



Wayne P. Allen
Principal Manager
Regulatory Support Service

Filed Electronically

October 26, 2023

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

**Subject: 2023 Initial Study Report
Rush Creek Project (FERC Project No. 1389)**

Dear Secretary Bose:

Southern California Edison (SCE) is filing this Initial Study Report to provide the Federal Energy Regulatory Commission (FERC or Commission) and stakeholders with an update regarding progress made in implementing 15 Technical Study Plans (TSP) associated with the relicensing of the Rush Creek Hydroelectric Project (Rush Creek Project or Project).

In accordance with the Code of Federal Regulations (CFR) Title 18 § 5.15(c)(1), SCE must file an Initial Study Report within one year of Study Plan Determination by FERC (by October 27, 2023). This report summarizes SCE's overall progress through early October 2023 in implementing the technical study plans, including an explanation of any variances. This report also summarizes any modifications to ongoing studies or new studies proposed by SCE.

Distribution of the 2023 Initial Study Report is being made by electronic means unless a relicensing participant's e-mail address is unavailable or they previously requested delivery via U.S. mail (Attachment A). The 2023 Initial Study Report and other Rush Creek Project relicensing documents can be obtained from FERC's website at <http://www.ferc.gov/docs-filing/elibrary.asp> or SCE's Rush Creek Project relicensing website at <http://sce.com/rushcreek>.

Background

On December 16, 2021, SCE filed a Notice of Intent (NOI) and Pre-Application Document (PAD) to initiate the Integrated Licensing Process (ILP) to obtain a new license for the Rush Creek Project. As part of the PAD, SCE included 15 draft technical study plans (study plans) for stakeholders to review and provide comments. On February 14, 2022, FERC issued a Notice of Commencement of the Proceeding and Scoping Document 1 (SD1) for the Rush Creek Project relicensing. FERC also requested that any individual or entity interested in providing comments on the PAD, SD1, and/or submitting formal study requests do so by April 15, 2022.

In response to stakeholder study requests filed with FERC and stakeholder comments received during a series of technical working group meetings held by SCE in February and March of 2022, SCE incorporated revisions of the 15 draft study plans in the Proposed Study Plan (PSP) filed with FERC on May 26, 2022.

Pursuant to 18 CFR § 5.11(e), SCE held a public meeting virtually on June 16, 2022, with the purpose of presenting the PSP; discussing previous stakeholder study requests/comments and how they were addressed in the PSP; and attempting to resolve any outstanding issues on the PSP. Pursuant to 18 CFR § 5.12, stakeholders were afforded 90 days from the date of the PSP filing to provide comments on the PSP or to request additional studies.

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On September 23, 2022, SCE in accordance with 18 CFR § 5.13(a) filed a Revised Study Plan (RSP). The RSP addressed specific study plan comments either by modifying specific technical study plans in the PSP or by providing a rationale for why a comment or new study request was not adopted. Four comment letters were received on the RSP including comments filed by the East Shore Silver Lake Improvement Association (ESSLIA); State Water Resources Control Board (State Water Board); Forest Service; and the California Department of Fish and Wildlife (CDFW). SCE filed responses to the stakeholder comments with FERC on October 19, 2022, which included a revised TERR-2 Wildlife Resources Technical Study Plan. On October 26, 2022, FERC issued its Study Plan Determination with staff-recommended modifications.

Study Implementation Progress

Study progress through early October 2023 is summarized in Attachment B. Attachment B is a multiple-page table that summarizes TSP implementation status to date. The table is organized by TSP and describes: (1) study elements completed/data collected; (2) Technical Working Group (TWG) consultation during study plan implementation (dates and topics); (3) technical study plan variances; (4) outstanding study elements; (5) proposed modifications; and (6) proposed new studies. As shown in the table, no new studies have been proposed by SCE.

As described above, FERC issued its Study Plan Determination for the relicensing Project on October 26, 2022, which coincided with the end of 2022 field season. This established the date for filing the ISR as October 27, 2023, no later than one year from FERC's approval of the study plan. Consistent with this schedule and taking into account the Project's high elevation location (more than 7,000 feet above mean sea level), and limited road access options (there is road access only to the lowest Project facilities), the TSPs describe field data collection beginning in early summer 2023. However, due to the substantially above normal 2023 snowpack, access to the study area was restricted through early July. In addition, high runoff extended into August, further delaying the initiation of data collection associated with aquatic-related studies until mid-August/early September 2023. As a result, data collection for some study elements is continuing into November 2023. For some study elements, including wildlife and noise, SCE, in collaboration with resource agencies and stakeholders, made the decision to delay data collection until 2024 due to unsuitable field conditions in 2023. Variations in schedule and/or survey methods are summarized in Attachment B. Updated TSP implementation schedules are graphically depicted in Attachment C.

The delayed and truncated field season in 2023 results in Technical Study Reports being completed in early 2024 and shared with the stakeholders for review and comment, consistent with the schedule in the FERC-approved study plans. The TSRs will provide results for study elements completed in 2023. Supplemental TSRs will be provided for those study elements for which data collection and analysis extend through the 2024 field season.

Next Steps

In accordance with 18 CFR § 5.15(c)(2), SCE will convene an Initial Study Report Meeting to discuss overall progress of study plan implementation and address any stakeholder

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requests/comments. Based on feedback from stakeholders, the meeting will be held virtually. Meeting details are as follows:

| | |
|---------------------------------|---|
| Date: | November 9, 2023 |
| Time: | 4:30 pm – 7:00 pm Pacific Time |
| Microsoft Teams meeting: | Join on your computer, mobile app or room device https://www.microsoft.com/microsoft-teams/join-a-meeting Meeting ID: 258 069 086 546 Passcode: 5kpPGa Or call in (audio only) +1 587-414-2460,,686992723# Canada, Edmonton (833) 266-3861,,686992723# Canada (Toll-free) Phone Conference ID: 686 992 723# |

In accordance with 18 CFR § 5.15(c)(3) through § 5.15(c)(7), within 15 days following the meeting, SCE will file with FERC an Initial Study Report Meeting Summary, including any modifications to ongoing studies or new studies proposed by SCE. Any participant or FERC staff may file a disagreement on the meeting summary within 30 days. SCE must file responses to disagreements within the following 30 days. FERC's Director, Office of Energy Projects, will address any disagreements and amend the approved study plan, as appropriate, no later than 30 days following the due date for SCE's responses. If no disagreements are filed, the meeting summary and any modifications proposed by SCE are deemed approved.

SCE looks forward to working with FERC staff and interested stakeholders as the relicensing of the Rush Creek Project proceeds. If you have any questions regarding this filing, please contact Matthew Woodhall, SCE Relicensing Project Manager, by phone at (909) 362-1764 or via e-mail at matthew.woodhall@sce.com.

Sincerely,

DocuSigned by:

106CF18A73D445F...

Wayne P. Allen
Principal Manager

Attachments:

- Attachment A: Distribution List
- Attachment B: Technical Study Plan Implementation Summary
- Attachment C: Technical Study Plan Implementation Schedule

Attachment A

Distribution List

| Organization | Name | Street Address | City, State, Zip | Email |
|--|---|-------------------------------------|---------------------------|--|
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| Bureau of Indian Affairs | Amy Dutschke Regional Director | 2800 Cottage Way | Sacramento, CA 95825 | amy.dutschke@bia.gov |
| Bureau of Indian Affairs | Darryl LaCounte Director | 1849 C Street NW MS-2624 MIB | Washington, DC 20240 | Darryl.lacounte@bia.gov |
| Bureau of Reclamation | Ernest Conant Regional Director, California-Great Basin | 2800 Cottage Way | Sacramento, CA 95825-1886 | ECONANT@usbr.gov |
| Bureau of Reclamation | Deputy Commissioner, Operations | 1849 C Street NW | Washington, DC 20240 | |
| Board of Supervisors, Mono County | Shannon Kendall Clerk of the Board | P.O. Box 715 | Bridgeport, CA 93517 | skendall@mono.ca.gov |
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| Federal Energy Regulatory Commission | Vinh Tran SF Branch Engineer | 100 1st St. | San Francisco, CA, 94105 | vinh.tran@ferc.gov |
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| US Fish and Wildlife Service | Marcy Haworth | | | marcy_haworth@fws.gov |

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| US Geological Survey | Eric Reichard Acting Regional Director | 345 Middlefield Road | Menlo Park, CA 94025 | egreich@usgs.gov |
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Rush Creek Initial Study Report October 2023

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| Hydropower Reform | Colleen McNally-Murphy Associate National Director | 1101 14th Street NW, Suite 1400 | Washington DC 20005 | colleen@hydroreform.org |
| California Sportfishing Protection Alliance | Chris Shutes FERC Projects Director | 1608 Francisco Street | Berkeley, CA 94703 | blancapaloma@msn.com |
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| California Trout | Marrina Nation | | | mnation@caltrout.org |
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| Double Eagle Resort | Ralph Lockhart Owner | P.O. Box 731 B-736 | June Lake, CA 93529 | rlockhart@doubleeagle.com |
| East Shore Silver Lake Improvement Association (ESSLIA) | Mark Shoemaker President | 32151 River Island Drive | Springville, CA 93265 | shoemaker.mark@ymail.com |
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| East Shore Silver Lake Improvement Association (ESSLIA) | Ann Marie Mahoney | 8 Cresta Del Sol | San Clemente, CA | annmarie.mahoney@yahoo.com ; annmarie.mahoney@icloud.com |
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| Eastern Sierra Packers Association; Frontier Pack Train (Summer) | | P.O. Box 656 | June Lake, CA 93529 | frontierpacktrain@gmail.com |
| Eastern Sierra Packers Association; Frontier Pack Train (Winter) | | 2095 Van Loon Lane | Bishop, CA 93514 | frontierpacktrain@gmail.com |
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| June Lake Loop Historical Society | | P.O. Box 104 | June Lake, CA 93529 | curator@junelakeloophistoricalociety.com |
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| Mono Lake Committee | Greg Reis Information and Restoration Specialist | P.O. Box 161 | San Geronimo, CA 94963 | greg@monolake.org |
| Northern California Power Agency | Howard Quan, State Government Relations & External Affairs Manager | 651 Commerce Drive | Roseville, CA 95678-6411 | howard.quan@ncpa.com |
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| People for Mono Basin Preservation | Kathleen Maloney Bellomo | P.O. Box 217 | Lee Vining, CA 93541 | hydroesq@schat.net |
| Planning and Conservation League | Howard Penn Executive Director | 1107 Ninth St., Suite 360 | Sacramento, CA 95814 | pclmail@pcl.org |
| Rainbow Pack Outfitters | Greg and Ruby Allen and Family | P.O. Box 1791 | Bishop, CA 93515 | rainbowpackers@aol.com |
| Reverse Creek Lodge | David Naader | 52 S. Texas Street | June Lake, CA 93529 | reverse@qnet.com |
| Saddlebag Lake Resort / Tioga Pass Resort LLC | | P.O. Box 303 | Lee Vining, CA 93541 | saddlebaglake@gmail.com |
| Sierra Business Council | Steve Frisch, President | 10183 Truckee Airport Road #202 | Truckee, CA 96161 | sfrisch@sierrabusiness.org |
| Sierra Club, Toiyabe Chapter | | 2101 Webster St., Suite 1300 | Oakland, CA 94612 | chair@toiyabe.sierraclub.org |
| Sierra Club, Toiyabe Chapter, Range of Light Group | Mark Bagley Owens River Watershed Conservation Chair | 53 S. Texas Street | June Lake, CA 93529 | m.bagley@verizon.net markbagley02@gmail.com |

Rush Creek Initial Study Report October 2023

| Organization | Name | Street Address | City, State, Zip | Email |
|---|---|---------------------------------|----------------------------|--|
| Sierra Nevada Alliance | Jenny Hatch Executive Director | P.O. Box 7989 | South Lake Tahoe, CA 96158 | jenny@sierranevadaalliance.org |
| Sierra Nevada Big Horn Sheep Foundation | John Wehausen Executive Director | P.O. Box 1183 | Bishop, CA 93515 | |
| Silver Lake Resort | Andrew Jones | P.O. Box 116 6857 CA-158 | June Lake, CA 93529 | silverlakeresortfamily@hotmail.com |
| Silver Lake Resort | Gary Jones | P.O. Box 116 6857 CA-158 | June Lake, CA 93529 | silverlakeresortfamily@hotmail.com |
| Silver Lake Resort | Richard Yokovanderpool | P.O. Box 116 6857 CA-158 | June Lake, CA 93529 | silverlakeresortfamily@hotmail.com |
| Southern Mono Historical Society | | 5489 Sherwin Creek Road | Mammoth Lakes, CA 93546 | events@mammothmuseum.org |
| TEAM Environmental | Naomi Jensen | 459 W. Line Street, Suite A | Bishop, CA 93514 | naomi@teambishop.com |
| The Nature Conservancy, California Field Office | | 201 Mission Street 4th Floor | San Francisco, CA 94105 | california@tnc.org |
| Tioga Lodge at Mono Lake | | P.O. Box 580 | Lee Vining, CA 93541 | tiogalodge@gmail.com |
| Tioga Pass Resort | | 1887 Highway 120 | Lee Vining, CA 93541 | tiogapassresortllc@gmail.com |
| Trout Unlimited | Mary Ann King California Water Project Director | 5950 Doyle Street, Suite 2 | Emeryville, CA 94608 | mking@tu.org |
| Trout Unlimited, Eastern Sierra Chapter | Jessica Strickland California Field Coordinator | P.O. Box 7399 | Mammoth Lakes, CA 93546 | jstrickland@tu.org |
| Trout Unlimited | Tiffanee Hutton | 15695 Donner Pass Rd, Suite 100 | Truckee, CA 96161 | tiffanee.hutton@tu.org |
| Native American Tribes | | | | |
| American Indian Council of Mariposa County (S. Sierra Miwuk National) | Sandra Chapman, Chairwoman | P.O. Box 186 | Mariposa, CA 95338 | ssmiwuknation@gmail.com |
| American Indian Council of Mariposa County (S. Sierra Miwuk National) | Sandra Chapman, Chairwoman | P.O. Box 186 | Mariposa, CA 95338 | sandra47roy@gmail.com |
| American Indian Council of Mariposa County (S. Sierra Miwuk National) | Wylon Coats, Vice Chairperson | P.O. Box 186 | Mariposa, CA 95338 | Vicechair@southernsierramiwuknation.org |
| Bishop Paiute Tribe | Tilford Denver, Tribal Chair | 50 Tu Su Lane | Bishop, CA 93514 | tilford.denver@bishoppaiute.org |
| Death Valley Timbisha Shoshone Tribe | Mandi Campbell, Tribal Historic Preservation Officer | 621 W Line St., Suite 109 | Bishop, CA 93515 | THPO@timbisha.com |
| Fort Independence Indian Community of Paiute Indians | Sean Scruggs, THPO | P.O. Box 67 | Independence, CA 93526 | thpo@fortindependence.com ; falconkeeper22@gmail.com |
| Bishop Paiute Tribe | Steven Orihuela | 50 Tu Su Lane | Bishop, CA 93514 | steven.orihuela@bishoppaiute.org |
| Utu Utu Gwaitu Paiute Tribe Benton Paiute Reservation | Shane Saulque, Tribal Chairperson (INT) and Vice Chair | 25669 Highway 6 PMBI | Benton, CA 93512 | shanesaulque@hotmail.com |
| Big Pine Paiute Tribe of Owens Valley | Sally Manning, Environmental Director | P.O. Box 700 | Big Pine, CA 93513 | s.manning@bigpinepaiute.org |
| North Fork Mono Tribe | Ron Goode, Chairman | 13396 Tollhouse Road | Clovis, CA 93619 | rwgoode911@hotmail.com |
| Tuolumne Band of Me-Wuk Indians | Reba Fuller, Government Affairs Specialist | P.O. Box 669 | Tuolumne, CA 95379 | rfuller@mewuk.com |
| American Indian Council of Mariposa County (S. Sierra Miwuk National) | Jazzmyn Gegere (Brochini), Cultural Resource Preservation Department Manager and Tribal Monitor Coordinator | | | preservation@southernsierramiwuknation.org |
| Lone Pine Paiute-Shoshone Tribe | Katherine Bancroft, THPO | P.O. Box 40 | Lone Pine, CA 93545 | patsiata@yahoo.com |
| Death Valley Timbisha Shoshone Tribe | Margaret Cortez, Chairperson | 621 W Line St., Suite 109 | Bishop, CA 93515 | one_mug@yahoo.com |

Rush Creek Initial Study Report October 2023

| Organization | Name | Street Address | City, State, Zip | Email |
|---|--|---|------------------------|--|
| Walker River Paiute Tribe | | Olen McCloud, Chairman | | omccloud@wrpt.org |
| Yosemite-Mono Lake Paiute Indian Community | David Andrews, Representative | P.O. Box 163523 | Sacramento, CA 95816 | nayanake@comcast.net |
| Yosemite-Mono Lake Paiute Indian Community | Melvin Bewster, Representative | | | nativearchdoc@yahoo.com |
| Mono Lake Kutzadikaa Tribe | Angela Eddy | 884 Harry Street | Big Pine, CA 93513 | mono1paiute@gmail.com |
| Bishop Paiute Tribe | | Meryl Picard, Chairperson | | meryl.picard@bishoppaiute.org |
| Yosemite-Mono Lake Paiute Indian Community | Lucy Parker, Representative | | | lucy_basket4@yahoo.com |
| Walker River Paiute Tribe | | Linzey Scott, Tribal Historic Preservation Officer | | Lscott@wrpt.org |
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| Mono Lake Kutzadikaa Indian Community Cultural Preservation Association | Raymond Andrews, President | P.O. Box 591 | Bishop, CA 93515 | kutzanuumu@yahoo.com |
| Mono Lake Kutzadikaa Tribe | Jocelyn Sheltraw, President of Mono Lake Kudadika'a Indian Community Cultural Preservation Association | | | jsheltraw@monolaketribe.us |
| Tuolumne Band of Me-Wuk Indians | Jon Otterson, Tribal Administrator | P.O. Box 669 | Tuolumne, CA 95379 | jon@mewuk.com |
| Timbisha Shoshone Tribe | George Gholson, Tribal Chairman | 621 West Line St., Suite 109 | Bishop, CA 93515 | george@timbisha.com |
| North Fork Rancheria of Mono Indians | | Fred Beihn, Chairperson | | fbeihn@nfr-nsn.gov |
| Death Valley Timbisha Shoshone Tribe | Thomas Romero, Environmental Department | 621 W Line St., Suite 109 | Bishop, CA 93515 | environmental@timbisha.com |
| North Fork Rancheria of Mono Indians of California | Elaine Fink, Tribal Chair | P.O. Box 869 | North Fork, CA 93643 | efink@nfr-nsn.gov |
| Mono Lake Kutzadikaa Tribe | | Dean Tonenna, Vice President of Mono Lake Kudadika'a Indian Community Cultural Preservation Association | | dtonenna@gmail.com |
| Utu Utu Gwaitu Paiute Tribe Benton Paiute Reservation | Dennis G. Chappabitty, Attorney at Law | 25669 Highway 6 PMBI | Benton, CA 93512 | dennis@chaplaw.us |
| Bishop Paiute Tribe | Darren Delgado, Tribal Historic Preservation Officer | | | darren.delgado@bishoppaiute.org |
| Big Pine Paiute Tribe of Owens Valley | Danelle Gutierrez, Tribal Historic Preservation Officer | P.O. Box 700 | Big Pine, CA 93513 | d.gutierrez@bigpinepaiute.org |
| Bridgeport Paiute Indian Colony | Debbie Painter, Cultural Department | P.O. Box 37 | Bridgeport, CA 93517 | culture@bridgeportindiancolony.com |
| North Fork Rancheria of Mono Indians | | Christina McDonald, Vice Chairperson | | cmcdonald@northforkrancheria-nsn.gov |
| Mono Lake Kutzadikaa Tribe | Charlotte Lange, Chairperson | P.O. Box 117 | Big Pine, CA 93513 | char54lange@gmail.com |
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| Big Pine Paiute Tribe of Owens Valley | James Rambeau, Chairperson | P.O. Box 700 | Big Pine, CA 93513 | |
| Public | | | | |

| Organization | Name | Street Address | City, State, Zip | Email |
|------------------|--------------------------|------------------------------------|----------------------|--|
| Public | Bartshe Miller | Mono County | | bzashe@gmail.com |
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| Public | Dennis Boeher | Box 626 | | plm2pne@gmail.com |
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| Public | Duncan King | P.O. Box 235 200 Peeler Lake Drive | Lee Vining, CA 93541 | nosmog@yahoo.com |
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| Public | Harvey Lewis | P.O. Box 296 | June Lake, CA 93529 | |
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| Public | Robert Nailon | 2454 Grimes Cemetary Rd | Lufkin, TX 75901 | Robert_Nailon@aol.com |
| Public | Jora Fogg | | | jora.rehm.lorber@gmail.com |
| Public, Attorney | Greg James Attorney | 1839 Shoshone Drive | Bishop, CA 93514 | gregjames@earthlink.net |
| Public | Robert Marks | 660 Piute Dr. PO Box 671 | June Lake, CA 93529 | rmarks1949@iCloud.com |
| Public | Ed Escoto | | | edbuilt@gmail.com |

Attachment B

Technical Study Plan Implementation Summary
As of October 2023

| Technical Study Plan | Study Elements Completed / Data Collected | Work Group Updates/ Consultation During Study Plan Implementation | Technical Study Plan Variances | Outstanding Study Elements <small>(Data analysis and reporting schedules are shown on the implementation schedules provided in Attachment C)</small> | Modifications to Ongoing Studies | Proposed New Studies |
|--------------------------|--|---|--|---|----------------------------------|----------------------|
| Aquatic Resources | | | | | | |
| AQ 1 – Instream Flow | <p>Quantification of Habitat Versus Flow Relationships Data Collection</p> <ul style="list-style-type: none"> Stream segments were selected for modeling (Table AQ 1-1; Map AQ 1-1) and additional locations/cross-sections identified in the TERR 1 – Botanical Technical Study Plan (TSP) and AQ 5 – Geomorphology TSP were selected. Data collection for hydraulic and aquatic habitat modeling <ul style="list-style-type: none"> Data was collected at representative mesohabitat types (see AQ 5 – Geomorphology TSP) to support one-dimensional hydrodynamics and habitat models at all sites in Table AQ 1-1. Data was collected at the two-dimensional model study sites, except for the channel within Waugh Lake due to high water surface elevations (Table AQ 1-1). Hydraulic and habitat data was collected in the plunge pool habitats. Stage data were collected to evaluate Silver Lake backwater effects (pressure transducers were installed and data to develop rating curves were collected) <p>Rush and South Rush Creek Channels near SR-158</p> <ul style="list-style-type: none"> Collected detailed topographic information for South Rush Creek near SR-158 and cross-sections /topography in the Rush Creek and powerhouse tailrace channels, using a combination of LiDAR, aerial photogrammetry, and total station surveys. Characterized/mapped the channel and floodplain channel substrate and riparian vegetation (see TERR 1 – Botanical TSP) suitable for hydraulic roughness characterization. | <p>Consultation to be scheduled associated with development of the target species suitability criteria in early 2024 and during review of the TSRs.</p> | <p>Survey Timing</p> <ul style="list-style-type: none"> The collection of data associated with evaluation of Waugh Lake lakebed, a field study element originally scheduled for the summer 2023, has been delayed until the summer of 2024 due to the wet water year of 2023 and resulting high water surface elevation of Waugh Lake. | <p>Previous Instream Flow Study</p> <ul style="list-style-type: none"> Summarize previous instream flows study below Rush Meadows Dam <p>Quantification of Habitat Versus Flow Relationships Modeling and Analysis (in progress)</p> <ul style="list-style-type: none"> Stakeholder Consultation, Conduct Target Species / Suitability Criteria working group meeting (TWG meeting to be scheduled) to finalize target species and their suitability criteria. Generate a species distribution map and life stage periodicity chart Evaluation of Silver Lake backwater effects Hydrodynamics Modeling Habitat Modeling Empirical Plunge Pool Modeling Riparian and Sediment Transport Modeling Summarize local hydrology in Rush Creek and South Rush Creek near SR-158, Rush Creek Powerhouse Tailrace, Reversed Creek, and inflow to Silver Lake developed in the AQ 2 – Hydrology TSP for historical, existing, Proposed Project, and unimpaired hydrology. Use the stage-discharge relationship of Silver Lake over a range of flows to incorporate backwater effects in the channel hydraulic modeling. Use HEC-RAS 1D/2D and River2d (if needed) to characterize channel and culvert hydraulics and identify potential flooding near SR-158 under the Proposed Project, existing, historical and unimpaired hydrology. <p>Evaluation of Rush Creek at the Silver Lake Inlet (in progress)</p> <ul style="list-style-type: none"> Summarize the Rush Creek inflow hydrology to Silver Lake developed in the AQ 2 – | None | None |

| Technical Study Plan | Study Elements Completed / Data Collected | Work Group Updates/ Consultation During Study Plan Implementation | Technical Study Plan Variances | Outstanding Study Elements <small>(Data analysis and reporting schedules are shown on the implementation schedules provided in Attachment C)</small> | Modifications to Ongoing Studies | Proposed New Studies |
|----------------------|---|---|--------------------------------|--|----------------------------------|----------------------|
| | <ul style="list-style-type: none"> • Collected model calibration water surface elevations along the channel. • Collected the stage-discharge relationship of Silver Lake over a range of flows to incorporate backwater effects in the channel hydraulic modeling. • Collected current channel conditions (i.e., downed trees, sediment, riparian encroachment, culverts) for assessing impediments to flows in Rush Creek and South Rush Creek near SR-158 (see TERR 1 – Botanical TSP for riparian vegetation characterization and AQ 5 – Geomorphology TSP for channel and large woody debris characterization). <p>Rush Creek at the Silver Lake Inlet</p> <ul style="list-style-type: none"> • Collected detailed topographic information for Rush Creek near the inlet using a combination of LiDAR, aerial photogrammetry, total station surveys, and/or GPS tagged sonar, as needed. • Characterized / mapped the channel and floodplain channel substrate and riparian vegetation (see TERR 1 – Botanical TSP) suitable for hydraulic roughness characterization. • Collected model calibration water surface elevations along the channel at at least two different flows. • Collected the stage-discharge data for Silver Lake over a range of flows (see above) to incorporate backwater effects in the channel hydraulic modeling. | | | <p>Hydrology TSP for historical, existing, Proposed Project, and unimpaired hydrology.</p> <ul style="list-style-type: none"> • Use the stage-discharge relationship of Silver Lake over a range of flows to incorporate backwater effects in the channel hydraulic modeling. • Use HEC-RAS 1D/2D and River2d (if needed) to characterize channel hydraulics and identify potential sediment scour/deposition conditions under the Proposed Project, existing, historical and unimpaired hydrology. <p>Evaluation of Potential Rush Creek Channel Restoration in the Former Lakebed of Waugh Lake</p> <ul style="list-style-type: none"> • Summarize the unimpaired hydrology developed in the AQ 2 Hydrology TSP. • Collect detailed topographic data for the channel using a combination of methods, including Light Detection and Ranging (LIDAR), aerial photogrammetry and supplemental total station surveys, as needed. • Characterize/map the channel and floodplain substrate for hydraulic roughness characterization and erosion modeling. • Collect model calibration water surface elevations along the channel at least two different flows. • Use HEC-RAS 1D/2D and/or River2d modeling (or equivalent) to characterize channel hydraulics (stage-discharge relationships along the channel) and erosion potential over the range of unimpaired flows (e.g., 10% to 90% exceedance flows). <p>Reporting</p> <ul style="list-style-type: none"> • Prepare Draft TSR • Distribute Draft TSR for stakeholder review • Address comments, finalize, and distribute Final TSR | | |

| Technical Study Plan | Study Elements Completed / Data Collected | Work Group Updates/ Consultation During Study Plan Implementation | Technical Study Plan Variances | Outstanding Study Elements <small>(Data analysis and reporting schedules are shown on the implementation schedules provided in Attachment C)</small> | Modifications to Ongoing Studies | Proposed New Studies |
|----------------------|--|---|--------------------------------|--|----------------------------------|----------------------|
| AQ 2 – Hydrology | <p>Data Collection – Hydrology</p> <ul style="list-style-type: none"> • Installed temporary gages (data collection in progress) at the following locations: <ul style="list-style-type: none"> – South Rush Creek upstream of SR-158 (River Mile [RM] 0.2) – Unnamed tributary entering South Rush Creek upstream of SR-158 (RM 0.12) – Unnamed tributary entering Rush Creek upstream of SR-158 (RM 17.66) – Reversed Creek upstream of the confluence with Rush Creek (RM 0.25) | <p>Consultation to be scheduled associated with development of the hydrology model in early 2024 and during review of the TSRs.</p> | <p>None</p> | <p>Hydrology Development</p> <ul style="list-style-type: none"> • Conduct stakeholder hydrological modeling working group meetings (TWG meeting to be scheduled) <p>Hydrology Model (in progress)</p> <ul style="list-style-type: none"> • Refine the modeled unimpaired (without the Project) daily average flow hydrology presented in PAD Section 4.3 for the POR • Develop model to characterize the Proposed Project (future operations), historical (operations prior to reservoir seismic restrictions), existing (current operations under seismic restrictions) daily average flow hydrology for the POR <ul style="list-style-type: none"> – Downstream of the Rush Creek Powerhouse, incorporate a sub-daily component into the operations model • Identify available climate change data / modeling applicable to the Rush Creek Watershed. If data / modeling exists, incorporate, as appropriate. <p>Hydrologic Alteration Analysis</p> <ul style="list-style-type: none"> • Analyze and compare Proposed Project, historical, existing, and unimpaired daily average flows in select Project-affected stream segments (Table AQ 2-1 and Map AQ 2-1) Monthly flow exceedance plots / tables for the POR. <ul style="list-style-type: none"> – Time-series plots – January to December (annual) plots / tables showing mean daily exceedance flows. – Monthly timing and magnitude of mean and median flow conditions (e.g., high and low flows). – Magnitude, duration, and timing of annual high flow and low flow conditions (1-day, 3-day, 7-day, monthly, etc.), including the presence of pulse flow events. | <p>None</p> | <p>None.</p> |

| Technical Study Plan | Study Elements Completed / Data Collected | Work Group Updates/ Consultation During Study Plan Implementation | Technical Study Plan Variances | Outstanding Study Elements <small>(Data analysis and reporting schedules are shown on the implementation schedules provided in Attachment C)</small> | Modifications to Ongoing Studies | Proposed New Studies |
|--------------------------|--|--|--------------------------------|---|----------------------------------|----------------------|
| | | | | <p>- Rate, timing, and frequency of hydrograph changes (e.g., rate and timing of the declining limb of the spring high flow hydrograph).</p> <p>Flood Frequency Analysis</p> <ul style="list-style-type: none"> • Generate a flood-frequency analysis for the Proposed Project, historical, existing, and unimpaired flows using annual peak daily flow data and peak flow estimates in select Project-affected stream segments. <p>Data Collection – Hydrology</p> <ul style="list-style-type: none"> • Generate hydrological data for the lower Rush Creek and South Rush Creek channels near SR-158: <ul style="list-style-type: none"> - Determine the Rush Creek/South Rush Creek percent flow split and additional flows entering South Fork Rush Creek and Rush Creek near SR-158. - Continue operating temporary gages (October 2022 to September 2024). - Use the empirical data and watershed area to develop a time series of accretion to South Rush Creek, Rush Creek upstream of SR-158, and Reversed Creek to Rush Creek. • Estimate the peak design flow for each of the channels / culverts at SR-158 (South Rush Creek, Rush Creek, and Powerhouse Tailrace). <p>Reporting</p> <ul style="list-style-type: none"> • Prepare Draft TSR • Distribute Draft TSR for stakeholder review • Address comments, finalize, and distribute Final TSR | | |
| AQ 3 – Water Temperature | <p>Data Collection</p> <ul style="list-style-type: none"> • Collect existing water temperature and meteorological conditions in Project-affected stream segments and Reversed Creek identified in Table AQ 3-1 from May 15 to October 15, 2023 at the high elevation sites (>7,300 feet; powerhouse | The Technical Working Group will be consulted during the TSR stakeholder review process. | None | <p>Data Review and Collection</p> <ul style="list-style-type: none"> • Obtain meteorological station data (relative humidity, wind speed, solar radiation, air temperature) from three existing locations (Gem Pass, June Mountain Summit, and near Rush Creek Powerhouse). | None | None |

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|----------------------|---|--|--|---|----------------------------------|----------------------|
| | <p>elevation) and from May 15 to December 1, 2023 at the lower elevation sites (≤7,300 feet), weather and access permitting.</p> <ul style="list-style-type: none"> Installed water temperature probes and collected data at nine stream locations (Table AQ 3-1) in May. Access was delayed to sites near Agnew/Gem lakes, occurred June 9, and near Waugh Lake, occurred July 18. Downloaded data bi-monthly from the water temperature probes. Coordinated with the AQ4-Water Quality TSP to obtain water temperature profiles in Gem Lake, Agnew Lake, and Silver Lake | | | <p>Outstanding Study Elements</p> <ul style="list-style-type: none"> Demobilize water temperature probes and collect final data (Oct 15 high country; Dec 15 low country) Review available literature predictions of changes in air temperature as a result of global warming to qualitatively evaluate the resulting effect on water temperature over the anticipated term of the new FERC license (30-50 years). <p>Reporting</p> <ul style="list-style-type: none"> Prepare Draft TSR Distribute Draft TSR for stakeholder review Address comments, finalize, and distribute Final TSR | | |
| AQ 4 – Water Quality | <p>In-situ Field Measurements and Seasonal Water Quality Grab Sampling</p> <ul style="list-style-type: none"> Completed in-situ data collection and seasonal grab samples at 15 sites (Table AQ 4-1; Map AQ 4-1); once in spring runoff (June/July) when access permitted and once during late summer/early fall base-flow period (September) <p>Reservoir/Lake Profiles</p> <ul style="list-style-type: none"> Completed profiles in July, August, September, and October <p>Bacterial Sampling</p> <ul style="list-style-type: none"> Completed five relatively evenly spaced bacterial sampling events for total and fecal coliform in Gem and Agnew lakes in July of 2023. <p>Laboratory Analysis</p> <ul style="list-style-type: none"> Early season laboratory analysis completed | The Technical Working Group will be consulted during the TSR stakeholder review process. | <p>In-situ Field Measurements and Water Quality Grab Sampling</p> <ul style="list-style-type: none"> Alkalinity was not collected in-situ, or during reservoir profiles. However, it was collected during spring runoff and base low-flow periods via lab analysis. <p>Reservoir Profiles</p> <ul style="list-style-type: none"> Due to the presence of snow and associated limited access, June reservoir profiles were not completed for Gem Lake. | <p>Laboratory Analysis</p> <ul style="list-style-type: none"> Late season laboratory analyses in progress. If water quality sampling results exceed parameters identified in the Basin Plan or other relevant water quality standards (refer to Table AQ 4-2), SCE will consult with the State Water Board, resource agencies, and the Technical Working Group to determine appropriate next steps, including whether additional sampling is needed. <p>Analysis and Reporting</p> <ul style="list-style-type: none"> Analyze data and prepare Draft TSR Distribute Draft TSR for stakeholder review Address comments, finalize, and distribute Final TSR | None | None |

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| AQ 5 – Geomorphology | <p>Channel Condition in Project-Affected Stream Segments</p> <ul style="list-style-type: none"> Stream segment classification and mesohabitat typing Collected data to refine the desktop channel characterization of each stream segment presented in Section 4.8 of the PAD. Collected data to estimate Rosgen Level II classification of channels Completed mesohabitat map of all river segment except within Waugh Lake (due to high water elevations in the lake). Sediment conditions in the Project-affected stream segments (all sites in Table AQ5-1, except as outlined below) <ul style="list-style-type: none"> Collected fine sediment in pools (except in Waugh Lake due to high water levels in the lake and in the reach above Silver Lake due to the absence of pools) Collected spawning gravel composition except Waugh Lake due to high water levels in the lake and in the reach above Silver Lake and the South Rush Creek reach due to the absence of spawning gravels. <p>Sediment Capture/Deposition in Project Reservoirs</p> <ul style="list-style-type: none"> Map sediment facies in the exposed reservoir bed areas and determine the depth of the fine sediment deposition facies to estimate sediment volume. <ul style="list-style-type: none"> Gem Lake Agnew Lake <p>Identify Flows Necessary to Maintain Geomorphic Processes in Project-affected Stream Segments</p> <ul style="list-style-type: none"> Evaluate Initiation of Sediment Transport under Flow Regimes <ul style="list-style-type: none"> Collected channel topography, bank full elevation, stream bed composition, elevation of riparian vegetation, and water surface slope data at three water surface elevations for all locations in Table AQ 5-1, | <p>The Technical Working Group will be consulted during the TSR stakeholder review process.</p> | <p>Channel Condition in Project-Affected Stream Segments</p> <ul style="list-style-type: none"> Sediment Conditions in the Project-affected Stream <ul style="list-style-type: none"> Fine sediment was not collected in pools in historic channel in Waugh Lake due to high water levels in the lake and in the reach above Silver Lake due to the absence of pools. Spawning gravel composition was not collected in Waugh Lake due to high water levels in the lake and in the reach above Silver Lake and South Rush Creek reach due to the absence of spawning gravels. <p>Survey Timing</p> <ul style="list-style-type: none"> The collection of data associated with evaluation of Waugh Lake, a field study element originally scheduled for the summer 2023, has been delayed until the summer of 2024 due to the wet water year of 2023 and resulting high water surface elevation of Waugh Lake. | <p>Channel Condition in Project-Affected Stream Segments</p> <ul style="list-style-type: none"> Fine Sediment in Pools in Waugh Lake (2024) Spawning gravels in Waugh Lake (2024) and 1 additional sample below Waugh Lake <p>Sediment Capture/Deposition in Project Reservoirs</p> <ul style="list-style-type: none"> Summarize any existing sediment management conducted by SCE Operations and Maintenance personnel. In Waugh Lake (2024), map sediment facies in the exposed reservoir bed areas and determine the depth of the fine sediment deposition facies to estimate sediment volume. In Waugh Lake (2024), use tree stump mapping (completed during implementation of the TERR 1 – Botanical Technical Study Plan [TSP]) to assist in identification of sediment deposition. <p>Identify Flows Necessary to Maintain Geomorphic Processes in Project-affected Stream Segments</p> <ul style="list-style-type: none"> Compare Impaired and Unimpaired Hydrologic Regimes. Evaluate Initiation of Sediment Transport under Different Flow Regimes at Selected Stream Segment Study Sites. <ul style="list-style-type: none"> Identify initiation of sediment transport (motion) and bankfull flows at the study sites in the selected stream segments using the hydraulic models developed in the AQ 1 – Instream Flow TSP. <ul style="list-style-type: none"> Derive channel hydraulic conditions, including flow depth, velocity, energy slope, and bed shear stress, from the models over a range of high flows. Determine flows necessary for initiation of sediment transport (motion) using a range of critical shear stress and corresponding range of | None | None |

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| | <p>except Waugh Lake due to high water elevations in the lake.</p> <p>Identify Historical and Existing Sources of Sediment and Project-related Erosion Areas (in progress)</p> <ul style="list-style-type: none"> Documented the location and relative volume of historic and existing sediment recruitment to channels from hillslope mass wasting and bank erosion processes in the Project-affected stream segments in the field. Historic and/or ongoing erosion at the Project facilities in the field. <p>Evaluation of Potential Rush Creek Channel Restoration in the former lakebed of Waugh Lake</p> <ul style="list-style-type: none"> In coordination with implementation of the TERR 1 – Botanical TSP and AQ 1 – Instream Flow TSP, characterized and mapped large woody debris/downed trees and riparian vegetation within the stream channels related to conveyance blockage and creation of potential flow backwater effects during high-flow events. Coordinated with the AQ 1 – Instream Flow TSP, which includes LiDAR, aerial photogrammetry, and/or total station surveys of the channel to assist in development of potential enhancements (e.g., berms, channel modification, clearing of the channel) and evaluation of fluvial geomorphic change in the Rush Creek and South Rush Creek channels. <p>Evaluate of Sediment deposition/transport in Rush Creek near the Silver Lake Inlet</p> <ul style="list-style-type: none"> Coordinated with the AQ 1 – Instream Flow TSP, which includes LiDAR, aerial photogrammetry, and/or total station surveys of the channel to evaluate sediment scour /deposition and potential fluvial geomorphic change at the Silver Lake inlet under the Proposed | | | <p>discharge values for a given particle size.</p> <ul style="list-style-type: none"> Estimate bankfull flow using the water surface elevations modeled over a wide range of flows at each cross-section (AQ 1 – Instream Flow TSP) and the bankfull elevations identified in the field. <p>Identify Historic and Existing Sources of Sediment and Project-Related Erosion Areas (complete analysis)</p> <ul style="list-style-type: none"> Document the location and relative volume of historic and existing sediment recruitment to channels from hillslope mass wasting and bank erosion processes in the Project-affected stream segments in the field. Historic and/or ongoing erosion at the Project facilities. <p>Evaluation of Potential Rush Creek Channel Restoration in the former lakebed of Waugh Lake (2024)</p> <ul style="list-style-type: none"> Coordinate with the AQ 1 – Instream Flow TSP, which includes Light Detection and Ranging (LiDAR), aerial photogrammetry, and/or total station channel surveys and hydraulic modeling of the channel in the Waugh Lake lakebed to assist in the evaluation of potential channel change related to sediment erosion/deposition. Use this information to assist in the evaluation of potential restoration of the Rush Creek channel within the former lakebed of Waugh Lake. <p>Evaluation of Potential Enhancement of Rush Creek and South Rush Creek Channels near SR-158</p> <ul style="list-style-type: none"> Coordinate with the AQ 1 – Instream Flow TSP hydraulic modeling of the channel to assist in development of potential enhancements (e.g., berms, channel modification, clearing of the channel) and evaluation of fluvial geomorphic change in the | | |

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| | Project, historical, existing, and unimpaired hydrology conditions. | | | <p>Rush Creek and South Rush Creek channels.</p> <p>Evaluate of Sediment deposition/transport in Rush Creek near the Silver Lake Inlet</p> <ul style="list-style-type: none"> Coordinate with the AQ 1 – Instream Flow TSP hydraulic modeling of the channel to evaluate sediment scour/deposition and potential fluvial geomorphic change at the Silver Lake inlet under the Proposed Project, historical, existing, and unimpaired hydrology conditions. <p>Analysis and Reporting</p> <ul style="list-style-type: none"> Analyze data and prepare Draft TSR. Distribute Draft TSR for stakeholder review. Address comments, finalize, and distribute Final TSR. | | |
| AQ 6 – Fish Population and Barriers | <p>Fish Populations – Selected Stream Segments</p> <ul style="list-style-type: none"> The AQ 5 – Geomorphology Technical Study Plan (TSP) mesohabitat mapping was used to identify representative sampling sites with mesohabitat types in similar proportion to the larger geomorphic stream segment. Sampling sites were chosen that overlapped with the instream flow study sites (see the AQ 1 – Instream Flow TSP) and/or historic fish sampling sites, where possible. Quantitative stream sampling was conducted during the late summer/early fall base-flow period using a combination of electrofishing (shallow water) and/or snorkeling (deep water) (Table AQ 6-1). <p>Fish Populations in Project Reservoirs</p> <ul style="list-style-type: none"> Characterized fish species composition, relative abundance, | The Technical Working Group will be consulted during the TSR stakeholder review process. | None | <p>Fish Barriers/Migration</p> <ul style="list-style-type: none"> Estimate potential for fish passage at Project-related fish barriers during the base-flow (low-flow) period using the following information: <ul style="list-style-type: none"> The general fish barrier assessment methodology outlined in Powers and Orsborn (1985) and Thompson (1972) modified, where necessary, for the specific species (e.g., rainbow trout and brook trout) and barriers within the study area. Leaping and swimming capabilities of the fish based on the literature (Powers and Orsborn 1985; Hoar et al. 1978) and fish size and water temperature information from the AQ 6 – Fish Population TSP and the AQ 3 – Water Temperature TSP. Physical and hydraulic characterization of potential barriers based on measurements or aerial | None | None |

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| | <p>and size in the Project reservoirs using gillnets.</p> <ul style="list-style-type: none"> - Sampled in each Project reservoir once during the late summer/early fall using variable mesh gillnets at three sampling locations in Gem Lake and two sampling locations in Agnew Lake. <p>Fish Barriers/Migration</p> <ul style="list-style-type: none"> • Identify and classify potential fish barriers in Project-affected stream segments and drawn down Project reservoirs. - Used the AQ 5 – Geomorphology TSP mesohabitat mapping to identify the location and nature (natural or Project-related) of potential barriers (e.g., natural falls, tributary junctions, road crossings, shallow riffles, and dams) in Project-affected stream segments and drawn down Project reservoirs. - Classified each potential barrier identified in the field or from aerial methods mapping (e.g., helicopter, aerial photographs) into the falls, chute, and cascade types defined by Powers and Orsborn (1985) or as critical riffles (Thompson 1972). - For stream road crossings, used a classification approach consistent with Flosi et al. (2010). • Summarized data collected at the potential fish passage barriers during field mapping (e.g., fall height, plunge pool depth, photographs, and field biologist observations). | | | <p>estimates and/or Project engineering drawings.</p> <ul style="list-style-type: none"> - For stream road crossings, evaluate fish migration consistent with Flosi et al. (2010). <p>Reporting</p> <ul style="list-style-type: none"> • Prepare Draft TSR. • Distribute Draft TSR for stakeholder review. • Address comments, finalize, and distribute Final TSR. | | |
| <p>AQ 7 – Special-Status Amphibians and Aquatic Reptiles</p> | <p>Sierra Nevada Yellow-Legged Frog</p> <ul style="list-style-type: none"> • Prepared preliminary maps of potential SNYLF breeding/rearing, overwintering, and dispersal habitat in the study area. • Conducted a field survey to document the presence of PCEs (as defined by USFWS [2016]) | <p>The Technical Working Group will be consulted during the TSR stakeholder review process.</p> | <p>None</p> | <p>Sierra Nevada Yellow-Legged Frog</p> <ul style="list-style-type: none"> • No occupied breeding/rearing habitat for SNYLF was identified in selected stream segments, therefore, quantification of the relationship of habitat to flow was not completed/required. <p>Analysis and Reporting</p> <ul style="list-style-type: none"> • Analyze data and prepare Draft TSR. | <p>None</p> | <p>None</p> |

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| | <p>within potential SNYLF habitat in the study area.</p> <ul style="list-style-type: none"> Developed a Geographic Information System (GIS) map of SNYLF habitat and overlaid information on Project facilities, construction areas, restoration areas, and the potential enhancement area. Conducted VES to determine the presence of SNYLF in the study area. Recorded incidental observations of SNYLF obtained during other surveys. <p>Yosemite Toad</p> <ul style="list-style-type: none"> Prepared preliminary maps of potential YT breeding/rearing, overwintering, and dispersal habitat in the study area. Conducted a field survey to document the presence of PCEs (as defined by USFWS [2016]) within potential YT habitat in the study area. Developed a GIS map of YT habitat and overlaid information on Project facilities, construction areas, restoration areas, and the potential enhancement area. Conducted VES to determine the presence of YT in the study area. Recorded incidental observations of YT obtained during other surveys. | | | <ul style="list-style-type: none"> Distribute Draft TSR for stakeholder review. Address comments, finalize, and distribute Final TSR. | | |
| Cultural Resources | | | | | | |
| CUL 1 – Built Environment | <p>Establish APE</p> <ul style="list-style-type: none"> Established APE (Area of Potential Effects) in consultation with SHPO. <p>Review of Previous Studies and Site Records</p> <ul style="list-style-type: none"> Obtained survey Permit from Inyo National Forest. Reviewed Previous Studies and Site Records. <p>Archival Research</p> <ul style="list-style-type: none"> Completed Archival Research. <p>Built Environment Inventory</p> <ul style="list-style-type: none"> Conducted field inspection and documentation of historic period built environmental resources. | The Technical Working Group will be consulted during the TSR stakeholder review process. | <p>Reporting Schedule</p> <ul style="list-style-type: none"> Due to heavy snow in APE/ Project Area field studies were delayed to late in the season and analysis and reporting has been subsequently delayed. Distribution of TSRs expected to be delayed by approximately one month as follows: <ul style="list-style-type: none"> February 2024 -Distribute draft TSR to stakeholders. March-May 2024 - Stakeholder review and provide comment on draft TSR (90 days). | <p>National Register of Historic Places (NRHP) Evaluation</p> <ul style="list-style-type: none"> Evaluate historic period built environmental resources and document, as appropriate. <p>Historic Properties Management Plan (HPMP)</p> <ul style="list-style-type: none"> Develop HPMP. <p>Analysis and Reporting</p> <ul style="list-style-type: none"> Analyze data and prepare Draft TSR. Distribute Draft TSR for stakeholder review. Address comments, finalize, and distribute Final TSR. | None | None |

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| CUL 2 – Archaeology | <p>Establish APE</p> <ul style="list-style-type: none"> Established APE (Area of Potential Effects) in consultation with SHPO. <p>Review of Previous Studies and Site Records</p> <ul style="list-style-type: none"> Obtained survey Permit from Inyo National Forest. Reviewed Previous Studies and Site Records. <p>Archival Research</p> <ul style="list-style-type: none"> Completed Archival Research. <p>Archeological Inventory</p> <ul style="list-style-type: none"> Completed archaeological field survey. Conducted Tribal participation in archaeological inventory. | <p>The Technical Working Group will be consulted during the TSR stakeholder review process.</p> | <p>National Register of Historic Places (NRHP) Evaluations</p> <ul style="list-style-type: none"> Evaluations requiring testing were not completed during 2023 field season due to late season survey because of heavy snow in APE. These may be able to be conducted in 2024 depending on 23/24 winter and access. <p>Reporting Schedule</p> <p>Due to heavy snow in APE/ Project Area field studies were delayed to late in the season and analysis and reporting has been subsequently delayed. Distribution of TSRs expected to be delayed by approximately one month as follows:</p> <ul style="list-style-type: none"> February 2024 - Distribute draft TSR to stakeholders. March-May 2024 - Stakeholder review and provide comment on draft TSR (90 days). | <p>Archeological Inventory</p> <ul style="list-style-type: none"> Submit field report to Inyo National Forest. <p>NRHP Evaluation</p> <ul style="list-style-type: none"> NRHP Evaluation Eligibility. <p>Historic Properties Management Plan (HPMP)</p> <ul style="list-style-type: none"> Develop HPMP. <p>Analysis and Reporting</p> <ul style="list-style-type: none"> Analyze data and prepare Draft TSR. Distribute Draft TSR for stakeholder review. Address comments, finalize, and distribute Final TSR. | None | None |
| TRI 1 – Tribal | <p>Establish APE</p> <ul style="list-style-type: none"> Established APE (Area of Potential Effects) in consultation with SHPO. <p>Review of Previous Studies and Site Records</p> <ul style="list-style-type: none"> Obtained Organic Act Permit from Inyo National Forest. Reviewed Previous Studies and Site Records (previous regional ethnography and archaeology in study area)]. Collaborated with other scholars knowledgeable about study area ethnohistory (Jones, Davis-King, Hull). <p>Archival Research</p> <ul style="list-style-type: none"> Reviewed previously collected archival data. Compiled ethnobotany data. Researched online collections (Harrington, Merriam, Huntington). Made appts. for Bancroft, YOSE. <p>Tribal Outreach (all Tribal groups identified in TSP)</p> <ul style="list-style-type: none"> Emails to all Tribes (7-14-23), with telephone follow-ups. | <p>The Technical Working Group will be consulted during the TSR stakeholder review process.</p> | <p>Reporting Schedule</p> <p>To provide Tribes with additional time to respond to inquiries for input, distribution of TSR to be delayed by approximately one month as follows:</p> <ul style="list-style-type: none"> February 2024 – Distribute draft TSR to stakeholders. March-May 2024 – Stakeholder review and provide comment on draft TSR (90 days). | <p>Meetings with Tribal Governments</p> <ul style="list-style-type: none"> Meetings with Tribal Governments if requested (offered in 7-14-23 email and follow-up calls; none yet scheduled). Review CUL-2 results with tribal participants. Follow-up calls to active participants to schedule interviews if requested. Formal, recorded Interviews (none yet requested or scheduled). Documentation and Evaluation of Tribal Places, TCPs, Tribal Government Resources (no Tribal Places, TCPs per NPS Bulletin 38 or Tribal Government Resources identified in APE to date). <ul style="list-style-type: none"> Other tribal resources may include waterfalls/pools, botanical resources, trail corridors. <p>Technical Study Reporting and Consultation</p> <ul style="list-style-type: none"> Analyze data and prepare Draft TSR. | None | None |

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| | <ul style="list-style-type: none"> - Emails included invitation to participate and to conduct formal interviews if desired. • Tribal contact list updated with participation status. • Project Site Visit with Mono Lake Kuktzadikaa tribal representative (9-14-23). - Field notes to Kutzadikaa Chair, with request for interview participation. | | | <ul style="list-style-type: none"> • Distribute Draft TSR for stakeholder review. • Address comments, finalize, and distribute Final TSR. <p>Historic Properties Management Plan (HPMP)</p> <ul style="list-style-type: none"> • Revise and update Historic Properties Management Plan. <ul style="list-style-type: none"> - Include tribal concerns and implementation recommendations. | | |
| Land Resources | | | | | | |
| LAND 1 – Aesthetics | <p>Data Collection</p> <ul style="list-style-type: none"> • Prepared maps showing Project facilities with respect to Forest Service Scenic Integrity Objectives and corresponding tables. • Developed standardized inventory form in consultation with INF. • Established Key Observation Points (KOPs) and documented, with photos and narrative, the landscape character of the Project facility viewsheds (mid-July 2023). • With photos, documented views of Horsetail Falls under various flow conditions including: <ul style="list-style-type: none"> - >100CFS; and - 70-8CFS. | The Technical Working Group will be consulted during the TSR stakeholder review process. | <p>Data Collection and Analysis Timing</p> <ul style="list-style-type: none"> • Due to a high water year, photos of Horsetail Falls at low flows are anticipated to be taken in October and November of 2023 rather than in August of 2023. | <p>Data Collection</p> <ul style="list-style-type: none"> • Document Horsetail Falls at low flows. <ul style="list-style-type: none"> - Outstanding documentation needed: <ul style="list-style-type: none"> ▪ 13-20 cfs ▪ 5-8 cfs ▪ 1 cfs • Prepare visual renderings of proposed Project alternatives. <ul style="list-style-type: none"> - Rush Meadows Dam – full and partial removal. - Gem Dam – retrofit. - Agnew Dam – full and partial removal. <p>Reporting</p> <ul style="list-style-type: none"> • Prepare Draft TSR. • Distribute Draft TSR for stakeholder review. • Address comments, finalize, and distribute Final TSR. | None | None |

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| LAND 2 – Noise | <p>Points of Interest</p> <ul style="list-style-type: none"> Identified noise receptors/points of interest <p>Noise Measurements</p> <ul style="list-style-type: none"> Characterized ambient noise environment and project-induced noise (October 2023) <ul style="list-style-type: none"> Powerhouse operation. Helicopter Use. Construction Equipment. Truck use. | <p>June 22, 2023 - Noise Technical Working Group meeting to discuss timing of noise monitoring study, and location from which to conduct the monitoring (Points of Interest). Stakeholders suggested noise studies be postponed due to atypical ambient noise environment created by ongoing exceptionally high runoff.</p> <p>June 30, 2023 - Follow-up email to engaged noise stakeholders confirming the decision to postpone two of the three proposed noise studies to 2024 and to proceed with the October 2023 noise study if conditions are favorable.</p> | <p>Survey Timing</p> <p>Due to high runoff and an associated atypical ambient noise environment in the study area, noise studies were delayed (at stakeholder request) to field season 2024 with the exception of noise measurements undertaken in late October 2023.</p> | <p>Noise Measurements</p> <ul style="list-style-type: none"> Conduct noise surveys: characterize ambient noise environment and project-induced noise (June, August). <ul style="list-style-type: none"> Powerhouse operation. Helicopter Use. Construction Equipment. Truck use. <p>Analysis and Reporting</p> <ul style="list-style-type: none"> Analyze data and prepare Draft TSR. Distribute Draft TSR for stakeholder review. Address comments, finalize, and distribute Final TSR. | None | None |
| Recreation Resources | | | | | | |
| REC 1 – Recreation | <p>Non Commercial Use</p> <ul style="list-style-type: none"> Developed survey instrument (survey form). Collected and analyzed wilderness permit system data from USFS for last 4+ years. Established self-registration survey box near the Rush Creek trailhead. Conducted use counts and visitor surveys May 1- November 1 2023. <p>Commercial Use</p> <ul style="list-style-type: none"> Interviewed the Frontier Pack Station outfitter. Collected available commercial use data from USFS. | None | <p>Data Variance</p> <p>USFS provided wilderness permit data from the fall of 2018 through December 2022. Data was not available prior to the fall of 2018. Therefore, the analysis reflects 4+ years of data rather than 5 years of data as indicated in the TSP.</p> | <p>Non Commercial Use</p> <ul style="list-style-type: none"> Interview INF Wilderness Rangers. <p>Document Public Safety</p> <ul style="list-style-type: none"> Interview SCE to characterize safety features and recorded incidents in the vicinity of the Project. <p>Data Synthesis and Analysis</p> <p>Characterize Flow Fluctuation in Rush Creek Downstream of the Rush Creek Powerhouse.</p> <p>Reporting</p> <ul style="list-style-type: none"> Prepare Draft TSR. Distribute Draft TSR for stakeholder review. Address comments, finalize, and distribute Final TSR. | None | None |
| Terrestrial Resources | | | | | | |
| TERR 1 – Botanical Resources | <p>Vegetation Alliances and Wildlife Habitats</p> <ul style="list-style-type: none"> Developed vegetation alliances maps of the study area based on Classification and Assessment with LANDSAT of Visible Ecological Groupings (CALVEG) mapping and vegetation alliance descriptions. | <ul style="list-style-type: none"> May 11, 2023 – Conducted Terrestrial Resources TWG meeting to confirm special-status and NNIP species lists; obtain any new information on location of special-status plants or NNIPs in the study area; identify agency personnel to coordinate reference population visits and verify timing of surveys; and to discuss current site conditions | None | <p>Special-status Plants</p> <ul style="list-style-type: none"> Prepare and submit California Native Species Field Survey Forms for special-status plant populations to CNDDDB. <p>Historic and Existing Botanical Resources within the Inundation Zones of Project Reservoirs</p> <ul style="list-style-type: none"> Finalize maps showing location of stumps within the inundation | None | None |

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| | <ul style="list-style-type: none"> • Verified CALVEG data against recent aerial photographs. • Conducted ground-truthing of vegetation alliances. • Developed GIS map of vegetation alliances, wildlife habitats and riparian alliances. <p>Special-status Plants</p> <ul style="list-style-type: none"> • Consulted with agencies regarding updated special-status species lists or new occurrences. • Developed updated lists of special-status plant species potentially occurring in the Project area, based on agency responses. • Identified and mapped known occurrences of special-status plant species. • Provided updated plant list and timing of surveys to the Technical Working Group members. • Requested input on the location of special-status plant reference populations. • Conducted special-status plant reference population surveys and provided results to Technical Working Group members. • Conducted focused special-status plant surveys. • Developed GIS map of special-status plant populations. <p>Non-Native Invasive Plants</p> <ul style="list-style-type: none"> • Consulted with agencies regarding updated non-native invasive plant lists or known occurrences. • Developed updated list of priority NNIPs for focused surveys. • Identified and mapped known occurrences of non-native invasive plants (NNIP). • Provided updated non-native invasive plant (NNIP) list and timing of surveys to Technical Working Group members. • Conducted focused NNIP surveys. | <p>and potential effects on survey timing.</p> <ul style="list-style-type: none"> • June 19, 2023 – E-mail submitted to TWG requesting agency-recommended early season reference populations and identifying the schedule for the early season reference populations site visit. • July 4, 2023 – E-mail notification to TWG regarding early season reference population site visit on July 6th and 7th. • July 15, 2023 – E-mail to TWG providing results of early season reference population site visit and schedule for early season surveys. • August 15, 2023 - E-mail submitted to TWG requesting agency-recommended late season reference populations and identifying the schedule for the late season reference populations site visit. • August 23, 2023 – E-mail notification to TWG regarding late season reference population site visit on August 29th and 30th. • September 5, 2023 – E-mail to TWG providing results of late season reference population site visit and schedule for late season surveys. | | <p>zones of Project reservoirs using LiDAR, once available.</p> <p>Aquatic Resources (Wetland) Delineation</p> <ul style="list-style-type: none"> • Develop aquatic resources delineation report and maps consistent with USACE standards. <p>Characterization of Riparian Community Along Project-Affected Stream Reaches</p> <ul style="list-style-type: none"> • Characterize the relationship between riparian vegetation and flow conditions in the selected Project-affected stream segments (refer to AQ 1 – Instream Flows). • Develop summary of the relationship between existing inundation characteristics and the distribution of dominant riparian species across the floodplain at each selected Project-affected stream segment. <p>Analysis and Reporting</p> <ul style="list-style-type: none"> • Analyze data and prepare Draft TSR. • Distribute Draft TSR for stakeholder review. • Address comments, finalize, and distribute Final TSR. | | |

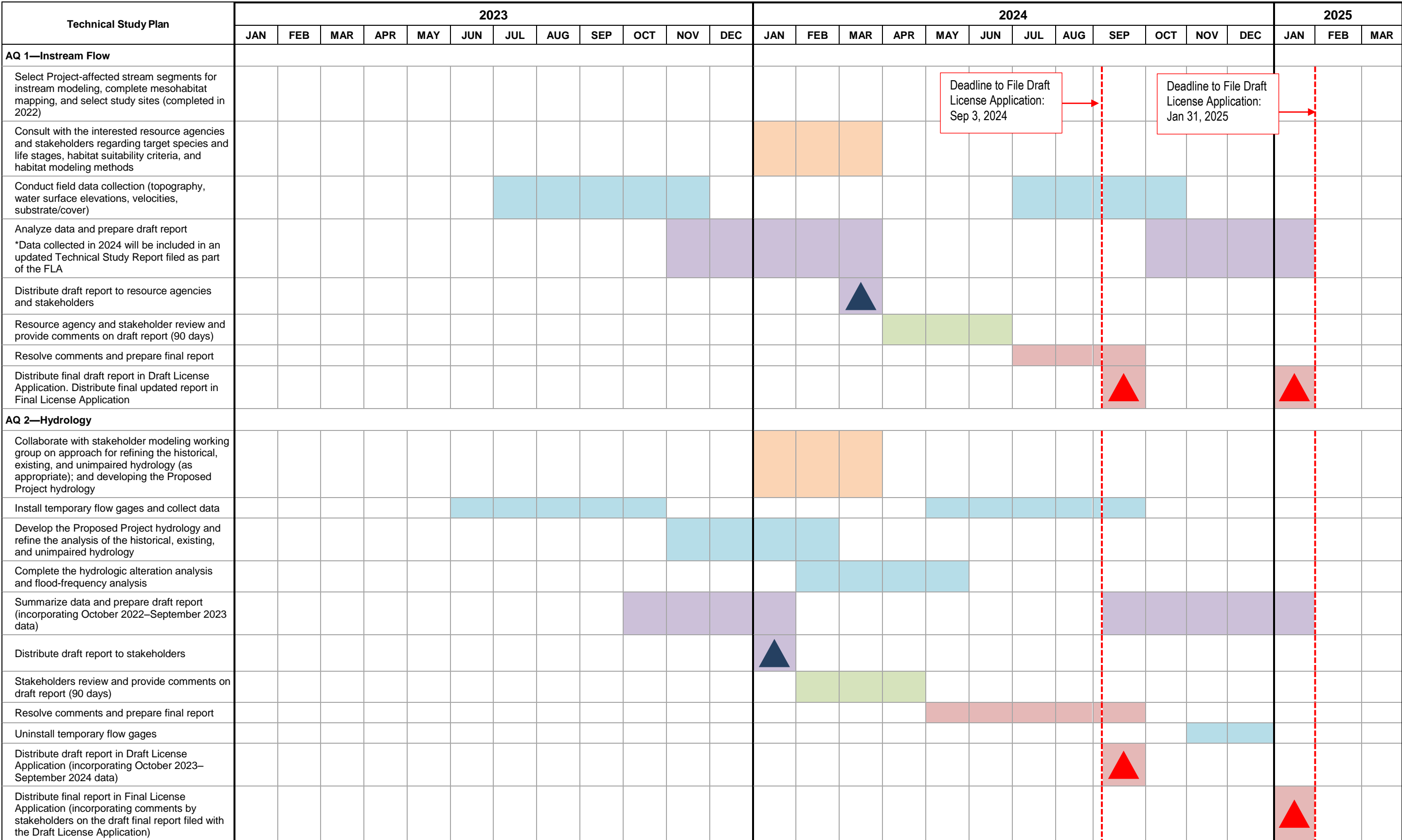
| Technical Study Plan | Study Elements Completed / Data Collected | Work Group Updates/ Consultation During Study Plan Implementation | Technical Study Plan Variances | Outstanding Study Elements <small>(Data analysis and reporting schedules are shown on the implementation schedules provided in Attachment C)</small> | Modifications to Ongoing Studies | Proposed New Studies |
|----------------------|--|---|--------------------------------|---|----------------------------------|----------------------|
| | <ul style="list-style-type: none"> • Developed GIS map of noxious weeds and invasive non-native plants. <p>Historic and Existing Botanical Resources within the Inundation Zones of Project Reservoirs</p> <ul style="list-style-type: none"> • Used aerial images and photographs of the Project reservoirs to develop a preliminary map showing the location and distribution of tree stumps within the inundation zones. • Collected data on the size class and species of stumps within inundation zones of Project reservoirs (i.e., live tree cores and stump cross-sections). • Developed a table of tree species identified within inundation zones of Project reservoirs. • Obtained information on current plant species composition, distribution, and abundance within the inundation zones of Project reservoirs. • Developed GIS layer showing location of transects and sampling plots; and tables documenting plant species composition, distribution, and abundance. <p>Aquatic Resources (Wetland) Delineation</p> <ul style="list-style-type: none"> • Conducted an aquatic resources delineation within the enhancement area consistent with U.S. Army Corps of Engineers protocols. • Developed GIS layers of wetland habitats within the enhancement area. <p>Characterization of Riparian Community Along Project-Affected Stream Reaches</p> <ul style="list-style-type: none"> • Developed a summary of life history requirements of dominant woody species and patterns of riparian vegetation establishment along Rush Creek. | | | | | |

| Technical Study Plan | Study Elements Completed / Data Collected | Work Group Updates/ Consultation During Study Plan Implementation | Technical Study Plan Variances | Outstanding Study Elements <small>(Data analysis and reporting schedules are shown on the implementation schedules provided in Attachment C)</small> | Modifications to Ongoing Studies | Proposed New Studies |
|-----------------------------|--|---|---|---|----------------------------------|----------------------|
| | <ul style="list-style-type: none"> Conducted a field assessment of the riparian communities along Project-affected stream reaches. <p>Documentation of Riparian Community Within the Potential Enhancement Area</p> <ul style="list-style-type: none"> Conducted a field assessment to document riparian communities within the potential enhancement area. Developed a final map of riparian communities and tables summarizing the results of the inventory. | | | | | |
| TERR 2 – Wildlife Resources | <p>Special-status Wildlife</p> <ul style="list-style-type: none"> Cross-referenced updated CALVEG alliance maps with CWHR System wildlife habitats to develop an updated CALVEG-CWHR crosswalk table. Consulted with agencies to obtain updated information on Sierra Nevada bighorn sheep distribution and use of lands within the FERC Project boundary and adjacent Critical Habitat. Consulted with agencies and local experts regarding historic and recent raptor nests within the FERC Project boundary and proposed helicopter flight paths. Identified and mapped potential raptor nesting habitat and observation points to support raptor surveys; developed a map of potential raptor nesting habitat along the proposed helicopter flight path. Updated existing wildlife lists and wildlife occurrence maps. Conducted wildlife reconnaissance surveys. Documented incidental observations of special-status species during the 2023 field season. Developed an updated list of special-status wildlife species potentially occurring in CWHR habitats. | <ul style="list-style-type: none"> May 11, 2023 – Conducted Terrestrial Resources TWG meeting to obtain any new information on Sierra Nevada bighorn sheep and the historic/current location of raptor nests in the study area; obtain information on raptor electrocutions on Project transmission/powerlines; and discuss current site conditions and potential effects on raptor nest and bat roost/seasonal use surveys. May 16, 2023 – Follow-up e-mail sent to the TWG requesting input on proposed alterations to survey schedule, including: <ul style="list-style-type: none"> Delay raptor nest surveys until 2024. Delay bat roost and seasonal use surveys until 2024. June 5, 2023 – E-mail from CDFW approving survey delays. June 15, 2023 – E-mail from USFWS approving survey delays. | <p>Survey Timing</p> <p>Considering winter conditions in 2022/2023, timing for some TERR 2 surveys were modified (in consultation with resource agencies) to ensure that representative data is obtained for the Project area. Modifications include moving the following surveys from 2023 to 2024:</p> <ul style="list-style-type: none"> Raptor nesting surveys. Bat surveys. | <p>Special-status Wildlife</p> <ul style="list-style-type: none"> Prepare and submit California Native Species Field Survey Forms for special-status wildlife observations to CNDDDB. Consult with agencies and local experts to confirm regional nesting period. Conduct raptor nest surveys during the regional nesting period (2024). Develop a final map showing the location of potential raptor nesting habitat and nests identified within the Study Area. <p>Special-status Bat Surveys</p> <ul style="list-style-type: none"> Prepare and submit to agencies a summary of the preliminary visual assessment of Project facilities. Conduct visual roost surveys at Project facilities identified as potentially supporting bat roosts (2024). Collect/submit for analysis DNA samples obtained from roost sites where fresh guano is available and bat species could not be determined visually during the roost survey. Conduct acoustic sampling during the reproductive season. Conduct seasonal use surveys (i.e., additional acoustic sampling during the fall before onset of winter snows) (2024). | None | None |

| Technical Study Plan | Study Elements Completed / Data Collected | Work Group Updates/ Consultation During Study Plan Implementation | Technical Study Plan Variances | Outstanding Study Elements <small>(Data analysis and reporting schedules are shown on the implementation schedules provided in Attachment C)</small> | Modifications to Ongoing Studies | Proposed New Studies |
|----------------------|---|---|--------------------------------|---|----------------------------------|----------------------|
| | <p>Evaluation of Transmission Line, Transmission Tap Line, and Power Line Configuration</p> <ul style="list-style-type: none"> Mapped the location and documented the configuration of Project transmission lines, transmission tap lines, and power lines. Evaluated consistency with Avian Power Line Interaction Committee (APLIC) guidelines. Documented past avian electrocutions and mortalities. <p>Special-status Bat Surveys</p> <ul style="list-style-type: none"> Conducted an initial desktop assessment of Project facilities to determine potential to support bat roosts. Conducted a preliminary visual assessment of Project facilities to determine potential to support bat roosts. Developed a list of Project facilities potentially supporting bat roosts (by facility type). | | | <p>Outstanding Study Elements</p> <ul style="list-style-type: none"> Develop a map showing the location of special status bat roosts in Project facilities. <p>Analysis and Reporting</p> <ul style="list-style-type: none"> Analyze data and prepare Draft TSR. Distribute Draft TSR for stakeholder review. Address comments, finalize, and distribute Final TSR. | | |

Attachment C

Technical Study Plan Implementation Schedule
As of Early October 2023



Rush Creek Initial Study Report October 2023

| Technical Study Plan | 2023 | | | | | | | | | | | | 2024 | | | | | | | | | | | | 2025 | | |
|---|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|
| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR |
| AQ 3—Water Temperature | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Install and maintain temperature probes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintain low elevation (≤7,300 feet; powerhouse elevation) temperature probe | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Analyze data and prepare draft report | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Distribute draft report to stakeholders | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stakeholders review and provide comments on draft report (90 days) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Resolve comments and prepare final report | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Distribute final report in Draft License Application | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AQ 4—Water Quality | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct In-Situ Field Measurements and Grab Sampling | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct Reservoir Profiles | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct Bacterial Sampling | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Analyze Data and Prepare Draft Report | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Distribute draft report to stakeholders | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stakeholders review and provide comments on draft report (90 days) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Resolve Comments and Prepare Final Report | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Distribute final report in Draft License Application | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AQ 5—Geomorphology | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct channel surveys (e.g., mesohabitat and Rosgen mapping) (mesohabitat mapping occurred in 2022, Rosgen mapping in late summer 2023) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Complete data analysis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct sediment capture/deposition surveys, sediment transport field surveys, sediment source surveys, and evaluation of potential restoration/enhancement measures in coordination with instream flow surveys | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Analyze data and prepare draft report *Data collected in 2024 will be included in an updated Technical Study Report filed as part of the FLA | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Distribute draft report to stakeholders | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stakeholders review and provide comments on draft report (90 days) | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Technical Study Plan | 2023 | | | | | | | | | | | | 2024 | | | | | | | | | | | | 2025 | | |
|--|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|
| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR |
| Resolve comments and prepare final report | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Distribute final draft report in Draft License Application. Distribute final updated report in Final License Application | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AQ 6—Fish Population and Barriers | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Characterize fish barriers/migration in Project-affected stream segments | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct fish population sampling in Project-affected stream segments and Project reservoirs | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Analyze data and prepare draft report | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Distribute draft report to stakeholders | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stakeholders review and provide comments on draft report (90 days) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Resolve comments and prepare final report | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Distribute final report in Draft License Application | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AQ 7—Special-status Amphibians | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Complete habitat mapping and conduct VES surveys | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| If occupied breeding/rearing habitat for SNYLF is identified in stream segments evaluated as part of implementation of the AQ 1 – Instream Flow TSP, quantification of habitat versus flow relationships will be developed (No occupied breeding/rearing habitat for SNYLF was identified in selected stream segments) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Analyze data and prepared draft report | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Distribute draft report to stakeholders | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stakeholders review and provide comments on draft report (90 days) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Resolve comments and prepare final report | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Distribute final report in Draft License Application | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CUL 1—Built Environment | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convene interested stakeholders to discuss Draft Study Plan and adequacy of the APE (completed in 2022) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consult with SHPO regarding adequacy of the APE (completed in 2022) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct archival research and background review | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct field inventory | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Analyze data and prepare draft TSR | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Rush Creek Initial Study Report October 2023

| Technical Study Plan | 2023 | | | | | | | | | | | | 2024 | | | | | | | | | | | | 2025 | | |
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| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR |
| Distribute draft TSR to stakeholders | | | | | | | | | | | | | | ▲ | | | | | | | | | | | | | |
| Stakeholder review and provide comments on draft TSR (90 days) | | | | | | | | | | | | | | | ■ | ■ | ■ | | | | | | | | | | |
| Resolve comments and prepare final TSR | | | | | | | | | | | | | | | | ■ | ■ | | | | | | | | | | |
| Develop Draft HPMP | | | | | | | | | | | | | | | | ■ | ■ | ■ | ■ | ■ | | | | | | | |
| Distribute final TSR and Draft HPMP in Draft License Application | | | | | | | | | | | | | | | | | | | | | ▲ | | | | | | |
| CUL 2—Archaeology | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convene interested stakeholders to discuss Draft Study Plan and adequacy of the APE (completed in 2022) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consult with SHPO regarding adequacy of APE (completed in 2022) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct archival research and background review | ■ | ■ | ■ | ■ | ■ | ■ | | | | | | | | | | | | | | | | | | | | | |
| Develop and obtain consensus on Inventory and NRHP Evaluation strategy and permitting approach | ■ | ■ | ■ | ■ | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct field studies | | | | | | | ■ | ■ | ■ | ■ | | | | | | | | | | | | | | | | | |
| Analyze data and prepare draft TSR | | | | | | | | | | ■ | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |
| Distribute draft TSR to stakeholders | | | | | | | | | | | | | | ▲ | | | | | | | | | | | | | |
| Stakeholder review and provide comments on draft TSR (90 days) | | | | | | | | | | | | | | | ■ | ■ | ■ | | | | | | | | | | |
| Resolve comments and prepare final TSR | | | | | | | | | | | | | | | | ■ | ■ | ■ | | | | | | | | | |
| Develop Draft HPMP | | | | | | | | | | | | | | | | ■ | ■ | ■ | ■ | ■ | | | | | | | |
| Distribute final TSR and Draft HPMP in Draft License Application | | | | | | | | | | | | | | | | | | | | | ▲ | | | | | | |
| TRI 1—Tribal | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Meet with Tribal groups and resource agencies/stakeholders to discuss Draft Study Plan and adequacy of the APE (completed in 2022) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consult with SHPO regarding adequacy of the APE (completed in 2022) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Submit Tribal Resources technical qualifications to INF | ■ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct archival research | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | | | | | | | | | | | | | | |
| Engage Tribal groups to arrange meetings and establish protocols | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | | | | | | | |
| Conduct Tribal interviews to identify Tribal resources | | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | | | | | | | |
| Compile results of data gathered, evaluate Tribal resources, and prepare draft TSR | | | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | | | | | | | | | | | | | |

Rush Creek Initial Study Report October 2023

| Technical Study Plan | 2023 | | | | | | | | | | | | 2024 | | | | | | | | | | | | 2025 | | |
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| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR |
| Distribute draft TSR to stakeholders | | | | | | | | | | | | | | ▲ | | | | | | | | | | | | | |
| Stakeholder review and provide comment on draft TSR (90 days) | | | | | | | | | | | | | | | ■ | ■ | ■ | | | | | | | | | | |
| Resolve comments and prepare final TSR | | | | | | | | | | | | | | | | ■ | ■ | ■ | | | | | | | | | |
| Develop Draft HPMP | | | | | | | | | | | | | | | | ■ | ■ | ■ | ■ | ■ | | | | | | | |
| Distribute final TSR and Draft HPMP in Draft License Application | | | | | | | | | | | | | | | | | | | | | ▲ | | | | | | |
| LAND 1—Aesthetics | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Summarize land management direction and objectives, establish KOPs, and develop inventory forms | ■ | ■ | ■ | ■ | ■ | | | | | | | | | | | | | | | | | | | | | | |
| Inventory, photo document, and assess Project facilities | | | | | | | ■ | | | | | | | | | | | | | | | | | | | | |
| Photo document and characterize Horsetail Falls at five different flows, assuming spill flows are available | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | | | | | | | | | | | | | | | |
| Prepare visual renderings of proposed project alternatives | | | | | | | | | | ■ | ■ | ■ | | | | | | | | | | | | | | | |
| Analyze data and prepare draft report | | | | | | | | | | ■ | ■ | ■ | | ▲ | | | | | | | | | | | | | |
| Stakeholder 90-day Review and Comment Period | | | | | | | | | | | | | | | ■ | ■ | ■ | | | | | | | | | | |
| Resolve comments and prepare final report | | | | | | | | | | | | | | | | | | ■ | ■ | ■ | ▲ | | | | | | |
| LAND 2—Noise | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Identify sensitive receptors/ POI with resource agencies and stakeholders | | | | | ■ | ■ | | | | ■ | | | | | | | | | | | | | | | | | |
| Conduct noise surveys | | | | | | | | | ■ | | | | | | | | | ■ | ■ | ■ | ■ | | | | | | |
| Analyze data and prepare draft report *Data collected in 2024 will be included in a updated Technical Study Report filed as part of the FLA | | | | | | | | | | ■ | ■ | ■ | | ▲ | | | | | | | | | | | | | |
| Distribute draft report to stakeholders | | | | | | | | | | | | | | ▲ | | | | | | | | | | | | | |
| Stakeholders review and provide comments on draft report (90 days) | | | | | | | | | | | | | | | ■ | ■ | ■ | | | | | | | | | | |
| Conduct additional noise surveys (as needed) | | | | | | | | | | | | | | | | | | ■ | ■ | ■ | ■ | | | | | | |
| Resolve comments and prepared updated draft report | | | | | | | | | | | | | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | | | |
| Distribute final updated report in Final License Application | | | | | | | | | | | | | | | | | | | | | | | | | | | ▲ |

Rush Creek Initial Study Report October 2023

| Technical Study Plan | 2023 | | | | | | | | | | | | 2024 | | | | | | | | | | | | 2025 | | | | | | |
|---|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|--|--|--|--|
| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | | | | |
| REC 1—Recreation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gather and analyze existing available use data (including wilderness permit data from the INF) | █ | █ | █ | █ | █ | █ | | | | | | | | | | | | | | | | | | | | | | | | | |
| Develop the survey instrument in consultation with the Forest Service and CDFW and interview key information sources | | | █ | █ | █ | █ | █ | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct use counts and visitor surveys, and establish and maintain a temporary self-registration box at the Rush Creek Trail Trailhead | | | | | █ | █ | █ | █ | █ | █ | █ | | | | | | | | | | | | | | | | | | | | |
| Analyze data and prepare draft report | | | | | | | | | | | █ | █ | █ | █ | █ | | | | | | | | | | | | | | | | |
| Distribute draft report to stakeholders | | | | | | | | | | | | | | █ | | | | | | | | | | | | | | | | | |
| Stakeholders review and provide comments on draft report (90 days) | | | | | | | | | | | | | | | █ | █ | █ | | | | | | | | | | | | | | |
| Resolve comments and prepare final report | | | | | | | | | | | | | | | | █ | █ | █ | █ | | | | | | | | | | | | |
| Distribute final report in Draft License Application | | | | | | | | | | | | | | | | | | | █ | █ | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | █ | | | | | | | | | | | |
| TERR 1—Botanical | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Collect data to characterize riparian vegetation at long-term riparian monitoring sites (consistent with USFS 4[e] Condition 7) (completed in 2022) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct field surveys | | | | | | █ | █ | █ | █ | █ | █ | | | | | | | | | | | | | | | | | | | | |
| Analyze data and prepare draft report | | | | | | | | | | | █ | █ | █ | █ | █ | | | | | | | | | | | | | | | | |
| Distribute draft report to stakeholders | | | | | | | | | | | | | | █ | | | | | | | | | | | | | | | | | |
| Stakeholders review and provide comments on draft report (90 days) | | | | | | | | | | | | | | | █ | █ | █ | | | | | | | | | | | | | | |
| Resolve comments and prepare final report | | | | | | | | | | | | | | | | █ | █ | █ | █ | | | | | | | | | | | | |
| Distribute final report in Draft License Application | | | | | | | | | | | | | | | | | | | | █ | █ | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | █ | | | | | | | | | | |
| TERR 2—Wildlife | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consult with resource agencies to obtain information on Sierra Nevada bighorn sheep and the location of historic or recent raptor nests and site-specific raptor nesting chronology | █ | █ | █ | █ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct wildlife reconnaissance surveys, raptor nest surveys, and transmission line/power line pole evaluation | | | | | | █ | █ | █ | █ | █ | | | | | | | | | | | | | | █ | █ | | | | | | |
| Conduct bat surveys (preliminary visual assessment, roost survey, guano DNA sampling, acoustic sampling) | | | | | | | | | | | | | | | | | | | █ | █ | | | | | | | | | | | |
| Conduct seasonal use bat survey (acoustic sampling) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Analyze data and prepare draft report | | | | | | | | | | | | | █ | █ | | | | | | | | | | | | | | | | | |
| *Data collected in 2024 will be included in an updated Technical Study Report filed as part of the FLA | | | | | | | | | | | | | | | | | | | | | | | █ | █ | █ | █ | | | | | |

Rush Creek Initial Study Report October 2023

| Technical Study Plan | 2023 | | | | | | | | | | | | 2024 | | | | | | | | | | | | 2025 | | |
|---|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|
| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR |
| Distribute draft report to stakeholders | | | | | | | | | | | | | | ▲ | | | | | | | | | | | | | |
| Stakeholders review and provide comments on draft report (90 days) | | | | | | | | | | | | | | | ■ | ■ | ■ | | | | | | | | | | |
| Resolve comments and prepare final report | | | | | | | | | | | | | | | | | | ■ | ■ | ■ | | | | | | | |
| Distribute final draft report in Draft License Application. Distribute final updated report in Final License Application. | | | | | | | | | | | | | | | | | | | | | ▲ | | | | ▲ | | |

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| | Stakeholder/Agency Consultation |
| | Field Surveys/Data Collection |
| | Data Analysis and Prepare Draft Report |
| | Stakeholder Review and Comment Period |
| | Resolution of comments and Prepare Final Report |

- ▲ Submit Draft Technical Study Report to Stakeholders
- ▲ Deadline to File Draft License Application: Sep 3, 2024.
- ▲ Deadline to File Final License Application, Jan 31, 2025.