

STUDY DESCRIPTION LU-1
Project Roads and Trails
Condition Assessment
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 Roads and Trails used to access Project facilities to conduct Operation and Maintenance (O&M) activities. For the purposes of this Study, a “Project Road or Trail” is a road or trail segment that is used exclusively for the purposes of the Project, including access to Project recreation facilities, and that is not otherwise used for non-Project purposes. Due to this Project need, a Project Road or Trail segment is maintained by and at the sole expense of CCWD. Project Roads and Trails do not include “joint use” or “multi-purpose” road and trail segments (i.e., road and trail segments used by other parties to access non-Project facilities, such as electric lines, residences, or other areas).² For the purposes of this Study, Project Roads or Trails do not include roads within Project recreation areas or Project recreation trails (i.e., trails whose sole purpose is for Project recreation).³ A list and description of Project Roads is provided in Attachment A. The Project does not include any non-recreation trails.

STUDY METHODS

Excluding Data Summary Development (i.e., Reporting), the study will be completed in one step: Data Collection at Project Roads, which is described below.

Step 1: Data Collection at Project Roads

CCWD will visit each Project Road listed in Table 1 to assess the road segments’ condition and identify obvious signs and potential risks of environmental damage. If a road is on federal lands managed by the United States Department of Agriculture, Forest Service, or United States Department of the Interior, Bureau of Land Management (BLM) and the federal land management agency has established maintenance levels for the road segment on its managed lands, CCWD will become familiar with those maintenance level requirements prior to the field assessment. Assessments will be made in comparison to those Forest Service or BLM maintenance levels. Forest Service Maintenance Levels are provided in Attachment A. Items to be assessed or confirmed in the field condition assessment will include:

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.

² Outside of relicensing and this Study, CCWD is willing to meet with the Forest Service and other users of joint use roads to discuss operation and maintenance responsibilities.

³ The condition of roads and trails within Project recreation areas will be included in the Pre-Application Document (PAD).

- List, map, and confirm lengths (i.e., hundredths of a mile) and widths (feet); Forest Service or BLM maintenance level, if applicable; traffic classification; seasons of use; confirm travel way surface material (i.e., native, gravel/aggregate, paved, or combination); and CCWD's use (i.e., type and frequency of CCWD vehicle use) of each Project Road. The confirmation will not entail any land survey work but will utilize field Global Positioning System (GPS) equipment and best estimate by field staff during the filed condition assessment.
- Assess the condition of the travel way surface treatment and estimate remaining useful life of travel way surface. Determine pavement conditions, if appropriate, using the industry standard Pavement Management System (PMS). If the road is on Forest Service or BLM managed lands, determine if the travel way surface treatment is consistent with the designated maintenance level of the road (see Attachments A and B).
- Assess the condition and locate culverts and other drainage structures, including noting any significant erosion (take photographs and note location of the culverts and drainage structures by GPS).
- List, describe, and map bridges or other water crossings (take photographs and note location by GPS). Identify widths (feet) for all bridges and posted weight limits for any bridges that were constructed by or on behalf of CCWD.
- Assess the condition and confirm the location of CCWD-maintained traffic control devices; safety features; directional, warning and information signage including signs along roads (photograph each and note location of the culverts and drainage structures by GPS), and document compliance of those CCWD-maintained features with current Manual on Uniform Traffic Control Devices (MUTCD) standards or Forest Service or BLM standards, if the sign occurs in federal lands.
- Assess the condition of CCWD-maintained gates or other traffic exclusion structures (e.g., boulders) structures (photograph each and note location of gates and traffic exclusion structures by GPS). Note whether gate is locked at all times or opened during periods, and what parties have locks on the gate.
- Identify, describe, and map sub-standard, unsafe, or hazardous traffic conditions such as site clearing (e.g., blind spots and poor sight distances) and inadequate clear zones, using the appropriate American Association of State Highway and Transportation Officials (AASHTO) standards for traffic levels (photograph each and note location by GPS).
- Identify, describe, and map the location of obvious slope instability along the travel way or that may affect the road segment (photograph each and note location by GPS). This will not include any geotechnical or ground disturbing activities but best estimate by field staff during the condition assessment.
- Estimate CCWD's typical use and routine O&M activities of the Project Road segment (i.e., this is an estimate of CCWD's use, not a traffic count survey).

- Identify, describe, and map location and size of specifically designated vehicle turnouts (photograph each and note location by GPS). A turnout for the purpose of the Study is an area cleared along the side of the road that is at least 20 feet long and allows cars to pass a slower moving vehicle, and at which a motorist can safely (e.g., clear lines of sight and adequate width) turn around. Vehicular turnouts do not include parking areas near the Project facility being accessed.

REPORTING

CCWD will compile the study data into a summary report, including maps. If the information is collected in a manner inconsistent with this plan, the report will include a description of any inconsistency and why it occurred. 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.⁴

SCHEDULE

CCWD anticipates the schedule for Study completion as follows:

Data Collection at Project Roads	April – September 2027
Reporting	October – December 2027

REFERENCES

- USFS. June 2012. Guidelines for Road Maintenance Levels. 7700-Transportation Management 1177 1811-SDTDC.
- USFS. March 2022. Forest Service Manual 7700 – Travel Management. Chapter 7730 – Transportation System Operation and Maintenance.

⁴ In addition to the details provided in this section, reporting will also follow the "*Concepts and Practices Applicable to All Relicensing Studies*" developed by CCWD.

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Table 1. List of Project Roads in Study LU-1.

Road Segment Designation		Termini (Lat/Long)		Est. Length (mile)	Est. Width (~feet)	Est. Driving Surface	Gated	Land Ownership	Current Maintenance Responsibility
Name	Forest Service Designation	Start	End						
NFDD Access Rd	7N17B	38.44039733443908, -120.00852306396033	38.43805295682596, -120.01707424824865	0.57	14	Gravel	Yes	NFS	Forest Service
NSM Water Tank Access Road	Unnamed Extension off 7N01	38.405547943620526, -120.00461105098194	38.40503465244793, -120.00421889622864	0.04	14	Native	No	NFS	CCWD
MPDD Access Road	Unnamed Extension off 4N38	38.23305529769888, -120.29545276032123	38.23378357483741, -120.29311575448797	0.14	13	Gravel	Yes	NFS	CCWD
McKays LLO Access Road	Unnamed Extension off 4N38	38.23290512909011, -120.29553293431842	38.23305914803599, -120.29331640745194	0.13	13	Gravel	Yes	NFS	CCWD
Beaver Creek Top of Penstock Access Road	4N38D	38.2358069, -120.2824934	38.2349360, -120.2837234	0.09	12	Native	No	NFS	Forest Service
Beaver Creek Top of Penstock Access Road	Unnamed Extension off 4N38D	38.23968934855315, -120.28164817438875	38.2358069, -120.2824934	0.23	12	Native	No	Private	SPI
Beaver Creek Comms Tower Access Road	4N38E	38.23468513821321, -120.281137100000	38.231183317281584, -120.28211351755967	0.26	12	Native	Yes	NFS	CCWD
Beaver Creek Access Road	4N38D	38.235801700309494, -120.27895108335633	38.23418864617101, -120.27933286675513	0.16	16	Gravel	Yes	NFS	CCWD
Mill Creek Tap Access Road	Not Applicable	38.191596860630966, -120.35392393679835	38.192477359900515, -120.35497497494651	0.14	12	Paved	Yes	Private	CCWD / UWPA
Adit 4 Access Road	Not Applicable	38.15741912992568, -120.38959526847506	38.154620110630475, -120.39179981973696	0.23	18	Gravel	Yes	BLM & Private	CCWD
Road to Spicer Meadow Powerhouse	Unnamed Extension off 7N01	38.391495, -120.001228	38.392288, -120.000548	0.05	25	Paved	Yes	--	CCWD
11 Road Segments		--		2.04	--				

Key:
~ = Approximate
BLM = United States Department of the Interior, Bureau of Land Management
CCWD = Calaveras County Water District
Comms = Communications
MPDD = McKays Point Diversion Dam

NFDD = North Fork Diversion Dam
NFS = National Forest System lands
NSM = New Spicer Meadows Reservoir
LLO = Low Level Outlet

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ATTACHMENT A

Table A-1. Summary of Forest Service Maintenance Levels.¹

Parameters	Maintenance Level				
	1	2	3	4	5
Service Life	Intermittent Service-Closed Status	Constant Service or Intermittent Service-Open Status (Some uses may be restricted under 36 Code of Federal Regulations Section 261.50)			
Traffic Type	Open for non-motorized uses; Closed to motorized traffic.	Administrative, permitted, dispersed recreation specialized, commercial haul	All National Forest Traffic – General Use, Commercial Haul		
Vehicle Type	Closed - N/A	High clearance, pick-up, 4x4, log trucks, etc.	All types - passenger cars to large commercial vehicles		
Traffic Volume	Closed - N/A	Traffic volume increases with maintenance level			
Typical Surface	All types	None; Native, or Aggregate – may be dust abated		Aggregate – usually dust abated; paved	
Travel Speed	Closed - N/A	Travel speed increases with maintenance level			
User Comfort and Convenience	Closed - N/A	Not a consideration	Low priority	Moderate priority	High priority
Functional Classification	All types	Local collector	Local collector arterial	Local collector arterial	Local collector arterial
Level of Service	Closed - N/A	J	G, H, I - Traffic service level increases with maintenance level		
Management Strategy	Prohibit or eliminate	Discourage or prohibit cars. Accept or discourage high clearance vehicles	Encourage, accept	Encourage	Encourage

¹ See also USDA Forest Service. 2012. Guidelines for Road Maintenance Levels. National Technology and Development Program. 7700 Transportation Management 11771811-SDTDC. June 2012., Forest Service Handbook. 7709.59, secs. 11 and 62.3., and Manual on Uniform Traffic Control Devices. Available online at: <http://mutcd.fhwa.dot.gov/>.

Key:

J = Traffic flow is slow and may be blocked by management activities. Two-way traffic is difficult, backing may be required. Rough and irregular surface. Travel with low clearance vehicles is difficult. Single purpose facility.

G = Free flowing, mixed traffic; stable, smooth surface. Provides safe service to all traffic.

H = Congested during heavy traffic, slower speeds, and periodic dust; accommodates any legal-size load or vehicle.

I = Interrupted traffic flow, limited passing facilities, may not accommodate some vehicles. Low design speeds.

Unstable surface under certain traffic or weather.

N/A = Not applicable

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