Attachment B

Kern River No. 1 Hydroelectric Project
FERC Project No. 1930

Revised Study Plan

SOUTHERN CALIFORNIA EDISON COMPANY

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FERC Project No. 1930

Revised Study Plan

SOUTHERN CALIFORNIA EDISON®
Energy for What's Ahead℠

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1.0 INTRODUCTION

Southern California Edison Company (SCE) is the owner and operator of the Kern River No. 1 Hydroelectric Project (Project), Federal Energy Regulatory Commission (FERC) Project No. 1930. SCE operates the Project under a 30-year license that was issued by FERC on June 16, 1998 (78 FERC ¶ 61,109). The current license will expire on May 31, 2028. SCE seeks to renew its license to continue operation and maintenance of the Project. SCE is using FERC's Integrated Licensing Process (ILP) to prepare its relicensing application, as specified in 18 Code of Federal Regulations (CFR) Part 5.

Pursuant to CFR § 5.13(a), SCE is filing this Revised Study Plan (RSP) with FERC within 30 days following the deadline for comments received on the Proposed Study Plan (PSP). This RSP addresses comments provided on the PSP by:

- FERC
- National Park Service
- American Whitewater
- Leah Carter

1.1 BACKGROUND

On May 5, 2023, SCE filed a Notice of Intent (NOI) and Pre-Application Document (PAD) with FERC to seek a new license for the existing 26.3-megawatt (MW) Project. The PAD provided FERC, federal and state agencies, and other interested parties with background information related to Project facilities, operation, and maintenance activities; summarized existing, relevant, and reasonably available information; defined pertinent Project issues; and identified potential study needs. The PAD also included 13 Draft Technical Study Plans that SCE determined were needed to address issues for which existing information may not be adequate. The overall objective of the studies is to develop sufficient information to identify potential Project effects and to develop new license conditions that reasonably balance multiple resource interests.

On June 29, 2023, FERC issued a Notice of Commencement of Pre-Filing Process and Scoping Document 1 (SD1) for the Project relicensing. FERC also requested that any individual or entity interested in providing comments on the PAD and SD1 and/or submitting formal study requests do so by September 5, 2023. During the comment period, FERC conducted a site visit on August 1, 2023, and a public scoping meetings on August 2, 2023. On October 17, 2023, FERC filed Scoping Document 2 (SD2) for the Project.

On August 23, 2023, SCE filed with FERC Updated Draft Technical Study Plans. The Updated Draft Technical Study Plans incorporated stakeholder comments received during 13 Technical Working Group meetings held between June 28 and August 30, 2023. The Updated Draft Technical Study Plans superseded the Draft Technical Study Plans included in the PAD.

On October 17, 2023, SCE filed a PSP with FERC that included 13 Technical Study Plans for the Project's relicensing. The deadline to file comments on the PSP was

January 16, 2024. During the comment period, SCE conducted a virtual study plan meeting on November 14, 2023 with stakeholders to: (1) clarify SCE's PSP; (2) discuss information gathering or study requests from stakeholders; and (3) attempt to resolve any outstanding issues with respect to SCE's PSP. To address State Water Resources Control Board comments received at the Study Plan Meeting, Technical Study Plan AQ 2 – Water Quality/Water Temperature has been revised to include methylmercury fish tissue sampling.

This document identifies study requests received on the PSP and SCE's response (Section 2); presents SCE's RSP, including defining the process for study implementation and reporting (Section 3); and describes the Initial and Updated Study Reports and meeting schedule (Section 4).

The RSP and other Project relicensing documents can be obtained from FERC's website at https://www.ferc.gov/ferc-online/elibrary or SCE's Kern River No. 1 Hydroelectric Project relicensing website at www.sce.com/kr1.

2.0 COMMENTS RECEIVED ON THE PROPOSED STUDY PLAN

The following entities filed written comments on the PSP:

- FERC Staff
- National Park Service
- American Whitewater
- Leah Carter

Attachment A provides a copy of the comment letters filed on the PSP.

Based on comments on the PSP, SCE addressed specific study plan comments either as a modification to the previously filed PSP, or by providing a rationale as to why a comment or new study request was not adopted (Table 1). The RSP includes revisions to the following five Technical Study Plans based on comments received:

- AQ 2 - Water Quality/Water Temperature
- REC 2 – Recreation Facility Use Assessment
- REC 3 – Whitewater Boating
- TERR 1 – Botanical Resource
- TERR 2 – Wildlife Resources

All other Technical Study Plans remain unchanged from the PSP filed with FERC On October 17, 2023.

3.0 REVISED STUDY PLAN

The RSP for the Project relicensing includes the following Technical Study Plans listed by resource area and included in Appendix B-1 of this document.

Aquatic Resources

- AQ 1 – Hydrology
- AQ 2 – Water Quality/Water Temperature
- AQ 3 – Fish Population

Cultural and Tribal Resources

- CUL 1 – Built Environment
- CUL 2 - Archaeology
- TRI 1 - Tribal

Land Resources

- LAND 1 – Road and Trail Condition Assessment
- LAND 2 – Erosion and Sedimentation

Recreation Resources

- REC 1 – Recreation Facility Condition Assessment
- REC 2 – Recreation Facility Use Assessment
- REC 3 – Whitewater Boating

Terrestrial Resources

- TERR 1 – Botanical
- TERR 2 – Wildlife

3.1 CONTENT AND ORGANIZATION OF TECHNICAL STUDY PLANS

The following presents the general content and organization of the Technical Study Plans contained in Appendix B-1:

- Potential Resource Issues – This section identifies the environmental or cultural resource issues that are specifically addressed in the Technical Study Plans.
- Project Nexus – This section describes potential direct and indirect effects of Project operation and maintenance activities on environmental and cultural resources.
- Relevant Information – This section describes available information that was reviewed to determine resource study needs.
- Potential Information Gaps – This section identified information gaps that the study will fill.
- Study Objectives - This section describes the specific study objectives or goals of the study.

- Extent of Study Area – This section describes the specific area to be studied and clearly identifies the limits of the study area based on the potential Project Nexus.
- Study Approach – This section provides a detailed description of the study elements and methodologies proposed to meet each study objective.
- Reporting – This section identifies how the study methods and results will be documented and distributed to stakeholders.
- Schedule – This section presents a detailed schedule for implementation of each study including data collection and stakeholder consultation; data analysis and technical memo preparation; draft technical memo distribution; stakeholder review and comment period, comment resolution, and final technical memo distribution.

3.2 OTHER TECHNICAL STUDY PLAN COMPONENTS

The following sections describes three additional study plan components that apply to all of the Technical Study Plans. These components are not addressed individually within each Technical Study Plan.

3.3 RELEVANT RESOURCE AGENCY JURISDICTION/MANAGEMENT GOALS

Table 3 identifies relevant resource agency jurisdiction/management goals related to the operation and maintenance of the Project. This list reflects the general content and range of management goals that may be under consideration for the Project relicensing. For each goal, the corresponding study plan(s) are identified that would result in the collection of sufficient information to adequately address resource agency management goals.

3.4 CONSISTENCY WITH GENERALLY ACCEPTED PRACTICE IN SCIENTIFIC COMMUNITY

The study methodologies (including data collection and analysis techniques, field schedules, and study durations) identified in the RSP are consistent with generally accepted practice in the scientific community. The RSP was collaboratively developed with technical experts representing the licensee, federal and state resource agencies, Native American tribes, non-government organizations and the public. Many of these technical experts have experience in multiple relicensing proceedings in California. The scope of each Technical Study Plan provided in Appendix B is consistent with common approaches used for other relicensing proceedings in California and the nation and, where appropriate, reference specific protocols and survey methodologies.

3.5 CONSIDERATION OF LEVEL OF EFFORT AND COST

The overall objective of the Technical Study Plans contained in Appendix B is to develop sufficient information to identify potential Project effects and to develop new license conditions that reasonably balance multiple resource interests. The approach of each Technical Study Plan was evaluated first to verify that the desired information was focused on potential effects associated with the Project (i.e., Project Nexus), second to confirm that the information collected would substantially influence decisions on new license conditions (i.e., clear linkage between information obtained and decision process), and third to substantiate that the study approaches and resulting level of efforts were

consistent with generally acceptable practices in the scientific community. The Technical Study Plans included in Appendix B meet these evaluation criteria. Table 4 presents the estimated level of effort and cost for completion of each Technical Study Plan.

The overall study plan development schedule is included in Table 5.

3.6 COMMENT ON THE REVISED STUDY PLAN

In accordance with FERC's Process Plan and Schedule contained in Appendix A of SD2, any individual or entity interested in submitting comments on the RSP must do so by February 29, 2024. FERC encourages electronic filing using FERC's eFiling at https://ferconline.ferc.gov/FERC Online.aspx. Commenters can submit comments using the eComment system at https://ferconline.ferc.gov/QuickComment.aspx.

Within 30 days of filing this RSP, FERC will issue its Study Plan Determination (March 15, 2024).

3.7 STUDY PLAN IMPLEMENTATION AND REPORTING

SCE has a well-defined process for the manner and extent that information obtained during implementation of each Technical Study Plan will be provided to stakeholders. Each Technical Study Plan contains a detailed schedule for data collection and analysis, development and distribution of draft technical memos, and stakeholder review and comment. Table 6 provides an overview of these activities for each Technical Study Plan. In general, a 90-day comment period is provided for stakeholder review of each draft technical memo. An additional 60- to 90-day period has also been allocated in the schedule to resolve stakeholder comments on the draft technical memos and to develop and distribute the final technical memos.

In addition to formal distribution of draft and final technical memos, SCE will present an overview of the content and key findings of each technical memo to stakeholders during regularly scheduled technical meetings. The timing of these meetings will be e-mailed to stakeholders in advance and posted on SCE's relicensing website at www.sce.com/kr1.

4.0 INITIAL AND UPDATED STUDY REPORTS AND MEETINGS

During study implementation, SCE will file an Initial Study Report and the Updated Study Report (on March 17, 2025 and March 16, 2026, respectively) with FERC describing the overall progress in implementing the Technical Study Plans, including data collected to date, any deviations in technical approaches or schedules, and a proposed schedule for completing the remaining study plan components. The Initial and Updated Study Reports will also include a description of any proposed modifications to the approved studies or new studies proposed by SCE.

Within 15 days after filing the Initial Study Report and Updated Study Report, SCE will hold a meeting with stakeholders to discuss the study results and SCE's or other participant's proposals, if any, to modify the Technical Study Plans Within 15 days after each of these meetings, SCE will file a meeting summary, including any modification to ongoing studies or new studies proposed by SCE and the rationale for not adopting any stakeholder requests, if applicable. The timing of these activities will be e-mailed to stakeholders in advance and posted on SCE's relicensing website at www.sce.com/kr1.

TABLES

Table 1. Stakeholder Study Requests and Associated SCE Responses

Request	SCE Response
Federal Energy Regulatory Commission Request Filed: January 5, 2024	
REC 2 – Recreation Facility Use Assessment Under the section Study Approach, the proposed study plan describes methods to estimate and characterize use at day use facilities and undeveloped areas that are different from methods proposed to estimate and characterize use on project trails. Specifically, vehicle counts and opportunistic in-person surveys are proposed at each day-use facility and undeveloped area, while consultation and survey-boxes are proposed for project trails. Please explain the methodological rational for selecting these different approaches, including: why project trails would not receive vehicle counts or in-person survey efforts, and	**Response FERC-1:** The geography of the bypass reach is characterized by steep and rugged topography, with SR 178 dominating the available area between the river and the canyon walls. As such, there are limited opportunities at the locations where the Project trails of focus intersect SR 178 (the 'trailheads'). None of the Project trails are formally signed, and those that are accessed via Project roads (e.g., the Democrat Gage Trail, Dougherty Creek Trail and Stark Creek Trail) are behind locked Project and/or Forest Service gates. There is no passing lane along SR 178 and most locations along the highway that offer an opportunity to pull to the shoulder are emergency pull-outs; not designated parking spots and not intended for long-term occupation. Refer to "Photos" at the end of the REC 2 TSP, Photos 11-20 for photos of the potential parking areas near access points to the Project trails. Due to these circumstances, vehicle counts at pull-outs along SR 178 in the relative vicinity of Project trailheads would not be expected to yield data that could be used to accurately characterize use of Project trails. In addition, vehicle counts at locations where parking is available would not readily distinguish between visitor vehicles that may have parked to access or view the river (presumably the majority of vehicles), from vehicles of visitors that parked to use the trails. For example, parking opportunities along the shoulder of the highway near the Upper Richar Day Use Area would largely be presumed to be overflow parking for the day use area (according to the Forest Service, the area is often used to capacity on weekends[1]), or to avoid paying the $12 day-use fee charged to park within the developed recreation area. These same areas may be occupied by vehicles of visitors who are using the Stark Creek Road to access the Dougherty Creek or Stark Creek Trails (both uphill and away from the river). However, based on lack of signage at the roadside and limited recreation destinations available from the Stark Creek Road or either of the trails, it is reasonable to assume that most occupied parking spaces in the vicinity of the Upper and Lower Richbar Day Use Areas are those of visitors accessing the river. Therefore, while vehicle counts are a reasonable methodology to estimate the intensity of day use along the river, that methodology is not appropriate to estimate use of Project trails. Rather, and based on stakeholder input, SCE is proposing to capture information about trail use through self-survey boxes installed along the Project trails of focus. Additionally, in response to stakeholder input, SCE has modified the REC 2 TSP to supplement and confirm the accuracy of data collected through the proposed self-survey boxes along the Project trails through the use of trail cameras, pending Forest Service approval. See revised REC 2 Study Approach. In addition QR code will be included as part of the signage installed on the front of the self-survey boxes. Using the QR code, trail users will be able to complete the survey form online (if they have cell phone reception at the location) or take a picture of the QR code and complete the survey form following their trip. The questions in the online survey form will be the same as the questions in the self-survey form provided at each trail. As noted in the REC 2 TSP, SCE will consult with the Recreation Technical Working Group (TWG) to finalize the questions in the survey form. Finally, the REC 2 TSP has been modified to include the placement of a physical, tamper proof, self-survey box at each of the four developed recreation sites to supplement the information proposed to be gathered during the vehicle counts and opportunistic in-person surveys.
How consultation with parties who frequent the project trails would result in accurate use estimates and characterization. In the absence of a clear understanding of methodological considerations, we cannot determine if the study will accurately capture the necessary recreational use data.	**Response FERC-2:** As discussed in the REC 2 TSP under Study Approach, the proposed methodology for characterizing use of Project trails (identified over the course of three meetings with the Recreation TWG), is to install tamper-proof survey boxes along each of the Project trails. The intention of the self-survey boxes is to establish information about the frequency, intensity, seasonality, and type of use that Project trails receive (e.g., the date, time of use and number of people in the visitor party, method of travel [walking, biking or horseback riding], and destination/purpose of activity. SCE will consult with the Recreation TWG to finalize the questions in the survey form. No in-person consultation with trail users is proposed because existing information indicates that trail use is limited such that the efforts to station occasional survey technicians to intercept users would likely result in little or no data collection. As such, remote collection methods designed to gather information from the intermittent user are likely to yield more data. As noted above, and based on stakeholder comments filed with FERC, SCE has modified the REC 2 TSP to supplement and confirm the accuracy of

[1] Forest Service (United States Forest Service). 2022. Sequoia National Forest - Kern River Ranger District (usda.gov). Accessed: November 2022. Available online: https://www.fs.usda.gov/recarea/sequoia/recarea/?recid=79571

Request	SCE Response
	data collected through the physical self-survey boxes, the use of trail cameras, and providing QR codes. SCE has engaged in consultation with the Sequoia National Forest regarding the use of trail cameras and physical self-survey boxes. Additional approvals and outreach with the regional Forest Service office will be required to prior to installation survey boxes and cameras.
TERR 1 – Botanical Resources Under the section, Extent of Study Area, the proposed study area for riparian vegetation alliances, special aquatic features, special-status plants, and non-native invasive plants is the [area within the] FERC project boundary (excluding underground project features); 10 feet on either side of project access trails; and the bypassed reach.	**Response FERC-3:** To clarify, the study areas described in the TERR 1 TSP are as follows: • "For **vegetation alliances**, the study area is 1 mile around Project facilities (see Table TERR 1-1)." • "For **riparian vegetation alliances and special aquatic features**, the study area is the FERC Project boundary (excluding underground Project features); 10 feet on either side of Project access trails located outside the FERC Project boundary; and the bypass reach." • "For **special-status plants and NNIP studies**, the study area is the FERC Project boundary (excluding underground Project features) and 10 feet on either side of Project access trails located outside the FERC Project boundary."
Please clarify if the proposed study area includes lands located above underground project features and specify within what distance on either side of the bypassed reach would the study document these botanical resources.	**Response FERC-4:** The study area for vegetation alliances is sufficiently broad that it includes the lands overlying underground features; therefore, vegetation alliances will be mapped in areas overlying underground facilities. The TERR 1 TSP Extent of Study Area has been modified to clarify that the study areas for 1) riparian vegetation alliances and special aquatic features and 2) special-status plants and NNIP studies exclude underground Project features *and* lands overlying the underground Project features. The study areas overlying underground Project features (e.g., underground tunnels) are excluded because SCE does not conduct project operations and maintenance activities in these areas.
Additionally, please explain the methodological rationale for selecting the proposed 10-foot buffer around access trails as well as any proposed buffer distance selected for the bypassed reach.	**Response FERC-5:** A 10-foot buffer around Project access trails located outside of the FERC Project boundary was selected to encompass the maximum area where SCE implements routine maintenance activities (e.g., vegetation trimming and trail maintenance) plus a protective buffer. The bypass reach is located within a defined bed and bank, and SCE will map the full extent of riparian habitats along the reach. Information on riparian habitat along the bypass reach will be used to analyze the relationship between river flows and the location and extent of riparian habitat. SCE does not conduct routine maintenance activities (e.g., vegetation trimming) along the bypass reach; therefore, maintenance activities would not affect resources in these areas.
Lastly, the proposed study plan states "for surveys at or around project facilities that are located outside of the FERC project boundary and on private property…". Please describe which project facilities are currently located outside of the project boundary.	**Response FERC-6:** Refer to Map 1 a–g for information on facilities that currently lie outside the FERC Project boundary. This includes five trails, two adits, a river gage, a stilling well, and a gaging cableway. SCE intends to modify the Project boundary to incorporate these facilities in the License Application as part of the relicensing proceeding.
The *Study Approach* section states in order to characterize the relationship between the riparian vegetation and flow conditions in the bypassed reach, that "up to 10 cross-sections" would be established "at representative locations along the bypassed reach". However, the plan does not explain for what environmental conditions (e.g., flows, vegetation types, etc.) the cross sections would be representative. The plan also does not explain if 10 is the total number of potential cross sections, or if 10 or fewer would be assessed for each type of representative environmental condition to be selected. Therefore, please describe any proposed methods and rationale for the selection of representative cross sections along the bypassed reach, including the number of cross sections.	**Response FERC-7:** The TERR 1 TSP Study Approach has been updated to provide additional methodology for selection of cross-sections. SCE plans to select no more than 10 total cross sections.

Request	SCE Response
The proposed study states that focused surveys for special-status plants and non-native, invasive plant species would be conducted by implementing field survey techniques including zigzag patterns, random meandering, and linear transects in the study area. However, the plan does not describe the level of effort that focused surveys would be conducted within the study area. Therefore, please provide more information on the following: the number, length/area, and type of surveys/transects (e.g., linear, zigzag) to be implemented, including the basis for the selected survey type; the number of surveyors; the minimum amount of time allocated per survey transect/area; where survey areas or transects would be located, including the basis for selecting their location (e.g., equally distributed across the study area and/or in representative vegetation alliances, specific habitat types, etc. mapped in the habitat assessment phase).	**Response FERC-8:** Botanical surveys will be conducted consistent with the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018), which requires biologists to "conduct botanical field surveys using systematic field techniques in all habitats of the project area to ensure thorough coverage. The level of effort required per given area and habitat is dependent upon the vegetation and its overall diversity and structural complexity, which determines the distance at which plants can be identified. Conduct botanical field surveys by traversing the entire project area to ensure thorough coverage, documenting all plant taxa observed." The text of the TERR 1 TSP Study Approach, Special-Status Plants, has been updated to clarify proposed survey methods. Consistent with the CDFW protocol, study methods do not include vegetation sampling methods. Instead, a team of two botanists will cover 100 percent of the study area on foot, excluding areas that cannot be safely accessed or for which permission to enter has not been granted by the property owner. These areas will be "surveyed" with binoculars and all plants recorded, to the degree possible. In terms of level of effort, SCE has allocated approximately 420 labor hours for the team of two botanists to complete the surveys to document special-status plants and NNIPs. As described in the CDFW protocol, surveyors would spend more time in structurally complex habitat types (e.g., riparian habitat occurring where trails cross tributary streams), and less time in rocky, arid grassland habitats that support less diversity and are structurally less complex.
TERR 2 – Wildlife Resources If the proposed habitat assessment study phase indicates suitable habitat is present for a federally listed or special-status species, please clarify if additional data collection would be conducted, such as ground-truthing identified habitat and/or focused surveys. Also, describe any pre-defined conditions/criteria that would trigger additional data collection.	**Response FERC-9:** SCE will conduct focused surveys for special-status salamanders (Kern canyon slender salamander, relictual slender salamander, and yellow-blotched salamander) and special-status bats (pallid bat, Townsend's big-eared bat, spotted bat, western mastiff bat, western red bat, and fringed myotis). Refer to Table 2 of this document, Survey Methods for Special-Status Wildlife Species Known to Occur or Potentially Occur in the Vicinity of the Kern River No. 1 Hydroelectric Project, for a list of other federally listed and special-status species known to occur or potentially occurring in the study area and clarification on additional data that would be collected for each species. The TERR 1 TSP Study Approach, Special-Status Plants, and TERR 2 TSP Study Approach, Special-Status Wildlife, have been modified to include additional data collection described in Table 2. U.S. Fish and Wildlife Service attended the Terrestrial TWG meetings to review existing information on wildlife resources potentially occurring in the study area and proposed Terrestrial TSPs. As part of these meetings, additional information was obtained on species and their habitat in the study area. The agency comments were addressed in the draft Terrestrial TSPs provided to FERC in the Proposed Study Plans.
For staff to understand if sufficient existing information is available, please specify which federally listed species potentially occurring in the project area you do not propose to conduct focused, species-specific surveys and describe the basis for why you determined such surveys are not necessary, including any specific documentation of consultation with FWS.	**Response FERC-10:** Refer to Response FERC-9.
Describe the level of effort for the proposed reconnaissance surveys including: the number, length, and type of survey transects (e.g., linear, zigzag); number of surveyors; the minimum amount of time allocated per survey transect; where transects would be located, including the basis for selecting their location (e.g., equally distributed across the study area and/or in representative vegetation alliances/wildlife habitat mapped in the habitat assessment phase).	**Response FERC-11:** A team of two botanists will conduct the wildlife reconnaissance survey by covering the entire study area on foot and will not use survey transects. For areas that cannot be safely accessed or for which permission to enter has not been granted by the property owner, the botanists will "survey" using binoculars, to the degree possible. The TERR 2 TSP Study Approach has been clarified to state that reconnaissance survey efforts will focus on habitats potentially supporting special-status species to provide time to identify and document species-specific habitat features, as detailed in Table 2 of this document, Survey Methods for Special-Status Wildlife Species Known to Occur or Potentially Occur in the Vicinity of the Kern River No. 1 Hydroelectric Project. In terms of level of effort, SCE has allocated approximately 120 hours for a team of two biologists for ground-truthing of vegetation alliances/wildlife habitats (as part of the TERR 1 vegetation alliances study) and 140 labor hours for the team of two biologists to complete wildlife reconnaissance surveys. Incidental observation of wildlife species will also be collected during the TERR 1 botanical surveys as well as other surveys conducted to support other resource areas (Aquatic, Cultural, Land, and Recreation).

Request	SCE Response
Provide the time of day and conditions (e.g., weather) when surveys would and would not be conducted.	**Response FERC-12:** The TERR 2 TSP Study Approach, Special-Status Wildlife, has been updated to state that wildlife reconnaissance surveys would be conducted in the period between sunrise and sunset and would not be conducted during weather conditions that affect detectability (i.e., snow, sleet, or rain; high winds; extreme heat, etc.).
Describe any specific methods that would be used for the proposed identification of bird nests within the study area (e.g., determination of nest status, nest searching methods, etc.).	**Response FERC-13:** Refer to Table 2 of this document for a description of specific methods for identification of bird nests in the study area. The TERR 2 TSP Study Approach, Special-Status Wildlife, has also been modified to include a description of these methods.
The proposed study would document the configuration of project powerline poles and evaluate their consistency with Avian Power Line Interaction Committee (APLIC) guidelines. APLIC guidelines are very comprehensive in scope and include recommendations for numerous types of electrified structures and configurations with consideration to their geographic location, surrounding topography, and adjacent vegetation. The proposed study does not specify what APLIC guidelines would be reviewed and documented. Therefore, please describe the specific APLIC guidelines (e.g., phase-to-phase spacing, insulators, siting of lines, etc.) the study would document on project powerlines as well as other electrified project structures.	**Response FERC-14:** The TERR 2 TSP currently states that Project powerlines in the study area will be evaluated for consistency with APLIC guidelines. There are only two Project powerlines in the study area (the Intake Gatehouse to Flume No. 1 Powerline and the Powerhouse to Forebay Communication / Powerline). Based on additional consultation with SCE field staff, one additional project facility, the switchyard located at the Kern River No. 1 Powerhouse, has been added to the TERR 2 TSP, and will also be evaluated to determine whether energized structures are present that may pose a potential risk for avian electrocution (Page 9, Evaluation of Project Powerline Pole Configurations). The TERR 2 TSP Study Approach, Evaluation of Project Powerline Pole Configurations, has been modified to include more detailed methodology for evaluation of powerlines consistent with “Suggested Practices for Avian Protection on Power Lines” (APLIC 2006).
The proposed study plan states that past avian electrocutions and mortalities on project powerlines would be documented based on SCE and resource agency consultation. No further information is provided. Please describe what sources of information would be reviewed, including whether standardized monitoring or incidental observations of avian electrocutions and mortalities along the powerlines have been implemented to identify potential hazards to birds.	**Response FERC-15:** The TERR 2 TSP Study Approach, Evaluation of Project Powerline Pole Configurations, has been modified to include a list of sources to be reviewed and agencies to consult for information on past avian electrocutions in the study area. There are only two relatively short powerlines associated with the Kern No. 1 Project. SCE conducts incidental monitoring as part of routine operations and maintenance and reports incidents consistent with SCE’s corporate Avian Protection Plan.
The *Extent of Study Area* section states that the proposed study area for wildlife reconnaissance surveys would be the FERC project boundary (excluding underground project features) and 10 feet on either side of project access trails. Please clarify the proposed extent of the study area as we also request under item 2 above under *TERR 1 – Botanical Resources Study*.	**Response FERC-16:** Refer to Map 1 a–g for information on Project facilities that lie outside the FERC Project boundary. A 10-foot buffer around Project access trails located outside the FERC Project boundary was selected to encompass the maximum area where SCE implements routine maintenance activities (e.g., vegetation trimming and trail maintenance) plus a protective buffer.
U.S. Department of the Interior, National Park Service **Request Filed: January 9, 2024**	
Proposed Study Plan, Table 2. Stakeholder Study Requests and Associated SCE Responses The Draft REC 2 Technical Study Report4 proposed to collect trail use data on Project trails using two data collection methods: self-survey forms using QR codes and trail cameras. The NPS recommended that study include an option for trail users to complete paper self-survey forms and submit them in drop boxes. In response (Response NPS-4), the Applicant stated that they revised the study to use the paper self-survey forms and drop boxes in place of the QR codes and trail cameras. The NPS intended that all three options (drop boxes with paper forms, QR codes, and trail cameras) should be used to collect a more comprehensive set of data. The trail cameras would collect quantitative data (i.e., number of trail users) and user type (e.g., hikers, mountain bikers, equestrian, etc.) and the surveys would gather data on demographics and qualitative information (e.g., recreation user preferences, perceived future needs, etc.).	**Response NPS-1:** Refer to Responses FERC-1 and FERC-2.
The Applicant should consult with the Sequoia National Forest on the use of trail cameras on lands that they administer. While there was recent concern over the use of trail cameras in developed recreation sites (i.e., campgrounds) on Sequoia National Forest lands along the North Fork Kern River used for the Kern River No. 3 Project (P-2290), such concerns may not apply to trails and undeveloped recreation sites. However, if Sequoia National Forest expresses concerns with trail camera use, an option would be to use infra-red trail counters. These devices are not connected to a camera and only count hikers	**Response NPS-2:** Refer to Responses FERC-1 and FERC-2. SCE has consulted with the Sequoia National Forest regarding the use of trail cameras and self-survey boxes. Additional approvals and outreach with the Regional Forest Service office will be required prior to installation of trail cameras and self-survey boxes. SCE staff familiar with the use of infra-red trail counters have noted that they proved problematic as a method to count trail users because they pick-up all movement along trails, including animal movement and, therefore, make an accurate trail use count difficult.

Request	SCE Response
who pass by them. They are used on USFS lands as part of the National Visitor Use Monitoring (NVUM) program, including on Sequoia National Forest lands. Since trail counters would not collect data on user types, they need be supplemented with calibration counts. These would consist of study technicians staying at each of the trail sites for a selected time during a randomly selected number of days per month over the study period. The technician would record the number and type of trail users observed and direction of travel (i.e., if they are starting their hike/ride or finishing it). The data gathered would be used to characterize the number of users captured by the trail counters.	SCE is not proposing stationing in-person survey technicians along any of the Project trails because existing information indicates that trail use is limited and efforts to station occasional survey technicians to intercept users will result in little or no data collection. As such, remote collection methods designed to gather information from the intermittent user are likely to yield more data. The following information about the Project trails supplements the PAD and REC 2 TSP with the intention of providing stakeholders more specific information about the trails of interest. Project trails are trails established by SCE to conduct routine operations and maintenance of SCE facilities. Of the six trails identified in the REC 2 TSP, five trails extend east from SR 178 uphill (away from the river) to the Project that carries water diverted from the Democrat Dam Intake to the KR1 Powerhouse. In many locations, the steep topography results in significant exposure and difficult trail conditions. These trails are all less than 1-mile in length (with the exception of Stark Creek Trail at 1.15 miles). Three trails intersect directly with SR 178 including the Steel Flume Trail[2], Cow Flat Creek Trail, and the Lucas Creek Trail. Dougherty Creek and Stark Creek Trails originate from Stark Creek Road, an existing Project Access Road that intersects directly with SR 178. The Project trail names are used by SCE to distinguish among access routes and are not official or publicly referenced names. The Democrat Gage Trail is the only Project trail that extends toward the river. Visitors access the Democrat Gage Trail by walking or biking down Democrat Dam Road, an existing paved Project road behind a locked gate, which is accessible via a large pull-out (with space for 10 or more cars). The pullout is adjacent to SR 178 approximately 0.75-mile down canyon from the public road that leads to the Democrat Raft Take-out Boating Site. Democrat Dam Road is approximately 1 mile in length and terminates at the Democrat Gage Trailhead. This trail provides direct access to the Kern River (approximately 500- feet) and extends downstream 0.5-miles to a Project gage location. Due to the steep and rugged topography of the lower Kern Canyon, with SR 178 dominating the narrow space between the river and the canyon walls, there are limited or no parking opportunities where Project trails intersect SR 178 (the 'trailheads'). None of the trails are formally signed, and those that are accessed via Project roads (i.e.., the Democrat Gage Trail, Dougherty Creek Trail and Stark Creek Trail) are behind locked gates. There is no passing lane along SR 178 and most locations along the highway that offer an opportunity to pull to the shoulder are utilized for passing and/or emergency pull-outs; not designed as parking spots and not intended for long-term occupation. With the exception of the Democrat Gage Trail, none of the trails offer access to a destination of recreational interest other than, in some cases, the "Powerhouse Trail," a Forest Service trail. The spatial location of the Powerhouse Trail is based on GIS layers provided by the Forest Service. However, based on review of recent aerial imagery and conversations with SCE staff that frequent the area, the Powerhouse Trail alignment, as shown in the GIS layer, is mostly informal and not necessarily a contiguous trail. In some locations it is obvious and in others the Powerhouse Trail consists of game trails – a trail that lacks vegetation growth due to the frequent passage of animals. Refer to PAD Maps REC 2-1a- REC2-1d for the relative location of the Powerhouse Trail.
REC 2 – Recreation Facility Use Assessment **<u>Project Nexus</u>** In addition to the USFS day use areas (i.e., developed sites) located adjacent to the Democrat Dam impoundment at the bypass reach, recreation use at undeveloped sites along SR 178 also have a nexus to the Project. This includes sites providing access for river-related recreation (e.g., whitewater boating, fishing, hiking, picnicking, swimming, etc.) and hiking opportunities offered by Project trails that connect with USFS trails and unmarked trails. All such recreation activities have a nexus to Project operations: river flows are influenced by the Project, which affect river-related recreation and Project trails provide access for hikers to connect to USFS trails and provide opportunities for extended hikes.	**Response NPS-3:** Comment noted.

[2] In December 2023 field staff identified that the Steel Flume Trail has been decommissioned and that GIS layers identifying the trail are based on remanent data. Final determination as to the existence and accessibility of the trail will precede implementation of the study.

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<u>Study Approach</u> **Characterize Recreation Use at Developed Recreation Facilities and at Undeveloped Recreation Areas Along the Bypass Reach** The NPS requests that the proposed study of recreation use along the bypass reach be modified to ensure that all user groups are surveyed systematically, and sample sizes are statistically significant.	**Response NPS-4:** The REC 2 TSP Study Approach has been modified to include additional detail describing the systematic methodology that will be used to conduct opportunistic in-person surveys at both developed recreation sites and at undeveloped locations identified as potential river access locations.
The PSP states that "opportunistic in-person surveys" would be delivered by the surveyor completing the vehicle counts, which would be conducted during two of three randomly selected four-hour shifts. The PSP does not provide details on the survey delivery methods, such as the duration the surveyor will be at each study site or methods used to contact recreationists. The study approach merely states that "survey technicians will be instructed to opportunistically intercept recreation users in parking lots or other safe-to-access locations during the vehicle counts." The PSP should provide additional information on how the "opportunistic" in-person surveys will be conducted: Will the intercept surveys be conducted when the surveyors are driving both directions (upstream and downstream) during each four-hour shift?	**Response NPS-5:** Refer to Responses NPS-4 and REC 2 TSP.
How long will the surveyors stay at each of the developed and undeveloped recreation sites to conduct the intercept surveys?	**Response NPS-6:** Refer to Responses NPS-4 and REC 2 TSP.
Will the surveyor approach recreationists when they are near their vehicles, or will they seek out recreationists to survey?	**Response NPS-7:** Refer to Responses NPS-4 and REC 2 TSP.
How will the opportunistic survey method ensure that an appropriate number of random surveys are collected for the results to be statistically significant?	**Response NPS-8:** The objective of the REC 2 TSP as it relates to developed public recreation facilities and dispersed recreation locations along the bypass reach is to characterize use. The methodology proposed to characterize use is to first estimate weekday, weekend, and holiday use given the information available from the Forest Service and/or their concessionaire (Rocky Mountain Recreation) and then document the number of times capacity was met or exceeded based on use of parking spaces. If sufficient data is not available to characterize use, then SCE would conduct on-ground vehicle counts and opportunistic in-person surveys. The survey methodology proposes surveys during the times when recreation day-use facilities are open and during the season that the Forest Service has indicated is most popular for visitors (April through September). The methodology proposes to conduct surveys on weekends, and weekdays each month, as well as during each of the holiday periods. These are sufficient methods to meet the objectives of the REC 2 TSP.
Developed Recreation Sites The vehicle counts and in-person intercept surveys are appropriate methods to use at the four developed recreation sites in the study area. These sites have available designated parking, are often filled to capacity, and can provide surveyors a safe area to work. To ensure an adequate number of recreationists are randomly selected to complete the survey (i.e., a statistically significant sample size), the surveying technique should be systematic (i.e., not opportunistic). This would be achieved by setting a specific amount of time surveyors spend at each of the four developed recreation sites and determining a general location where they intercept recreationists (e.g., stay near the parking lot exit and only survey those who have completed their recreation activity). In addition to conducting vehicle counts and in-person intercept surveys, also conduct spot counts and record the number of recreationists and types of recreation activities.	**Response NPS-9:** The REC 2 TSP Study Approach has been modified to include additional detail describing the systematic methodology that will be used to conduct opportunistic in-person surveys at both developed recreation sites and at undeveloped locations identified as potential river access locations.
Undeveloped Recreation Sites Vehicle counts and in-person intercept surveys would not likely gather sufficient data on recreation users (e.g., whitewater boaters and day users) at undeveloped sites along the bypass reach. This is due to the following reasons:	**Response NPS-10:** The objective of the REC 2 TSP as it relates to developed public recreation facilities and dispersed recreation locations along the bypass reach is to characterize use. As noted in the PAD, recreation facilities and improvements are relatively limited along the lower Kern River owing to the steep and rugged topography, swift flowing water, and the proximity of the highway. The Forest Service discourages swimming or wading in the bypass reach due to powerful currents, cold water temperatures, and underwater hazards.[3] Heading east from Bakersfield on SR 178 a sign warns travelers as they enter the canyon about lives lost on the Kern River since 1968. The sign indicates there have been 325 lives lost on the river as

[3] Forest Service (United States Forest Service). 2022. Sequoia National Forest - Kern River Ranger District (usda.gov). Accessed: November 2022. Available online: https://www.fs.usda.gov/recarea/sequoia/recarea/?recid=79571

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There are insufficient parking areas and/or unsafe conditions for the surveyor to pull over to conduct the surveys.	of June 2023. Despite the limited space, steep topography, and swiftness of the water along the bypass reach this stretch of river is a recreational attraction in the vicinity and visitors come to engage in streamside activities including picnicking, fishing, swimming and wading. Vehicle counts at undeveloped locations with potential river access would yield important information about frequency and intensity of use along the reach outside of the developed recreation sites. SCE has identified five potential river access points where there is parking adjacent to the highway sufficient to accommodate between two and 10 vehicles. Refer to Photos 1-10 in the REC 2 TSP for images of the parking areas near locations with potential river access. The actual undeveloped locations identified as potential river access points for inclusion in the study will be determined in consultation with the Recreation TWG. SCE does not anticipate that these locations will provide a safe place to conduct opportunistic in-person surveys during each survey shift due to the lack of parking; however, if sufficient parking along the roadside shoulder is available to pull off and survey visitors parked there, the REC 2 TSP directs the technicians to conduct the survey. Specifically, the REC 2 TSP has been modified to include additional detail describing the systematic methodology that will be used to conduct opportunistic in-person surveys at both developed recreation sites and at undeveloped locations identified as potential river access locations.
Recreationists would not likely be near their vehicles when the surveyor is conducting spot counts but would be dispersed away from their vehicles. This is especially true for whitewater boaters who quickly depart from their vehicles to carry their equipment to the river, and then put-in on the river. It is thus likely that whitewater boaters would be adequately represented.	**Response NPS-11:** REC-2 study objectives are focused on characterizing recreation use at developed recreation sites, at undeveloped river access points and along Project trails. Please refer to the Study Approach in REC-3 - Whitewater Boating which has been revised to provide information to better understand whitewater boating trends and future demand within the Lower Kern River.
The vehicle counts alone would not provide data on types of users (kayakers, anglers, picnickers, swimmers, etc.) or provide any demographic or qualitative data. The NPS recommends the following study modifications to collect recreation use and experience data at the undeveloped recreation sites in the Project bypass reach: In addition to in-person intercept surveys, use self-administered surveys in tamper-proof boxes. Determine locations for these boxes in consultation with Sequoia National Forest and American Whitewater.	**Response NPS-12:** The objective of the REC 2 TSP as it relates to developed public recreation facilities and dispersed recreation locations along the bypass reach is to characterize use. Vehicle counts would yield important information about frequency and intensity of use along the reach outside of the developed recreation sites, and opportunistic in-person surveys conducted at these sites (when safe) would generate additional information about user activities and experience. There is limited additional data of value that would be gained by adding self-survey boxes or cameras to these pull-outs. Further, there are reasons not to install self-survey boxes or cameras at these locations: 1) both self-survey boxes and cameras are subject to vandalism or damage due to the high visibility and proximity to the highway, and 2) using these areas for river access is discouraged by the Forest Service due to frequent dangerous river conditions and therefore installation of signage (such as self-survey boxes) encouraging use is problematic. Finally, because of the steep and rugged topography of the canyon and the associated limited space for parking or recreating between the highway and the river, collecting more detailed data on the use of these parking areas would not necessarily create or support future need for development or improvements of these areas.
Consult with Sequoia National Forest regarding the feasibility of using trail cameras at the undeveloped recreation sites. If determined feasible, set up trail cameras at main access points.	**Response NPS-13:** Refer to Response NPS-12.
If trail cameras are determined unfeasible, set up infrared trail counters at the undeveloped recreation access points. Supplement trail counters with calibration/spot counts.	**Response NPS-14:** Refer to Response NPS-12.
Randomly choose time and days for intercept surveys and spot/calibration counts that cover weekdays, weekends, and holidays.	**Response NPS-15:** The REC 2 TSP Study Approach has been modified to include additional detail describing the systematic methodology that will be used to conduct opportunistic in-person surveys at both developed recreation sites and at undeveloped locations identified as potential river access locations.
Study Duration The NPS recommends data collection efforts be conducted year long, with the exception of the two day-use areas that are closed November - March. Although recreation occurs along the bypass reach all year, the PSP proposes to conduct the vehicle counts and in-person intercept surveys from April-September 2024. Two of the developed recreation sites (Democrat Raft Take-out Boating Site and Upper Richbar Day Use Area) are open year-long and should be surveyed year-long. The other two developed recreation sites (Lower Richbar Day Use Area and Live Oak Day Use Area) are open April – October and should be surveyed during this open period.	**Response NPS-16:** The REC 2 TSP Study Approach has been modified to include the collection of information at the developed recreation sites using physical tamper-proof survey boxes installed at an obvious location. Short self-survey forms within the survey boxes will be designed to collect information about user activities and user experience, including questions pertaining to angling and to aesthetic experience. SCE will consult with the Recreation TWG to finalize the questions in the survey form. The survey boxes will be installed at each of the locations for a 12-month period beginning on or around April 1, 2024 and ending 365 days later (in the spring of 2025). The survey forms will be collected by SCE staff and/or consultants every two weeks (or as needed) throughout the survey period and the self-survey boxes serviced as needed to ensure functionality.

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	In addition, the REC 2 TSP has been modified to take advantage of additional opportunities to conduct vehicle counts between October and March. Specifically, survey technicians travelling along SR 178 to service the physical self-survey boxes located at the developed recreation areas and along the Project trails of focus (approximately every two weeks or as needed) will count vehicles observed during that activity. During this time period, vehicles will be counted once, while the survey technicians are travelling west to east (upstream) on SR 178.
Recreation use data should occur year-long at the undeveloped recreation sites. Although the Project's PAD identifies that total recreation use declines considerably during the "low-use season," some activities such as fishing increase: *Fishing along the lower Kern is open all year; however, fishing does not typically begin until October when water temperatures cool. Fishing continues to be good until April, prior to increased flows from runoff. (p. 3.11-7)* The proposed study period of April – September would exclude the main fishing season. The PAD describes fishing as a the "primary recreation activity for visitors," with the majority of visitors identifying fishing as their recreation activity in the bypass reach. The PAD further states that "angling access is scattered throughout the bypass reach where highway turnouts are available." Extending the study period year-long would ensure that the best fishing periods (October – April) would be included and this primary recreation activity would be adequately represented in the study, along with other recreation activity that occurs during the "low-use season."	**Response NPS-17:** Refer to Response NPS-16.
Characterize Recreation Use at Selected Project Trails The NPS recommends that the proposed trail study provide recreationists the option to fill out self-survey forms using QR codes and setting up trail cameras in addition to the paper self-survey forms and drop boxes. Providing an option for trail users to respond to the surveys on their mobile device would likely increase the total number of surveys completed. The surveys, either completed and inserted in the drop box or filled out online, would gather data on demographics and qualitative information (e.g., recreation user preferences, perceived future needs). The survey instrument should also include questions aimed at gathering data on perceived future trail needs and demands within the Project area and surrounding communities. The trail cameras are necessary to collect quantitative data (i.e., number of trail users) and user type (e.g., hikers, mountain bikers, equestrian, etc.). First consult with the Sequoia National Forest on the feasibility of using trail cameras to document number and type of trail users. If Sequoia National Forest requests that trail cameras not be used, use infra-red trail counters to record total trail use. Since trail counters would not collect data on user types, supplement them with calibration counts. This involves study technicians staying at each trail site for a selected time during a randomly selected number of days per month over the study period and recording the number and type of trail users observed and direction of travel (i.e., if they are starting their hike/ride or finishing it). The data gathered would be used to characterize the number of users captured by the trail counters.	**Response NPS-18:** SCE has modified the REC 2 TSP to supplement and confirm the accuracy of data collected through the physical self-survey boxes via the use of trail cameras, pending Forest Service approval, and QR codes. SCE is not proposing stationing in-person survey technicians along any of the Project trails because existing information indicates trail use is limited enough that efforts to station occasional survey technicians to intercept users may result in little or no data collection. As such, remote collection methods designed to gather information from the intermittent user are likely to yield more data. Also refer to Response NPS-2.
Estimate Future Recreation Use and Demand The NPS recommends that the study examine demand for and future potential use of developed recreation trails in the Project area. There currently is a community-led effort to make hiking the Kern River Canyon more accessible by developing the Kern Gateway Trail on the south side of the canyon. This proposed trail system would incorporate the use of some Project trails, connecting them to USFS trails and creating a 15-mile trail from the mouth of the Kern River Canyon to Democrat Dam. The proposed Kern Gateway Trail would meet what the community-led group has identified as existing demand for developed trails in the Bakersfield area. The NPS Rivers, Trails, and Conservation Assistance (RTCA) program is assisting the community group with the trail concept.	**Response NPS-19:** The objective of the REC 2 TSP is to characterize existing use. The survey form will be designed with that objective in mind. SCE will consult with the Recreation TWG to finalize the questions in the survey form.
The study approach described in the PSP should be modified to gather data on the need and demand for improved trails in the Project area, especially since Project trails have the potential to help meet this demand. To do so, conduct focus group discussions with Kern Gateway Trail members, local hiking groups, and other interested stakeholders to gather existing knowledge on trail demand. Also use input from the focus group to determine means to gather data on "potential trail users" (i.e., those who would	**Response NPS-20:** The objective of the REC 2 TSP is to characterize existing use. The survey form will be designed with that objective in mind. SCE will consult with the Recreation TWG to finalize the questions in the survey form. In addition, as described in the REC 2 TSP, to obtain estimates of overall trail use, characterize type of user (e.g., mountain biking, horseback riding, hiking, other), and gather information pertaining to parking, safety, and access, SCE will interview Sequoia National Forest

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hike on existing Project and connecting trails if they knew about the trails or if modifications were made to enhance access). With input from these focus groups, develop a survey to be sent to local hiking groups and other existing or potential trail users that examines the need and demand for developed trails in the Project area. In order to further understand potential use, the survey should ask trail users who have not hiked on the trails within the Project area to provide reasons why they have not done so.	recreation planners, and SCE personnel and consultants that frequent the Project area. In addition, SCE will consult with other interested stakeholders identified by the Recreation TWG such as active Kern Gateway Trail members.
American Whitewater **Request Filed: January 16, 2024**	
REC 2 – Recreation Facility Use Assessment SCE's modifications to the Study Plan in the PSP trade some qualitative survey methodologies for quantitative analysis. We suggest both direct sampling (i.e. through trail counters and game cameras) as well as survey options for qualitative and prospective future use perspectives rather than using specifically one methodology for PAD-identified Project Trails and another for dispersed use sites. FERC's request for additional information on the PSP supports this approach and it is consistent with National Parks Service and Kern Gateway Trail user perspectives as well.	**Response AWW-1:** Refer to Responses FERC-1, FERC-2 and NPS-4.
SCE will need to coordinate and obtain permission for any sampling methodologies conducted on USFS lands including any direct sampling, image collection, or camera siting. This permission should be specifically gained during the Study Planning phase of the relicensing rather than an afterthought which might occur during Study Conduct.	**Response AWW-2:** Refer to Responses FERC-1, FERC-2 and NPS-4. SCE has engaged in consultation with the Sequoia National Forest regarding the use of trail cameras and physical self-survey boxes. Additional approvals and outreach with the Regional Forest Service office will be required to prior to installation of either.
REC 3 – Whitewater Boating The REC-3 study continues to utilize language related to "the whitewater boating community" when referencing actionable items in nominating participants for focus groups, identifying physical sampling locations, and other issues. We believe that this ambiguity in participation is problematic and suggest SCE either specify a process for nomination conducted and coordinated by SCE staff or contractors, or specifically identify the Technical Working-Group members that will be consulted and contacted for each step. This might involve specifying e.g. a window and process for community members to nominate participants, a specific list of individuals and interested entities that will be contacted, or similar.	**Response AWW-3:** The REC 3 TSP Study Approach has been modified to add more specificity regarding how SCE will identify individuals from the whitewater boating community with the skill level, experience, and knowledge necessary to provide quality feedback as to the range of preferred flows, flow information needs, and whitewater use patterns.
We also suggest that representatives of interested recreation stakeholder groups, like American Whitewater, be specifically included in study inclusion criteria, rather than requiring stakeholder representatives meet the "knowledge of the section" or "direct knowledge" criteria. Access, policy and recreation community representation experience are all relevant factors in studying the project's whitewater boating access and flows regime and those perspectives should be included in focus groups despite the technical and challenging nature of the dewatered section and its current access points.	**Response AWW-4:** Refer to Response AWW-3. As detailed in the REC 3 TSP, the Recreation TWG will be consulted throughout the process of setting up and implementing the TSP, including to confirm undeveloped locations along SR 178 where there are potential river access points, to provide feedback on the proposed self-survey forms, to provide feedback on the proposed intercept survey forms, and for notice of any substantive proposed changes to the REC 3 TSP Study Approach during implementation.
We appreciate SCE's reversal on their previous indication that on-water study be precluded as an option for the prospective Level 3 study component of REC-3. The Single Flow Studies cited in SCE's PSP as conducted by American Whitewater (citations AW 2017, 2021) were not studies conducted during a FERC relicensing process and, while interesting and relevant to their specific project and design goals, should not be used as a justification for eliminating in-person or physical assessment possibilities in relicensing whitewater recreation studies. While there is a broad community understanding and history of boating within the project-affected reach, the study's Level 1 and 2 outcomes should not be presupposed and direct on-water boating might be one useful tool in a Level 3 Intensive Study. Currently the PSP indicates that Intensive Study should be On-Water while the Whittaker et al paper actually indicates several options for Intensive Study including: multiple flow reconnaissance; flow comparison surveys; controlled flow studies and/or supply and demand assessments. Information gathered in the Level 2 Limited Reconnaissance portion of the study should help to guide what type of intensive study to conduct.	**Response AWW-5:** As described in the REC 3 TSP, a Level 3 On-water Boating Assessment will be conducted only if results from the Level 1 Desktop Review and Level 2 Limited Reconnaissance are insufficient to characterize flow preferences over a variety of watercraft types. The Level 3 On-water Boating Assessment, if undertaken, will collect flow preference information directly from whitewater boaters for a variety of watercraft for the bypass reach using a single flow study for individual trips or, potentially, a controlled flow study. Consultation with the resource agencies and whitewater boating community will determine the need for, and potential to, conduct a single flow study or controlled flow study. The purpose of the studies is to improve the accuracy of identifying flow preferences for a variety of watercraft types.
The currently-described controlled flow study timeline of 2 to 3 days lead time for boater participants is not adequate. Flows from Isabella are more predictable than that and analysis of	**Response AWW-6:** The REC 3 TSP Study Approach has been modified to clarify the process by which boaters would be identified to participate in the Level 3 Study (including the single-flow study), if warranted. The modifications specify that boaters

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the hydrologic data, conversations with the Water Master, and other Level 1 & 2 study investigation steps should provide opportunity to give a much greater lead time for a controlled flow study. Two to three days advance notice for a controlled flow study greatly limits the type of paddlers that could participate and will hamper data collection.	identified to participate in the Level 1 and Level 2 Study will be contacted if the Level 3 Study is determined to be necessary and provided as much advanced notice as is possible regarding when either the single flow or the controlled flow study would take place. Because of the anticipated scarcity of boaters that may be interested in participating in either the single flow or controlled flow study, SCE's will provide advanced notice, to the extent possible, to effectively conduct the Level 3 Study.
Leah Carter **Request Filed: January 16, 2024**	
A local community group of volunteers promotes the development of the Kern River Canyon trails. This group proposed the creation of a network of trails on the south side of the Kern Canyon, starting at the mouth of the Kern River Canyon and extending 15 miles to Democrat Dam. A network of trails was already made for the hydroelectric power plant, but these trails are not all interconnected, even though they could be. The trails are not posted as public trails, even though they are on USFS land. To promote these trails as public, improved access to parking, trailhead signage, and bathrooms would need to be added. Some portions of the KGT start on trails in the Project Study Area. These Project trails continue onto Sequoia National Forest Service land. The existing sections of the Project trails should be connected to newly formed trails to create a 15-mile continuous hiking trail above the Kern River, thus providing access to the dramatic beauty of the steep Kern River Canyon walls while viewing the beautiful Kern River below the trail.	**Response Carter-1:** Comment noted.
REC 2 – Recreation Facility Use Assessment The study should include users of nearby existing trails in the Kern River Canyon, such as the Kern River Trail, Mill Creek Trail, and Remington Trail.	**Response Carter-2:** The objective of the REC 2 TSP with respect to trails is to characterize recreation use along Project trails that provide access to the lower Kern River or to an existing Forest Service trail in the vicinity of the Project. Hikers who utilize the Project trails during the 12-month survey period will have the opportunity to complete the survey form using either the physical self-survey form located in the self-survey boxes or via the QR code included as part of the self-survey box signage.
The focus groups should include local hiking groups and the Kern Gateway Trail Committee members.	**Response Carter-3:** SCE will consult with other interested stakeholders identified by the Recreation TWG such as active Kern Gateway Trail members.
The study should define in detail how opportunistic in-person surveys will be conducted.	**Response Carter-4:** Refer to Response NPS-4.
Expand the Project to include the impact of the Project on undeveloped recreation sites along SR 178 and on Project trails.	**Response Carter-5:** The objective of the REC 2 TSP as it relates to developed public recreation facilities, dispersed recreation locations along the bypass reach, and Project trails is to characterize use. Implementation of the TSP will generate information that will be used at a later part of the relicensing process to study Project impacts.
<u>Study Approach</u> Characterize Recreation Use at Developed Recreation Facilities and at Undeveloped Recreation Areas Along the Bypass Reach	**Response Carter-6:** The objective of the REC 2 TSP as it relates to developed public recreation facilities and dispersed recreation locations along the bypass reach is to characterize use.
<u>Undeveloped Recreation Sites</u> The main Project trail that is utilized is located across the highway from the Lower Richbar Picnic Area in an unmarked parking area by a cattle gate. In order to capture the most hiker input, the undeveloped site across from the Lower Richbar Picnic Area should be included.	**Response Carter-7:** Refer to Response FERC-1.
<u>Study Duration</u> The proposed study time is April-September 2024. The prime time to hike in the Canyon is when the weather is cool; therefore, the study duration should be modified to be conducted for the entire year.	**Response Carter-8:** SCE is proposing to capture information about trail use through self-survey boxes installed along the Project trails for a 12-month period. Additionally, in response to stakeholder input, SCE has modified the REC 2 TSP Study Approach to supplement and confirm the accuracy of data collected through the proposed physical self-survey boxes via the use of trail cameras, pending Forest Service approval, and QR codes. These would also be installed for a 12-month survey period (for example, April 2024-April 2025).
<u>Estimate Future Recreation Use</u> The Project trails are not marked, well-defined, or accessible; therefore, the Project trails are not well-known or widely used. If the trails were marked and accessible, more hikers would utilize the Project trails. Given this, determining future use potential is essential to capture in the study. Questions on the survey and focus groups should include potential future use. The survey and focus group questions	**Response Carter-9:** The objective of the REC 2 TSP is to characterize existing use. The survey form will be designed with that objective in mind. SCE will consult with the Recreation TWG to finalize the questions in the survey form.

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should be distributed to local hiking groups for input. Users of nearby established hiking trails should be included in the surveys and focus groups to help determine future use.	

Table 2. Survey Methods for Special-Status Wildlife Species Known to Occur or Potentially Occur in the Vicinity of the Kern River No. 1 Hydroelectric Project

Scientific/Common Name	Federal Status	Forest Service Status	State Status	Habitat	Study Methods
Terrestrial Invertebrates					
Danaus plexippus monarch butterfly	FC	—	—	Overwintering population in coastal California. In late-February or March, monarchs will disperse from wintering areas to interior California. Quality habitat includes milkweed (*Asclepias* spp.) which occur in short and tall grass prairies, livestock pastures, agricultural margins, roadsides, wetland and riparian areas, sandy areas, gardens, open forests, and woodlands.	• Monarch butterfly does not overwinter in the study area. Presence of this species during the breeding cycle would be assumed through presence of populations of its host plant, milkweed (*Asclepias* species) (USFWS 2020). • Habitat for Monarch butterfly (i.e., milkweed populations) would be mapped in conjunction with special-status plant surveys (TERR 1 TSP). • The Study Approach for TERR-1 TSP and TERR 2 TSP have been modified to state that botanists will record the following data for each population of the host plant for monarch butterfly (*Asclepias* species) identified in the study area: o GPS location o Approximate size of population (in acres/square feet) o Estimated number of individuals • In addition, any observations of monarch butterflies observed during wildlife reconnaissance surveys, or incidentally observed during other studies, would be documented consistent with methods described in the TERR 2 TSP.
Amphibians					
Batrachoseps simatus Kern Canyon slender salamander	FPT	FSCC	CT	Found in north-facing slopes in narrow canyons shaded by foothill woodland and riparian areas along creeks. Found under rocks, fallen limbs and leaf litter. Endemic to the Kern River Canyon from 1,500 to 4,000 feet in elevation. **This species is known to occur in the study area.**	Focused surveys will be conducted for special-status salamanders. Refer to the TERR 2 TSP for detailed study methods.
Batrachoseps relictus relictual slender salamander	FPE	FSCC	CSC	Found in seepages and springs in rocky areas with scanty tree cover, in a matrix of foothill woodland or riparian areas in creek bottoms. Rarely found far from surface water. Found at elevations ranging from 1,500 to 6,500 feet. **This species is known to occur in the study area.**	
Ensatina eschscholtzii croceator yellow-blotched salamander	—	FSCC	WL	Found in tributaries of lower elevation canyons. Found close to streams and under rocks and logs and become active after precipitation events between January to April. Generally found around seeps and drainages and under the canopy of trees (Germano 2006). **This species is known to occur in the study area.**	

Scientific/Common Name	Federal Status	Forest Service Status	State Status	Habitat	Study Methods

Spea hammondii
western spadefoot
	FPT	—	CSC	Prefers open areas with sandy or gravelly soils, in a variety of habitats such as mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, and mountains. Requires ephemeral rainpools without non-native predators for breeding. Up to 4,500 feet in the southern Sierra foothills.	• Habitat for the northern clade of western spadefoot includes open grassland habitat in close proximity to aquatic habitats such as temporary vernal or rain pools, sand or gravel washes, or seasonal streams (free of predators) for breeding (USFWS 2023). Individuals spend a majority of their life cycle in a torpor state in underground burrows, emerging only to breed following seasonal rains in winter and spring. Most surface activity is nocturnal. (USFWS 2023).
					• Grassland habitat for western spadefoot would be mapped in conjunction vegetation alliance studies conducted as part of the TERR 1 TSP.
					• Specific habitat elements would be evaluated during wildlife reconnaissance surveys, focusing on grassland habitats potentially supporting adjacent aquatic habitats for breeding. The TERR 2 TSP Study Approach has been clarified to state that the following data will be recorded for any suitable breeding habitat for western spadefoot (e.g., ephemeral pools or seasonal streams that are free of predators) observed during wildlife reconnaissance surveys or during the habitat evaluation for special-status salamanders:
					  ○ GPS location
					  ○ Photograph
					  ○ Description of pool or stream
					  ○ Proximity to suitable upland grassland habitats
					• Considering that this species is rarely above-ground and is nocturnal when active, spadefoot are unlikely to be observed during wildlife reconnaissance surveys. However, there is some potential for individuals to be present above-ground and detectable (particularly if calling from breeding habitats) during focused surveys for special-status salamanders, which are conducted at night following seasonal rains. Any western spadefoots incidentally observed during these surveys (or any other surveys) will be documented consistent with methods described in the TERR 2 TSP.

Reptiles					
Aniella spp. California legless lizard	—	—	CSC	Found in loose soil in sparsely vegetated areas, commonly in sandy washes, oak woodland, mixed conifer forest, and stream terraces.	• The five terrestrial reptiles potentially occurring in the study area inhabit a wide variety of habitats. During wildlife reconnaissance surveys, small-scale habitat features such as loose soils, small burrows, and areas with downed woody debris for cover would be noted. • Surveyors will look for the presence of individuals of California glossy snake, San Joaquin coachwip, and cost horned lizard during wildlife reconnaissance surveys. • Species such as the legless lizard and Sierra night lizard that prefer moister conditions and/or are nocturnal may be observable during implementation of focused surveys for special-status salamanders. • During both wildlife reconnaissance surveys and special-status salamander surveys, biologists will employ routine methodologies such as searching under downed wood, rocks, and other substrate for the presence of these species. • Any species observed during wildlife reconnaissance or during the habitat evaluation for special-status salamanders will be recorded, consistent with methods described in the TERR 2 TSP.
Arizona elegans occidentalis California glossy snake	—	—	CSC	Found in arid scrubby areas, rocky washes, grasslands, and chaparral in southern Sierra Nevada foothills and coast ranges. Ranges from the eastern San Francisco Bay area south to Baja California.	
Masticophis flagellum ruddocki San Joaquin coachwhip	—	—	CSC	Found in open, dry, treeless areas with little or no cover, including valley grasslands and saltbush scrub. Hides in rodent burrows, shaded vegetation, and under surface objects.	
Phrynosoma blainvillii coast horned lizard	—	—	CSC	Found in open areas of sandy soil in valleys, foothills, and semiarid mountains. Prefers areas of low vegetation within grasslands, forests, woodlands, and chaparral. Commonly found along sandy washes and dirt roads. The elevational range extends up to 4,000 feet in the Sierra Nevada foothills and up to 6,000 feet in the mountains of southern California. **This species is known to occur in the study area.**	

Scientific/Common Name	Federal Status	Forest Service Status	State Status	Habitat	Study Methods
Xantusia vigilis Sierra night lizard	—	—	CSC	Found in the Greenhorn mountains in the southwest Sierra Nevada. It is found in association with yucca, foothill pine, chamise, pinyon pine, and juniper. Can be found under yucca logs and other cover. Occurs at elevations of 990 to 6,800 feet. Activity may begin in early April at low elevations and last until early fall, while emergence may be retarded until late springs at higher elevations.	
Birds					
Aquila chrysaetos golden eagle	BCC Eagle Act	—	CFP (nesting and wintering), WL	Grasslands and early successional stages of forest and shrub habitats for foraging at elevations up to 11,500 feet. Secluded cliffs with overhanging ledges or large trees in open areas with unobstructed view for nesting.	• General habitat for cliff-nesting eagles and raptors such as golden eagle, prairie falcon, American peregrine falcon, and California condor will be mapped in the vegetation alliance studies conducted as part of the TERR 1 TSP. • More detailed mapping of cliff habitats that may support nests for these species would be completed during wildlife reconnaissance surveys. • The TERR 2 TSP Study Approach has been clarified to state that, during the wildlife reconnaissance survey, cliff habitat in and immediately surrounding the study area will be inspected (using binoculars) for the presence of nests. • Nest searches would be conducted by using binoculars and/or spotting scopes to systematically scan large trees and suitable crevices on cliffs for large aggregations of stick nest material, whitewash, and/or prey remains that indicate the presence of raptors. • The following additional data will be recorded for each nest observed: o GPS location/map markup o Photograph o Description of nest o Status of nest – active or inactive o Number of adults present o Number of eggs/young, if visible • In addition, any observations of non-breeding individuals observed during wildlife reconnaissance surveys or incidentally observed during other studies would be documented consistent with methods described in the TERR 2 TSP.
Falco mexicanus prairie falcon	—	—	WL	Nests on high cliff faces and requires open terrain for foraging. Occurs in annual grasslands, alpine meadows, but primarily associated with perennial grasslands, savannahs, rangeland, agricultural fields, and desert scrub. Not found in upper elevations of Sierra Nevada.	
Falco peregrinum anatum American peregrine falcon	—	—	CFP	Very uncommon breeding resident and uncommon as a migrant. Breeds in woodlands, forests, coastal habitats, and riparian areas near wetlands, lakes, rivers, or other water on high cliffs, banks, dunes, or mounds. Active nesting sites are known along the coast, in the Sierra Nevada, and in the mountains of northern California. Migrants occur along the coast and the western Sierra Nevada in spring and fall.	
Gymnogyps californianus California condor	FE	—	CE, CFP	Endangered, permanent resident of the semi-arid, rugged mountain ranges surrounding the southern San Joaquin Valley, including the Coast Ranges from Santa Clara County south to Los Angeles County, the Transverse Ranges, Tehachapi Mountains, and southern Sierra Nevada. Forages over wide areas of open rangelands, roosts on cliffs and in large trees and snags. Found mostly below 9,000 feet. Nests in caves, crevices, or sandstone ledges, typically at elevations below 6,500 feet. **This species is known to occur in the study area.**	
Accipiter gentilis atricapillus northern goshawk	—	FSCC	CSC	Middle to high elevation, mature, dense conifer forests for foraging and nesting. Casual in foothills during winter, northern deserts in pinyon-juniper woodland, and low elevation riparian habitats.	• Northern goshawk, Vaux's swift, bald eagle, and California spotted owl all utilize coniferous forest habitat. In addition, bald eagles require large lakes, reservoirs, and rivers for foraging. Forested habitats (and potential aquatic foraging habitat for bald eagles) will be mapped and ground-truthed in conjunction vegetation alliance studies conducted as part of the TERR 1 TSP. • More detailed mapping of coniferous forest habitat, including habitat elements that may support these species, would be mapped during wildlife reconnaissance surveys. Such elements would include (but are not limited to) dense canopy cover, large trees or snags with cavities; and large amounts of downed woody debris potentially supporting prey species (rodents) for goshawks and owls. • The TERR 2 TSP Study Approach has been clarified to state that, during the wildlife reconnaissance survey, wooded habitats that support potential nesting habitat for these species will be inspected for the presence of nests. Nest searches would be
Chaetura vauxi Vaux's swift	—	—	CSC	Fairly common in the coast ranges north of Sonoma County, in the Sierra Nevada, and Cascade range. Nests in redwood and Douglas-fir habitats in large hollow trees and snags. Forages in open areas and over water.	
Haliaeetus leucocephalus bald eagle	Eagle Act	FSCC	CE, CFP	Year-round resident in ice-free regions of California. Foraging areas include regulated and unregulated rivers, reservoirs, lakes, estuaries, and coastal marine ecosystems. Majority of bald eagles in California breed near reservoirs and nests are usually located within 1 mile of foraging habitat. Nests are typically placed in the branches of large conifer trees within dense stands of trees (Jackman and Jenkins 2004).	

Scientific/Common Name	Federal Status	Forest Service Status	State Status	Habitat	Study Methods
Strix occidentalis occidentalis California spotted owl	BCC	FSCC	CSC	Dense, old growth, multi-layered mixed conifer, redwood, Douglas-fir, and oak woodland habitats in the western slope of the Sierra Nevada, from sea level to elevations of approximately 7,600 feet.	conducted using binoculars and/or spotting scopes to systematically scan large trees for aggregations of stick nest material, whitewash, and/or prey remains that indicate the presence of raptors or swifts. • The following additional data will be recorded for each nest observed: o GPS location/map markup o Photograph o Description of nest o Status of nest – active or inactive o Number of adults present o Number of eggs/young, if visible • In addition, any non-breeding individuals observed during wildlife reconnaissance surveys or incidentally observed during other studies would be documented consistent with methods described in the TERR 2 TSP. Any observations of these species foraging in the study area will be recorded.
Ammodramus savannarum grasshopper sparrow	—	—	CSC	Grassland habitats with dense escape cover and tall herbaceous plants for perches.	• Grasshopper sparrow, northern harrier, and loggerhead shrike all utilize grassland habitats. Grassland habitats potentially supporting these species will be mapped and ground-truthed in conjunction vegetation alliance studies conducted as part of the TERR 1 TSP. • During the wildlife reconnaissance survey, grasslands in the study area will be inspected for the presence of these species and their nests. • Nest searches for grassland birds would be conducted by meandering in grassland habitats and searching for evidence of reproductive behaviors (i.e., singing males; adults carrying nesting materials, food, or fecal sacs; etc.) and tracking the adult birds to the nest location with binoculars. • The following additional data will be recorded for each nest observed: o GPS location/map markup o Photograph o Description of nest o Status of nest – active or inactive o Number of adults present o Number of eggs/young, if visible • In addition, any non-breeding individuals observed during wildlife reconnaissance surveys or incidentally observed during other studies would be documented consistent with methods described in the TERR 2 TSP.
Circus cyaneus northern harrier	BCC	—	CSC	A common winter visitor in southern California, but an increasingly rare breeding species in the region. Nests on the ground in marshes or grassy meadows. Feed on ground-dwelling mammals and other prey. They are migratory birds that spend winters in California.	
Lanius ludovicianus loggerhead shrike	—	—	CSC	Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches in the lowlands and foothills throughout California.	
Agelaius tricolor tricolored blackbird	BCC	—	CSC	Breeding habitat includes dense riparian vegetation with nearby accessible water and suitable foraging space for insect prey within a few kilometers of the nesting colony. Often forms large breeding colonies. Wintering habitat includes grasslands and agricultural fields with low-growing vegetation.	• Tricolored blackbird, southwestern willow flycatcher, yellow-breasted chat, purple martin, and yellow warbler all utilize riparian habitats. Riparian habitats potentially supporting these species will be mapped and ground-truthed in conjunction vegetation alliance studies, and during mapping of riparian habitats along the bypass reach, conducted as part of the TERR 1 TSP. • During wildlife reconnaissance surveys, riparian habitats present in the study area would be inspected for the presence of these species and their nests. • Nest searches for riparian birds would be conducted by meandering in riparian habitats and looking for evidence of reproductive behaviors (i.e., singing males;
Empidonax traillii extimus southwestern willow flycatcher	FE	—	CFP	Found only in southern California, this species breeds in dense riparian tree and shrubs associated with rivers, swamps, wetlands, lakes, and other large water bodies at elevations ranging from 2,000 to 8,500 feet. Riparian habitat must be at least 0.25 acre in size and 30 feet wide to support nesting.	

Scientific/Common Name	Federal Status	Forest Service Status	State Status	Habitat	Study Methods
Icteria virens yellow-breasted chat	—	—	CSC	An uncommon summer resident and migrant in Coastal California and the foothills of the Sierra Nevada. Breeds in valley foothill riparian and desert riparian habitats. Requires riparian thickets of willow and brushy tangles near watercourses for cover. Found at elevations up to 4,800 ft in valley foothill riparian habitats and up to 6,500 ft in the eastern Sierra Nevada.	adults carrying nesting materials, food, or fecal sacs; etc.) and following the adult birds to the nest location with binoculars. • The following additional data will be recorded for each nest observed: o GPS location/map markup o Photograph o Description of nest o Status of nest – active or inactive o Number of adults present o Number of eggs/young, if visible • In addition, any observations of non-breeding individuals observed during wildlife reconnaissance surveys or incidentally observed during other studies would be documented consistent with methods described in the TERR 2 TSP.
Progne subis purple martin	—	—	CSC	An uncommon, local summer resident in wooded low-to-mid elevation habitats. Found in valley foothill, montane hardwood, montane hardwood-conifer, and riparian habitats. Nests in tall, old trees near an open body of water, and occasionally in residential areas.	
Setophaga petechica yellow warbler	—	—	CSC	Breeds in riparian woodlands from coastal and desert lowlands at elevations up to 8,000 feet in the Sierra Nevada. Also breeds in montane chaparral, open ponderosa pine, and mixed conifer habitats with substantial amounts of brush.	
Mammals					
Antrozous pallidus pallid bat	—	FSCC	CSC	Grasslands, shrublands, woodlands, and forests from sea level to 10,000 feet in elevation. Typically, day-roosts in caves, crevices, or mines. Night roosts are in more open areas. Requires open habitat for foraging. Pallid bat hibernates in winter. The maternity season is April – July.	• Focused surveys will be conducted for special-status bats. Refer to the TERR 2 TSP for detailed study methods.
Corynorhinus townsendii Townsend's big-eared bat	—	FSCC	CSC	Found in all but alpine and subalpine habitats; most abundant in mesic habitats up to 6,000 feet in elevation. Requires caves, mines, tunnels, buildings, or other man-made structures for roosting. Hibernates October through April. Locally migratory only. Extremely sensitive to disturbance and may abandon a roost if disturbed. The Inyo National Forest is known to provide hibernacula, but likely does not support maternity roosts because of its high elevation (USDA-FS 2018b). Their maternity season is May – August. **This species is known to occur in the study area.**	
Euderma maculatum spotted bat	—	—	CSC	A widespread, but rare species throughout the western United States. Found in habitats that range from deserts to yellow pine forest. Roosts in caves, rocky crevices and snags and requires open water.	
Eumops perotis californicus western mastiff bat	—	—	CSC	Found in variety of habitats including desert scrub, chaparral, oak woodland, ponderosa pine, meadows and mixed conifer forests up to 4,600 feet in elevation. Distribution is likely limited by availability of significant rock features offering suitable roosting habitat. **This species is known to occur in the study area.**	
Lasiurus blossevillii western red bat	—	—	CSC	Roosts in forests and woodlands from seal level up through mixed mesic conifer forests in coastal ranges and the Sierra Nevada. Forages in a variety of habitats including croplands, grasslands, shrublands, and open woodlands and forests. Prefers solitary roosts in trees and occasionally shrubs.	

Scientific/Common Name	Federal Status	Forest Service Status	State Status	Habitat	Study Methods
Myotis thysanodes fringed myotis	—	FSCC	CSC	Optimal habitats are pinyon-juniper, valley foothill hardwood, and hardwood-conifer, generally at elevations of 4,000 to 7,000 feet msl. Roosts in caves, mines, buildings, and crevices. Separate day and night roosts may be used. Uses open habitats, early successional stages, streams, lakes, and ponds as foraging areas. Migratory species, making relatively short, local movements to suitable hibernacula. **This species is known to occur in the study area.**	
Bassariscus astutus ringtail	—	—	CFP	Found in most forest and shrub habitats in close association with rocky and/or riparian areas, usually not more than 0.6 miles from water. Dens in hollow trees, snags, or other cavities.	• Riparian habitats potentially supporting ringtail will be mapped and ground-truthed in vegetation alliance studies, and during mapping of riparian habitats along the bypass reach, conducted as part of the TERR 1 TSP. • It is unlikely that these species would be directly observed during wildlife reconnaissance surveys. Rather, their presence would be assumed based on the presence of habitat. • In the case that any individuals are observed during wildlife reconnaissance surveys or incidentally observed during other studies, such observations would be documented consistent with methods described in the TERR 2 TSP.

Onychomys torridus tularensis
Tulare grasshopper mouse
	—	—	CSC	Habitats include compact soils with a sparse growth of perennial grasses; blue oak savannas; desert scrub associations composed of grasses and shrubs; valley sink and saltbush scrub communities on the valley floor; and valley grassland. The historic range of the Tulare grasshopper mouse extended along the foothills and floor of the southern San Joaquin Valley from western Merced and eastern San Benito counties, east to Madera County, and south to the foothills of the Tehachapi and San Emigdio mountains. It also occurs on the Carrizo Plain in eastern San Luis Obispo County, Cuyama Valley, Caliente Creek Wash in southern Kern County, Weldon and Kelso Valley in northeastern Kern County, the Tulare Basin, and the Panoche Valley. Elevation range is between 279 to 2,650 feet.	• Tulare grasshopper mouse, American badger, and San Joaquin kit fox utilize open grassland and shrubland habitats.
					• Grassland and shrubland habitats potentially supporting these species will be mapped and ground-truthed in conjunction vegetation alliance studies conducted as part of the TERR 1 TSP.
					• During the wildlife reconnaissance survey, grassland and shrubland habitats in the study area will be inspected for the presence of suitable substrates and burrows that may provide habitat for or indicate the presence of these species.
					• Smaller burrows (which may provide habitat rodents such as the Tulare grasshopper mouse, as well as terrestrial lizards and amphibians) will be documented and photographed. The following additional data will be recorded for each large burrow observed that may provide habitat for American badgers or kit foxes.
					  ○ GPS location/map markup
					  ○ Photograph
					  ○ Approximate dimensions of burrow
					  ○ Substrate conditions
					  ○ Animal sign in vicinity of burrow (e.g., scat)
					• In addition, any non-breeding individuals observed during wildlife reconnaissance surveys or incidentally observed during other studies would be documented consistent with methods described in the TERR 2 TSP.

Taxidea taxus American badger	—	—	CSC	This species is considered a furbearing mammal under the California Fish and Wildlife Code. Occurs throughout most of the state in areas with dry, friable soils. It is most abundant in drier open stages of most shrub, forest, and herbaceous habitats up to 12,000 feet in elevation.	
Vulpes macrotis mutica San Joaquin kit fox	FE	—	CT	Grasslands and shrubland areas in the San Joaquin Valley with friable soils for building underground dens. Denning begins around September, mating occurs from December to March, and pups are born February through April. No critical habitat rules have been published for this species.	

Table 3. Relevant Resource Agency Jurisdiction/Management Goals

Agency	Resource Agency Jurisdiction/Management Goals	AQ-1 Hydrology	AQ 2 - Water Quality/Water Temperature	AQ 3 - Fish Population	CUL 1 – Built Environment	CUL 2 – Archaeological Resources	TRI 1 – Tribal Resources	LAND 1 – Road and Trail Condition Assessment	LAND 2 – Erosion and Sedimentation	REC 1 - Recreation Facility Condition Assessment	REC 2 - Recreation Facility Use Assessment	REC 3 - Whitewater Boating	TER-1 Botanical Resources	TERR-2 Wildlife Resources
California Department of Fish and Wildlife	In the State of California, fish and wildlife resources are held in trust for the people of the state, and the California Department of Fish and Wildlife (CDFW) has statutory responsibility for managing and protecting all fish, wildlife, and habitat to support these species in the public interest (Cal. Fish and Game Code § 711.7). The CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Cal. Fish and Game Code § 1802).	X	X	X					X				X	X
California Office of Historic Preservation	The California Office of Historic Preservation (OHP) is charged with ensuring that projects and programs carried out or sponsored by federal and state agencies comply with federal and state historic preservation laws and that projects are planned in ways that avoid or minimize adverse effects to heritage resources. Federal and federally-sponsored programs and projects are reviewed pursuant to Sections 106 and 110 of the National Historic Preservation Act (NHPA). Section 106 of the NHPA, as amended, requires federal agencies to consider the effects of proposed federal undertakings on historic properties. The NHPA's implementing regulations found in 36 CFR Part 800, require federal agencies (and their designees, permitees, licensees, or grantees) to initiate consultation with the State Historic Preservation Officer (SHPO) as part of the Section 106 review process.				X	X	X							
National Park Service	The National Park Service (NPS) has authority to consult with FERC and applicants concerning a Project's effects on outdoor recreation resources under the Federal Power Act (18 CFR 4.38(a), 5.41 (f)(4)-(6), and 16.8(a)); the Outdoor Recreation Act (Public Law [PL] 88-29); the National Park Service Organic Act (39 Stat. 535); and the Wild and Scenic Rivers Act (PL 90-542). It is the policy of the NPS to represent the national interest regarding recreation, and to assure that hydroelectric projects subject to relicensing recognize the full potential for meeting present and future public outdoor recreation demands, while maintaining and enhancing a quality environmental setting for those projects. Investigating opportunities to improve the recreation experience is consistent with NPS policy and FERC guidelines to identify future potential recreation needs.									X	X	X		

Agency	Resource Agency Jurisdiction/Management Goals	AQ-1 Hydrology	AQ 2 - Water Quality/Water Temperature	AQ 3 - Fish Population	CUL 1 – Built Environment	CUL 2 – Archaeological Resources	TRI 1 – Tribal Resources	LAND 1 – Road and Trail Condition Assessment	LAND 2 – Erosion and Sedimentation	REC 1 - Recreation Facility Condition Assessment	REC 2 - Recreation Facility Use Assessment	REC 3 - Whitewater Boating	TER-1 Botanical Resources	TERR-2 Wildlife Resources
State Water Resources Control Board	Before FERC can issue a new license, the Licensee must obtain water quality certification from the State Water Board pursuant to Section 401(a)(1) of the federal Clean Water Act (CWA) (33 U.S.C. § 1341 (a)(1)). Section 401 of the CWA requires any applicant for a federal license or permit, which may result in any discharge to navigable waters, to obtain water quality certification from the State Water Board that the discharge will comply with the applicable provisions of section 301, 302, 303, 306, and 307 of the CWA. Under Section 303 of the CWA and under the Porter-Cologne Water Quality Control Act, the Central Valley Regional Water Quality Control Board adopted, and the State Water Board and United States Environmental Protection Agency (USEPA) approved, the Water Quality Control Plan for the Tulare Lake Basin (Basin Plan). The Basin Plan designated beneficial uses of waters to be protected along with the water quality objectives necessary to protect those uses. The Basin Plan identified the following beneficial uses for the Kaweah River, upstream of Lake Kaweah: municipal and domestic supply; power, contact recreation; non-contact recreation; warm freshwater habitat; cold freshwater habitat, wildlife habitat; rare, threatened, or endangered species; spawning, reproduction, and/or early development; and freshwater replenishment. These beneficial uses also apply to the tributaries of the Kaweah River.	X	X	X			X		X			X		
U.S. Fish and Wildlife Service	The U.S. Fish and Wildlife Service (USFWS) has adopted an ecosystem approach to fish and wildlife resource conservation. This approach requires protecting or restoring the function, structure, and species composition of an ecosystem while providing for its sustainable socioeconomic uses. The USFWS's overall goal is to restore and protect fish and wildlife resources. Included in the ecosystem approach is conservation of ecosystems that support species listed under the Endangered Species Act (ESA).	X	X	X					X			X	X	X

Notes:
CDFW = California Department of Fish and Wildlife
CWA = Clean Water Act
ESA = Endangered Species Act
FERC = Federal Energy Regulatory Commission
NHPA = National Historic Preservation Act
NPS = National Park Service
OHP = Office of Historic Preservation
PL = Public Law
SHPO = State Historic Preservation Officer
USEPA = U.S. Environmental Protection Agency
USFWS = U.S. Fish and Wildlife Service

Table 4. Level of Effort and Cost for Completing the RSP

Technical Study Plan	Total Estimated Cost	Total Level of Effort (Labor Hours)
Aquatic Resources		
AQ 1 - Hydrology	$144,000	755
AQ 2 - Water Quality/Water Temperature	$503,000	2,749
AQ 3 - Fish Population	$224,000	1,186
Total	**$871,000**	**4,690**
Cultural and Tribal Resources		
CUL 1 – Built Environment	$47,000	315
CUL 2 – Archaeological Resources	$112,000	870
TRI 1 – Tribal Resources	$147,000	1,073
Total	**$306,000**	**2,258**
Land Resources		
LAND 1 – Road and Trail Condition Assessment	$63,000	344
LAND 2 – Erosion and Sedimentation	$73,000	399
Total	**$136,000**	**743**
Recreation Resources		
REC 1 – Recreation Facility Condition Assessment	$44,000	359
REC 2 - Recreation Facility Use Assessment	$260,000	1,975
REC 3 – Whitewater Boating	$136,000	711
Total	**$440,000**	**3,045**
Terrestrial Resources		
TERR-1 Botanical Resources	$239,000	1,279
TERR-2 Wildlife Resources	$290,000	1,739
Total	**$529,000**	**3,018**
Project Total	**$2,282,000**	**13,754**

Table 5. FERC's Study Plan Development Schedule

Responsible Entity	Milestone	Date	FERC Regulation
SCE	File Proposed Study Plan	10/17/2023	5.11(a)
All Stakeholders	Study Plan Meeting	11/16/2023	5.11(c)
All Stakeholders	File Comments on SCE's Proposed Study Plan Due	1/16/2024	5.12
SCE	File Revised Study Plan	2/14/2024	5.13(a)
All Stakeholders	File Comments on SCE's Revised Study Plan	2/29/2024	5.13(b)
FERC	Issue Study Plan Determination	3/15/2024	5.13(c)
Mandatory Conditioning Agencies	File Any Study Disputes	4/4/2024	5.14(a)
Dispute Panel	Select Third Dispute Resolution Panel Member	4/19/2024	5.14(d)
Dispute Panel	Convene Dispute Resolution Panel	4/24/2024	5.14(d)(3)
SCE	File Comments on Study Disputes	4/29/2024	5.14(i)
Dispute Panel	Dispute Resolution Panel Technical Conference	5/6/2024	5.14(j)
Dispute Panel	Issue Dispute Resolution Panel Findings	5/24/2024	5.14(k)
FERC	Issue Director's Study Dispute Determination	6/13/2024	5.14(l)

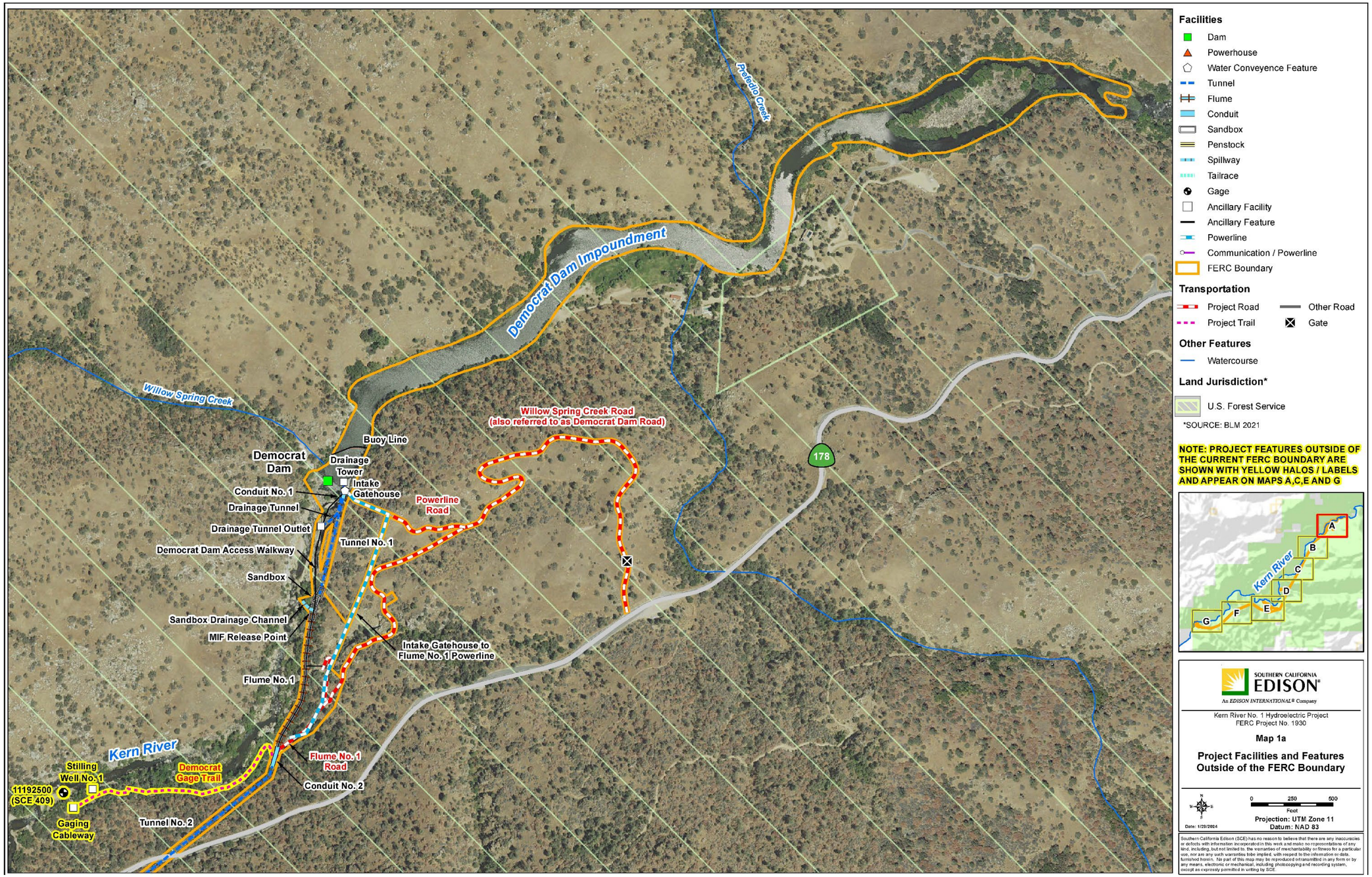
Table 6. Technical Study Plan Implementation Schedule

Technical Study Plan	2024												2025												2026											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
AQ 1- Hydrology																																				
Collaborate with stakeholders on the approach for refining the hydrology, as appropriate, and developing Project Operations Model																																				
Refine the Project hydrology and associated operations model																																				
Complete the hydrologic alteration analysis																																				
Prepare Draft Technical Memo																																				
Distribute Draft Technical Memo to stakeholders																																				
Stakeholder review and comment period																																				
Resolve Comments/Prepare Final Technical Memo																																				
Distribute Final Technical Memo in Draft License Application																																				
AQ 2 – Water Quality/Water Temperature																																				
Install water temperature probes and conduct spring water quality *in-situ* and grab sampling																																				
Maintain water temperature probes																																				
Conduct bacteria sampling at four day-use recreation areas																																				
Conduct summer/fall water quality *in-situ* and grab sampling																																				
Analyze Data/Prepare Draft Technical Memos (Year 1 and Year 2 results)																																				
Distribute Draft Technical Memos to stakeholders (Year 1 and Year 2)																																				
Stakeholder review and comment periods (Year 1 and Year 2)																																				
Resolve Comments/Prepare Final Technical Memos (Year 1 and Year 2)																																				
Distribute Final Memos (Year 1 – Draft License Application and Year 2 – Final License Application)																																				
AQ 3 – Fish Population																																				
Select fish population sampling sites in collaboration with interested resource agencies																																				
Conduct quantitative/qualitative fish sampling																																				
Analyze Data/Prepare Draft Technical Memo																																				
Distribute Draft Technical Memo to stakeholders																																				
Stakeholder review and comment period																																				
Resolve Comments/Prepare Final Technical Memo																																				
Distribute Final Technical Memo in Draft License Application																																				
CUL 1 – Built Environment																																				
Archival Research																																				
Fieldwork																																				
Analyze Data/Prepare Draft Memo																																				
Distribute Draft Memo																																				
Stakeholder Review																																				
Resolve Comments/Prepare Final Memo																																				
Develop Draft HPMP																																				
Distribute Final Memo																																				
CUL 2 – Archaeology																																				
Archival Research																																				
Fieldwork																																				
Analyze Data/Prepare Draft Memo																																				
Distribute Draft Memo																																				
Stakeholder Review																																				
Resolve Comments/Prepare Final Memo																																				
Develop Draft HPMP																																				
Distribute Final Memo																																				
TRI 1 – Tribal																																				
Archival Research																																				

Technical Study Plan	2024												2025												2026											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Engage Tribal groups																																				
Tribal Interviews																																				
Analyze Data/Prepare Draft Memo																																				
Distribute Draft Memo																																				
Stakeholder Review																																				
Resolve Comments/Prepare Final Memo																																				
Develop Draft HPMP																																				
Distribute Final Memo																																				
LAND 1 – Road and Trail Condition Assessment																																				
Conduct desktop reconnaissance and field surveys																																				
Analyze Data/Prepare Draft Memo																																				
Distribute Draft Memo																																				
Stakeholder Review																																				
Resolve Comments/Prepare Final Memo																																				
Distribute Final Memo																																				
LAND 2 – Erosion and Sedimentation																																				
Initiate desktop review and field surveys																																				
Analyze Data/Prepare Draft Memo																																				
Distribute Draft Memo																																				
Stakeholder Review																																				
Resolve Comments/Prepare Final Memo																																				
Distribute Final Memo																																				
REC 1 – Recreation Facility Condition Assessment																																				
Develop facility inventory and condition assessment forms in consultation with the SQF																																				
Conduct the facility inventory and condition assessment																																				
Analyze Data/Prepare Draft Memo																																				
Distribute Draft Memo																																				
Stakeholder Review																																				
Resolve Comments/Prepare Final Memo																																				
Distribute Final Memo																																				
REC 2 – Recreation Facility Use Assessment																																				
Consult with the Recreation TWG to (1) identify locations along the bypass reach accessible from SR 178 used for dispersed recreation, and (2) to finalize questions in the intercept survey forms.																																				
Acquire and review key information sources to characterize recreation use in the Project vicinity (i.e., Forest Service recreation planners, concessionaire, stakeholders identified by the Recreation TWG, and existing data files and reports).																																				
Install temporary tamper-proof survey boxes and trail cameras, pending Forest Service approval, at obvious location along each of the trails of focus (maintain and service for 12 months).																																				
Conduct vehicle counts and opportunistic in-person intercept surveys.																																				
Analyze data and prepare draft technical memo.																																				
Distribute draft technical memo to stakeholders																																				
Stakeholders review and provide comments on draft technical memo (90 days).																																				
Incorporate results from the self-survey boxes into revised draft technical memo.																																				
Distribute revised draft technical memo to stakeholders																																				
Stakeholders review and provide comments on revised draft technical memo (60 days).																																				
Resolve comments and prepare final technical memo																																				
Distribute Final Memo in Draft License Application																																				

Technical Study Plan	2024												2025												2026											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
REC 3 – Whitewater Boating																																				
Conduct Level 1 Desktop Study																																				
Complete Level 2 Limited Reconnaissance																																				
Analyze data and prepare draft technical memo (Level 1 and Level 2)																																				
Distribute draft technical memo to stakeholders.																																				
Stakeholders review and provide comments on draft technical memo (90 days)																																				
Determine, in consultation with resource agencies and whitewater community, whether a Level 3 On-water Boating Assessment is needed																																				
Resolve comments and prepare draft final technical memo (Level 1 and Level 2)																																				
If necessary, conduct Level 3 On-water Boating Assessment (Whitewater Focus Group and single flow or controlled flow study)																																				
Place temporary tamper-proof self-survey boxes at whitewater boater put-in and take-out locations along the bypass reach for single flow study																																				
Incorporate results from the Level 3 Assessment into final technical memo																																				
Distribute Final Memo in the Draft License Application for stakeholder review																																				
TERR 1 – Botanical Resources																																				
Conduct Ground-Truthing of Vegetation Alliances																																				
Conduct Botanical Surveys																																				
Characterize Riparian Vegetation in the Bypass Reach																																				
Analyze Data/Prepare Draft Memo																																				
Distribute Draft Memo																																				
Stakeholder Review																																				
Resolve Comments/Prepare Final Memo																																				
Distribute Final Memo																																				
TERR 2 – Wildlife Resources																																				
Conduct Wildlife Reconnaissance Surveys																																				
Conduct Special-Status Bat Reproductive Surveys																																				
Conduct Special-Status Bat Seasonal Use Surveys																																				
Conduct Special-Status Salamander Habitat Assessment																																				
Conduct Special-Status Salamander VES following rain events																																				
Analyze Data/Prepare Draft Memo																																				
Distribute Draft Memo																																				
Stakeholder Review																																				
Resolve Comments/Prepare Final Memo																																				
Distribute Final Memo																																				

MAPS


Prefedio Creek
Democrat Dam Impoundment
Willow Spring Creek
Willow Spring Creek Road
(also referred to as Democrat Dam Road)
Buoy Line
Democrat Dam
Drainage Tower
Intake
Gatehouse
Conduit No. 1
Drainage Tunnel
Drainage Tunnel Outlet
Tunnel No. 1
Powerline Road
Democrat Dam Access Walkway
Sandbox
Sandbox Drainage Channel
MIF Release Point
Intake Gatehouse to Flume No. 1 Powerline
Flume No. 1
Flume No. 1 Road
Conduit No. 2
Kern River
Stilling Well No. 1
11192500 (SCE 409)
Gaging Cableway
Democrat Gage Trail
Tunnel No. 2
178
Facilities
Dam
Powerhouse
Water Conveyence Feature
Tunnel
Flume
Conduit
Sandbox
Penstock
Spillway
Tailrace
Gage
Ancillary Facility
Ancillary Feature
Powerline
Communication / Powerline
FERC Boundary
Transportation
Project Road
Project Trail
Other Road
Gate
Other Features
Watercourse
Land Jurisdiction*
U.S. Forest Service
*SOURCE: BLM 2021
NOTE: PROJECT FEATURES OUTSIDE OF THE CURRENT FERC BOUNDARY ARE SHOWN WITH YELLOW HALOS / LABELS AND APPEAR ON MAPS A,C,E AND G
A
B
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Kern River
SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company
Kern River No. 1 Hydroelectric Project
FERC Project No. 1930
Map 1a
Project Facilities and Features Outside of the FERC Boundary
0 250 500
Feet
Projection: UTM Zone 11
Datum: NAD 83
Date: 1/29/2024
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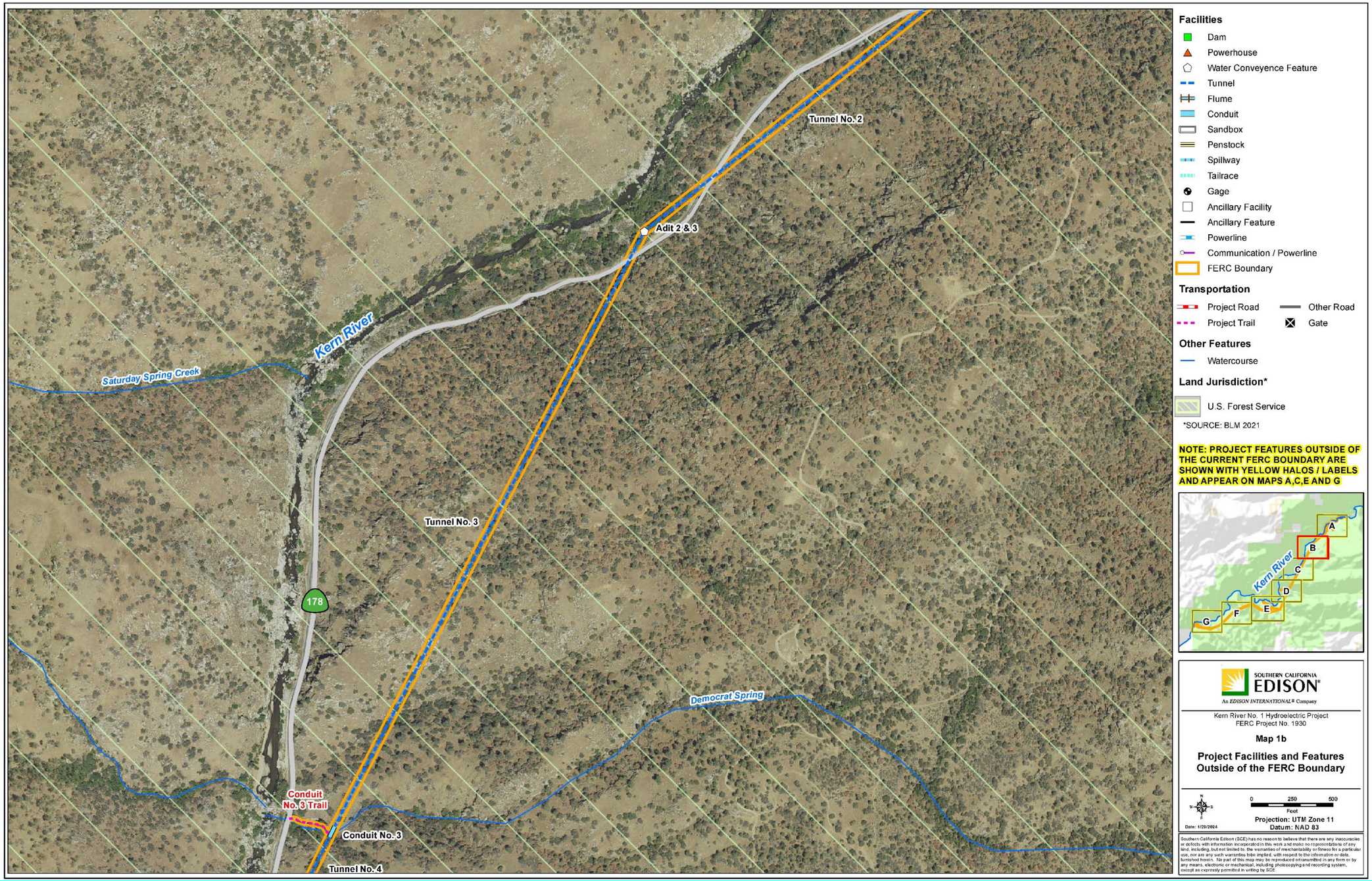
Tunnel No. 2
Adit 2 & 3
Kern River
Saturday Spring Creek
Tunnel No. 3
178
Democrat Spring
Conduit No. 3 Trail
Conduit No. 3
Tunnel No. 4
Facilities
Dam
Powerhouse
Water Conveyence Feature
Tunnel
Flume
Conduit
Sandbox
Penstock
Spillway
Tailrace
Gage
Ancillary Facility
Ancillary Feature
Powerline
Communication / Powerline
FERC Boundary
Transportation
Project Road
Other Road
Project Trail
Gate
Other Features
Watercourse
Land Jurisdiction*
U.S. Forest Service
*SOURCE: BLM 2021
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A
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Kern River
SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company
Kern River No. 1 Hydroelectric Project
FERC Project No. 1930
Map 1b
Project Facilities and Features Outside of the FERC Boundary
0 250 500
Feet
Projection: UTM Zone 11
Datum: NAD 83
Date: 1/29/2024
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Tunnel No. 4
Adit 4 & 5
Tunnel No. 5
Stilling Well No. 2
11192000 o. 2 Cow Flat Creek (SCE 410)
Cow Flat Creek Trail
Cow Flat Creek
Tunnel No. 6
Kern River
Conduit No. 4
Flume No. 3
Conduit No. 5
Steel Flume Trail
Tunnel No. 7
178
Conduit No. 6
Tunnel No. 8
Facilities
Dam
Powerhouse
Water Conveyence Feature
Tunnel
Flume
Conduit
Sandbox
Penstock
Spillway
Tailrace
Gage
Ancillary Facility
Ancillary Feature
Powerline
Communication / Powerline
FERC Boundary
Transportation
Project Road
Project Trail
Other Road
Gate
Other Features
Watercourse
Land Jurisdiction*
U.S. Forest Service
*SOURCE: BLM 2021
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Kern River
SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company
Kern River No. 1 Hydroelectric Project
FERC Project No. 1930
Map 1c
Project Facilities and Features Outside of the FERC Boundary
0 250 500
Feet
Projection: UTM Zone 11
Datum: NAD 83
Date: 1/29/2024
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178
Kern River
Lucas Creek Trail
Tunnel No. 8
Flume No. 4 Lucas Creek
Lucas Creek
Tunnel No. 9
Adit 9 & 10
Facilities
Dam
Powerhouse
Water Conveyence Feature
Tunnel
Flume
Conduit
Sandbox
Penstock
Spillway
Tailrace
Gage
Ancillary Facility
Ancillary Feature
Powerline
Communication / Powerline
FERC Boundary
Transportation
Project Road
Other Road
Project Trail
Gate
Other Features
Watercourse
Land Jurisdiction*
U.S. Forest Service
*SOURCE: BLM 2021
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Kern River
SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company
Kern River No. 1 Hydroelectric Project
FERC Project No. 1930
Map 1d
Project Facilities and Features Outside of the FERC Boundary
0 250 500
Feet
Projection: UTM Zone 11
Datum: NAD 83
Date: 1/29/2024
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Kern River
Stark Creek Road
Adit 13 & 14
Tunnel No. 13
Stark Creek
Stark Creek Trail
Dougherty Creek Road
Dougherty Creek Trail
178
Tunnel No. 10
Conduit No. 7
Flume No. 5 Dougherty Creek
Adit 12 & 13
Tunnel No. 12
Access Platform
Conduit No. 8
Flume No. 6 Stark Creek
Tunnel No. 11
Dougherty Creek
Facilities
Dam
Powerhouse
Water Conveyence Feature
Tunnel
Flume
Conduit
Sandbox
Penstock
Spillway
Tailrace
Gage
Ancillary Facility
Ancillary Feature
Powerline
Communication / Powerline
FERC Boundary
Transportation
Project Road
Project Trail
Other Road
Gate
Other Features
Watercourse
Land Jurisdiction*
U.S. Forest Service
*SOURCE: BLM 2021
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Kern River
Dougherty Creek
SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company
Kern River No. 1 Hydroelectric Project
FERC Project No. 1930
Map 1e
Project Facilities and Features Outside of the FERC Boundary
0 250 500
Feet
Projection: UTM Zone 11
Datum: NAD 83
Date: 1/29/2024
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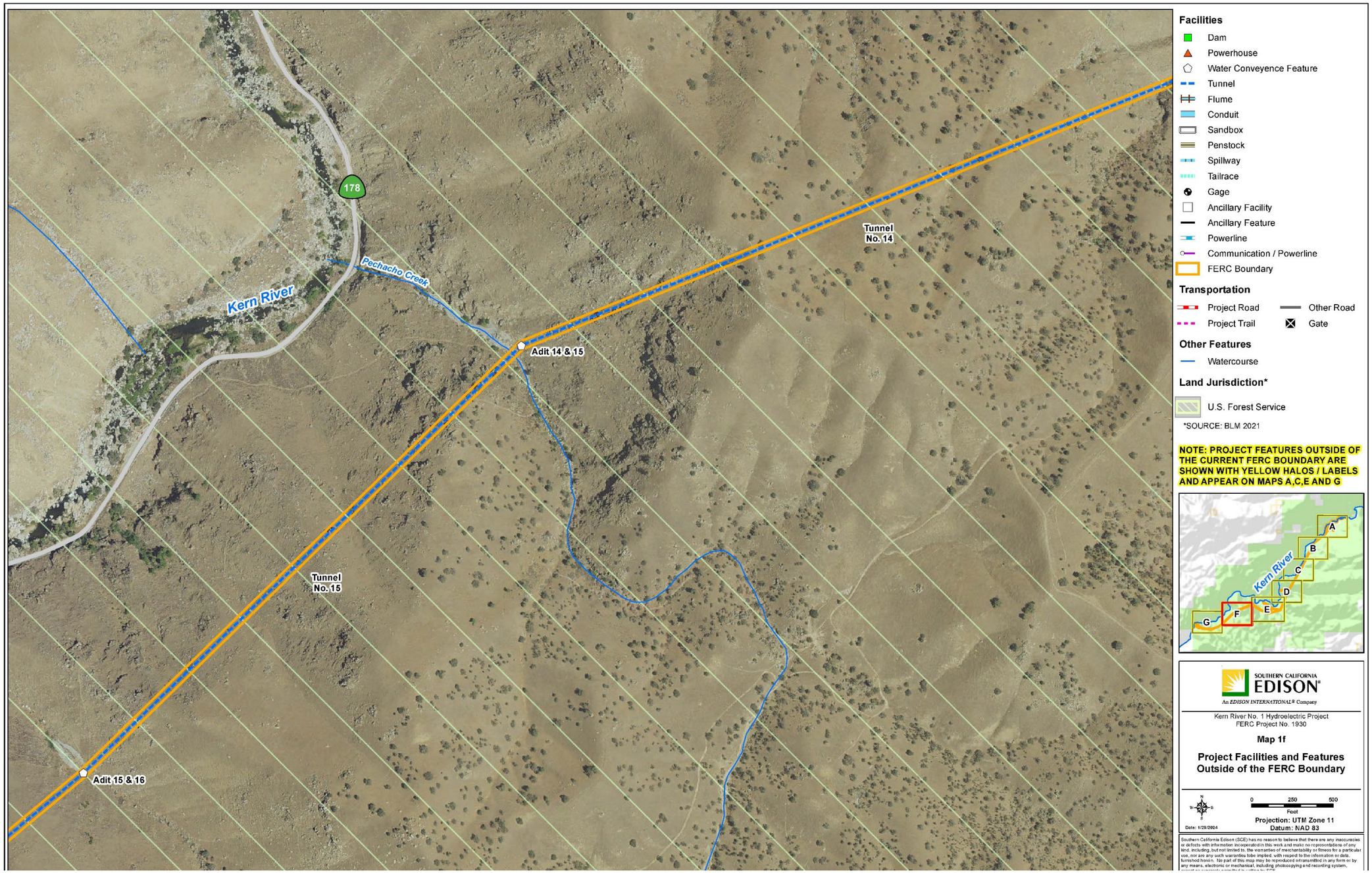
178
Kern River
Pechacho Creek
Tunnel No. 14
Adit 14 & 15
Tunnel No. 15
Adit 15 & 16
Facilities
Dam
Powerhouse
Water Conveyence Feature
Tunnel
Flume
Conduit
Sandbox
Penstock
Spillway
Tailrace
Gage
Ancillary Facility
Ancillary Feature
Powerline
Communication / Powerline
FERC Boundary
Transportation
Project Road
Other Road
Project Trail
Gate
Other Features
Watercourse
Land Jurisdiction*
U.S. Forest Service
*SOURCE: BLM 2021
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Kern River
SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company
Kern River No. 1 Hydroelectric Project
FERC Project No. 1930
Map 1f
Project Facilities and Features Outside of the FERC Boundary
0 250 500
Feet
Projection: UTM Zone 11
Datum: NAD 83
Date: 1/29/2024
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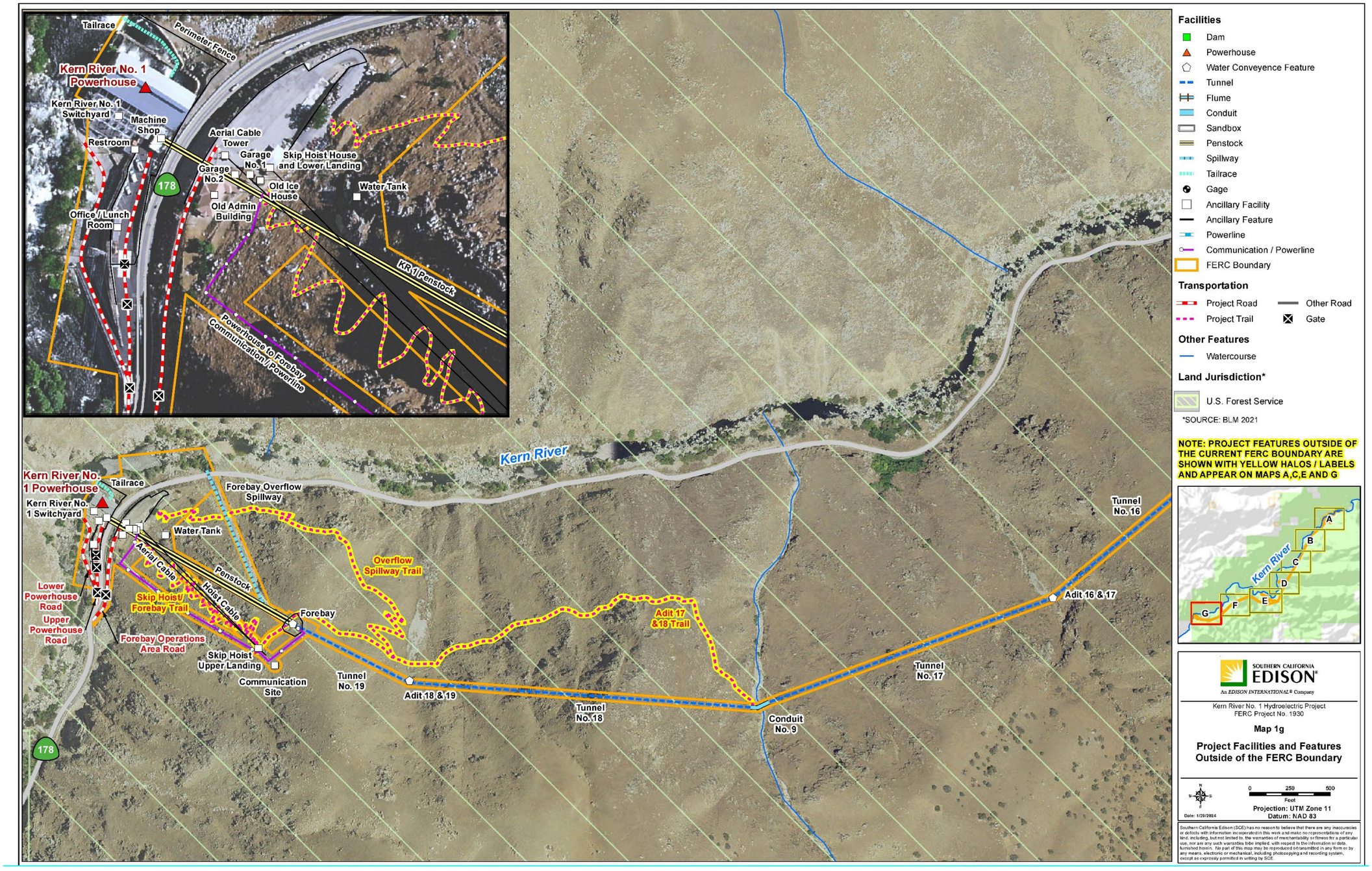
Tailrace
Perimeter Fence
Kern River No. 1 Powerhouse
Kern River No. 1 Switchyard
Machine Shop
Restroom
Aerial Cable Tower
Garage No. 1
Skip Hoist House and Lower Landing
Garage No.2
Old Ice House
Water Tank
178
Old Admin Building
Office / Lunch Room
KR#1 Penstock
Powerhouse to Forebay Communication / Powerline
Kern River
Kern River No. 1 Powerhouse
Tailrace
Forebay Overflow Spillway
Kern River No. 1 Switchyard
Water Tank
Aerial Cable
Penstock
Overflow Spillway Trail
Lower Powerhouse Road
Skip Hoist / Forebay Trail
Hoist Cable
Forebay
Upper Powerhouse Road
Forebay Operations Area Road
Skip Hoist Upper Landing
Communication Site
Tunnel No. 19
Adit 18 & 19
Adit 17 &18 Trail
Tunnel No. 18
Conduit No. 9
Tunnel No. 17
Adit 16 & 17
Tunnel No. 16
178
Facilities
Dam
Powerhouse
Water Conveyence Feature
Tunnel
Flume
Conduit
Sandbox
Penstock
Spillway
Tailrace
Gage
Ancillary Facility
Ancillary Feature
Powerline
Communication / Powerline
FERC Boundary
Transportation
Project Road
Project Trail
Other Road
Gate
Other Features
Watercourse
Land Jurisdiction*
U.S. Forest Service
*SOURCE: BLM 2021
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Kern River
SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company
Kern River No. 1 Hydroelectric Project
FERC Project No. 1930
Map 1g
Project Facilities and Features Outside of the FERC Boundary
0
250
500
Feet
Projection: UTM Zone 11
Datum: NAD 83
Date: 1/29/2024
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