area (i.e., conduct an observation survey for shoreline users). If impoundment users are observed, then CCWD will conduct a visitor survey if the users are readily and safely accessible (i.e., along the shoreline adjacent to the road up to the diversion dam). CCWD will not hike the shoreline to find or access users that are not readily accessible for safety reasons. When visitors cannot be located or accessed safely for a visitor survey, CCWD will leave a mail-back windshield survey on the vehicles parked at the locked gate.

Notably, the locked gate on Forest Road 7N17B is adjacent to the STF's Slick Rock OHV Trailhead, a non-Project trailhead, which provides access to the popular Slick Rock OHV Trail that leads to Lake Alpine to the north. The non-Project Slick Rock OHV Trailhead is not part of this study.

Beaver Creek Diversion Dam

CCWD will visit Beaver Creek Diversion Dam and observe if any vehicles are parked in the vicinity of the diversion dam. At this location, CCWD will conduct an observation survey for vehicles observed. If vehicles are observed, then CCWD will assess if visitors are readily available/visible along the impoundment shoreline (i.e., conduct an observation survey for shoreline users). If impoundment users are observed, then CCWD will conduct a visitor survey if the users are readily and safely accessible (i.e., in the immediate vicinity of the parked vehicles). CCWD will not hike the shoreline to find or access users that are not readily accessible for safety reasons as the terrain is very steep between the road and shoreline. When visitors cannot be located or accessed safely for a visitor survey, CCWD will leave a mail-back windshield survey on the vehicles parked at the diversion dam.

Sampling Approach and Data Collection

Target Number of Completed Surveys

CCWD is targeting one survey population for the Project. In 2014, the total Project recreation use was 35,207 Recreation Days² (RD). Using a 95 percent confidence interval with a sampling error no more than plus or minus 10 percent and a 50/50 split,³ CCWD's target is 96 completed visitor surveys (Salant and Dillman 1994). CCWD will make every attempt to secure the target number of visitor surveys, continuously monitor the survey returns, and if survey targets are not being met, then CCWD will re-evaluate the sampling frequency to determine if additional efforts are warranted. CCWD will continue the survey effort throughout the established survey season, even if the target number of visitor surveys has been met.

Sampling Period

CCWD will conduct Observation Survey and Visitor Survey sampling during the peak season from Memorial Day holiday weekend through Labor Day holiday weekend. The sampling frequency will be: 1) two weekdays per month (June-August); 2) two non-holiday weekend days per month

² FERC defines a Recreation Day (RD) as each visit by a person to a development for recreational purposes during any portion of a 24-hour period.

³ Since it is not apparent how varied the Project sample population is in its response to various questions, CCWD will use a more conservative sampling approach that utilizes a "50/50 split," (Salant and Dillman 1994).

(June-August); and 3) one holiday day (Saturday or Sunday) for Memorial Day, Independence Day, and Labor Day holiday weekends. In total, CCWD will conduct the surveys on 15 sampling days, including 6 weekdays, 6 non-holiday weekend days, and 3 holiday weekend days.

Notably, the STF opens the Project recreation facilities at New Spicer Meadow Reservoir when the snowpack and ice have melted, public access/travel is safe on Forest Road 7N01, and the recreation facilities have been inspected and ready for public use. Thus, CCWD will initiate the Observation Survey and Visitor Survey effort at the study sites accessed via Forest Road 7N01 (i.e., New Spicer Meadow Reservoir and North Fork Diversion Dam) once the Project recreation facilities are opened to the public.

REPORTING

CCWD will analyze the field data to include tables summarizing observed recreation use and visitor responses to the questionnaire. Study data will be made available to all interested parties (See *Concepts and Practices Applicable to All Relicensing Studies*) and standard GIS shapefiles, including metadata, will be provided to the Forest Service.

SCHEDULE

CCWD anticipates the schedule for Study completion as follows:

Recreation Use and Visitor Surveys	May - September 2027
Reporting	October - December 2027

REFERENCES

- Malvestuto, Stephen P. 1996. Sampling the Recreational Creel Fisheries Techniques (Chapter 20), 2nd edition. American Fisheries Society.
- Pollock, Jones, and Brown. 1994. Roving Creel Survey. Angler Survey Methods and Their Applications in Fisheries Management (Chapter 11). American Fisheries Society.
- Salant, P. and Dillman, D.A. 1994. *How to Conduct Your Own Survey*. John Wiley and Sons, Inc.
- United States Department of Agriculture, Forest Service (Forest Service). 1995. Techniques and Equipment for Gathering Visitor Use Data on Recreation Sites (Personal Observation, page 23 -25 and Visitor Surveys, page 35-37).
- Watson, A. E., Cole, D. N., Turnery D. L., and Reynolds, P. S. (October 2000). *Wilderness Recreation Use: A Handbook of Methods and Systems*, October 2000, United States Forest Service Rocky Mountain Research Station General Technical Report-56. Ogden, Ut

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RECREATION VISITOR SURVEY

North Fork Stanislaus River Hydroelectric Project (FERC Project No. 2049)

ATTACHMENT A

DRAFT RECREATION VISITOR SURVEY INSTRUMENT

RECREATION VISITOR SURVEY

North Fork Stanislaus River Hydroelectric Project (FERC Project No. 2049)

Recreation Site:

1. Is this visit a day trip or an overnight trip?
☐ Day trip
☐ Overnight trip
2. When did you arrive and plan to depart New Spicer Meadow Reservoir?
3. Which of the following best describes your recreation group?
☐ Alone
☐ Friends
☐ Family
☐ Family & Friends
☐ Multiple Families
☐ Organized Outing
☐ Other (specify)
4. How many **people** came in your group today?
5. How many **vehicles** did your group use to travel to New Spicer Meadow Reservoir?
6. Which activities do **you expect to participate in** during this visit to New Spicer Meadow Reservoir?
☐ Camping
☐ Picnicking
☐ Fishing
☐ Swimming
☐ Hiking or walking
☐ Wildlife viewing (birding, etc.)
☐ Driving for pleasure
☐ Flat-water, motorized boating
☐ Flat-water, non-motorized boating (kayaks, canoes)
☐ Other (specify)
7. Which activity is your **primary recreation activity** for this visit to New Spicer Meadow Reservoir?
8. How often do you visit New Spicer Meadow Reservoir?
☐ Once per year
☐ 2-5 times per year
☐ 6-10 times per year
☐ More than 10 times per year
9. List up to 3 other areas in Central California where you participate in your **primary recreation activity**.
10. Please rate and explain the **relative uniqueness** of the recreation opportunities at New Spicer Meadow Reservoir relative to similar opportunities at other Central California areas your identified.

(A) Rate the Uniqueness:

Extremely Common	Somewhat Common	Neither Common or Unique	Somewhat Unique	Extremely Unique
1	2	3	4	5

(B) Explain what is unique or special about recreation opportunities at New Spicer Meadow Reservoir.

RECREATION VISITOR SURVEY

North Fork Stanislaus River Hydroelectric Project (FERC Project No. 2049)

11. Please rate the **acceptability** of the **Existing Conditions** at this recreation facility/site.
Note: if you rated a condition "unacceptable", please describe the location & nature of the condition.

Facilities/Resources	Unacceptable	Slightly Unacceptable	Neither	Slightly Acceptable	Acceptable	Did Not Use/ Not Applicable
Campsites	1	2	3	4	5	☐
Picnic sites	1	2	3	4	5	☐
Food storage locker	1	2	3	4	5	☐
Restroom	1	2	3	4	5	☐
Potable water	1	2	3	4	5	☐
Trash receptacle	1	2	3	4	5	☐
Parking area	1	2	3	4	5	☐
Boat ramp	1	2	3	4	5	☐
Courtesy dock	1	2	3	4	5	☐
Signage	1	2	3	4	5	☐
Visitor information	1	2	3	4	5	☐
Other (specify)	1	2	3	4	5	☐

12. Did/do you feel **crowded** today at any of the following locations during your visit?

Location /Area	Not At All Crowded		Slightly Crowded		Moderately Crowded		Extremely Crowded		Did Not Use / Not Applicable	
Campground	1	2	3	4	5	6	7	8	9	☐
Picnic Area	1	2	3	4	5	6	7	8	9	☐
Boat Launch	1	2	3	4	5	6	7	8	9	☐
Shoreline	1	2	3	4	5	6	7	8	9	☐
Water Surface	1	2	3	4	5	6	7	8	9	☐

13. Please indicate whether or not the **level of the reservoir** was a problem for each of the following.

(Circle one number for each)	Not a Problem	A Small Problem	Neither	A Moderate Problem	A Large Problem	No Opinion/ Not Applicable
Ability to launch or take out boat	1	2	3	4	5	☐
Ability to safely boat	1	2	3	4	5	☐
Ability to access the shoreline	1	2	3	4	5	☐
Other (specify)	1	2	3	4	5	☐

14. (A) Did you experience any **conflict** with other recreation users at New Spicer Meadow Reservoir during your visit (i.e., anyone who negatively impacted your experience)? ☐ Yes ☐ No

(B) If **YES**, what was the activity of the other recreation user?

- ☐ Fishing boat ☐ Camper
☐ Other power boat ☐ Non-motorized boater
☐ PWC / Jet ski ☐ Hiker
☐ Ski boat ☐ Other (specify)

(C) If you **experienced conflict**, please check the reasons that contributed to the conflict.

- ☐ Proximity to where we were ☐ Loudness
☐ Rowdiness ☐ Other (specify)

15. (A) On this trip, did you experience any situations or encounters where you felt unsafe?

☐ Yes ☐ No

(B) If **YES**, please identify: i) why you felt unsafe, and ii) the location where you felt unsafe.

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16. (A) Did anything prevent you or a member of your group from participating in desired recreation activities at New Spicer Meadow Reservoir?

☐ Yes ☐ No

(B) If **YES**, please identify the location(s) and the thing(s) that prevented your participation.

17. Please rate your preference for these **potential facility improvements** at New Spicer Meadow Reservoir.

Facility	Not At All Preferred	Slightly Not Preferred	Neither	Slightly Preferred	Highly Preferred	No Opinion/ Not Applicable
Boat launch ramp	1	2	3	4	5	☐
Boat trailer parking (double space)	1	2	3	4	5	☐
Vehicle parking (single space)	1	2	3	4	5	☐
Courtesy dock	1	2	3	4	5	☐
Picnic sites	1	2	3	4	5	☐
Campsites	1	2	3	4	5	☐
Group campsites	1	2	3	4	5	☐
Restrooms	1	2	3	4	5	☐
Potable water	1	2	3	4	5	☐
Food storage lockers	1	2	3	4	5	☐
Trash receptacles	1	2	3	4	5	☐
Picnic sites	1	2	3	4	5	☐
Visitor information	1	2	3	4	5	☐
Signage at the recreation site	1	2	3	4	5	☐
Other (specify)	1	2	3	4	5	☐

18. What is the **zip code** for your primary residence?

19. Please provide any **additional comments** regarding your recreation experience here.

Thank You for Taking the Time to Participate in this Survey!