

Rush Creek Project

FERC Project No. 1389

Existing Project Overview

ESSLIA Discussion July 6, 2022

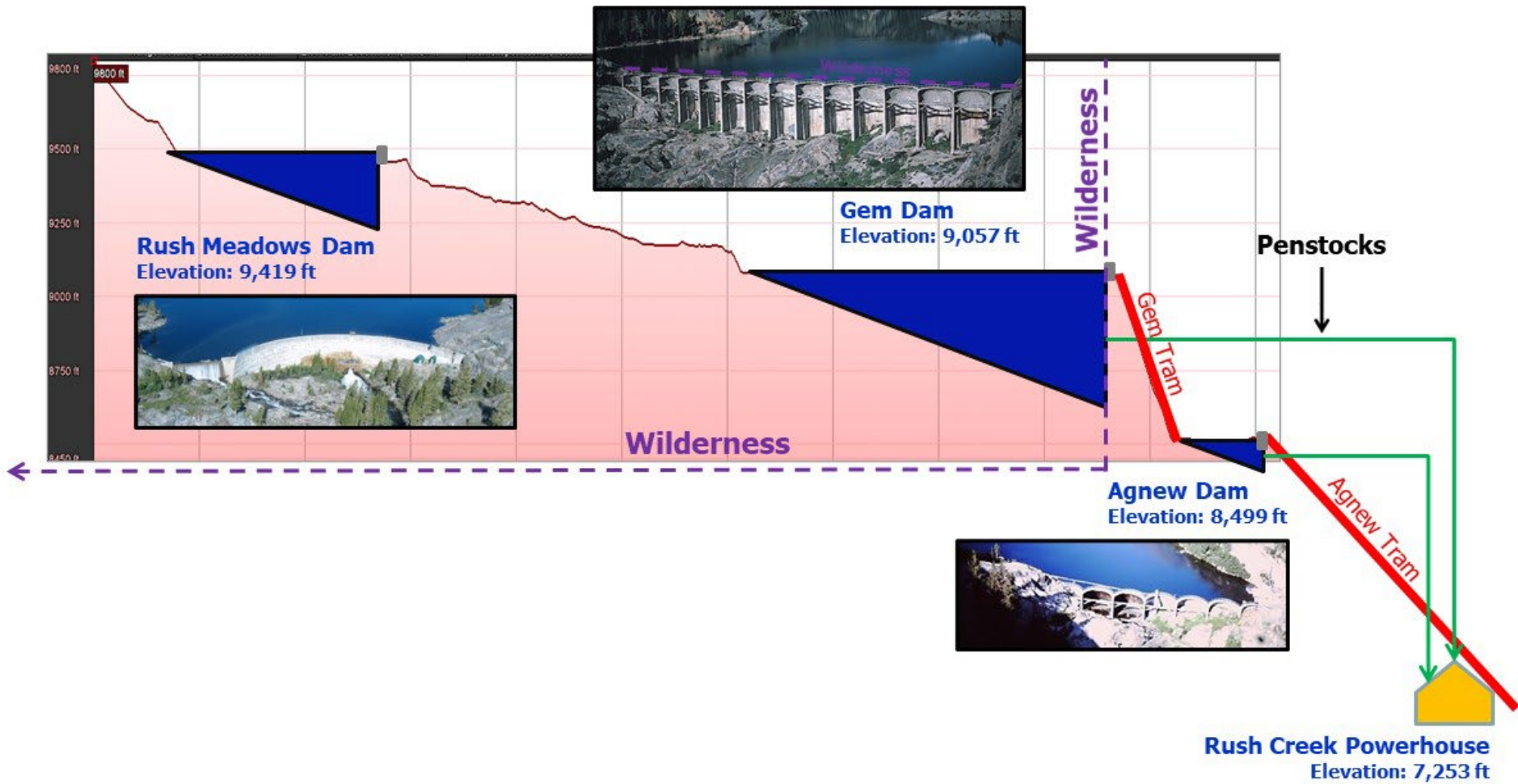
Safety Moment



Project Overview

- Primary Project facilities include:
 - Three dams and associated reservoirs
 - Water conveyance system
 - Powerhouse
 - Trams
- Rush Meadows Dam completed in 1918, raised in 1924/1925
- Gem Dam completed between 1915 and 1917, additional gravity section added in 1924
- Agnew Dam completed between 1915 and 1917

Project Overview



Seismic Restrictions

- Project dams classified by FERC as high hazard
 - Nearby Silver Lake Fault identified as a potential safety concern in 2007
- Reservoir operations restricted by FERC in 2012
 - Waugh Lake - 9,392.1 feet
 - Gem Lake - 9,027.5 feet
 - Agnew Lake - natural lake level

Project Modifications

- 2016/2017 Rush Creek Watershed experienced 230% of the average snowpack – high runoff conditions
- SCE determined restricted reservoir levels could not be maintained through normal operations
- Emergency actions and interim structural modifications were taken to maintain restricted reservoir levels

Project Modifications

Emergency Actions (2017) – Installed a temporary pumping system to remove water from Agnew Lake, and modified the Gem and Agnew flowlines to manage lake elevations



Project Modifications

Interim Structural Modifications – Notched the base of Agnew Dam (2017) and Rush Meadows Spillway (2018) to pass higher flows downstream and passively comply with the seismic restrictions

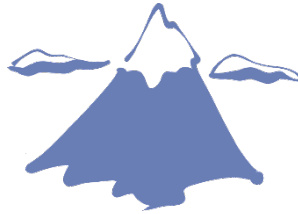


Project Modifications

Structural Modifications (2020-2021) – Retrofitted the existing Gem Dam Arch 8 outlet valve to improve hydraulic characteristics of the valve and increase flow releases at the Arch 8 outlet

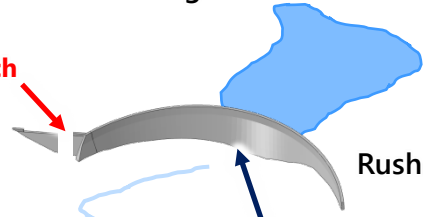


Sierra Nevada Mountains



Waugh Lake

Notch



Rush Meadows Dam

Low Level Outlets

Gem Lake



Gem Dam

Bypass Valve

Arch 8 Outlet & MIF Release

SCE Rush Creek Hydroelectric System

Water Release Features

Previously Existing Feature
New or Modified Feature
Currently Non-functional Feature

Agnew Lake

Agnew Dam

Notches

Pressure Relief Valve (PRV)

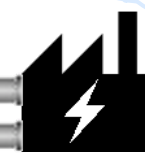
18" Valve

Penstock Cuts

MIF Release

Drain Valve

Agnew Junction



Rush Creek Powerhouse



Rush Creek Project

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Proposed Project Alternatives

ESSLIA Discussion
July 6, 2022

Proposed Project Alternatives

- Development of alternatives
- Considerations
- Proposed Project alternatives
- Proposed implementation schedule

Development of Alternatives

- Over the last few years, several engineering firms with different expertise were utilized to develop approaches for removal/retrofitting of the Rush Creek Project dams
- The following alternatives, supported by SCE Dam Safety, were selected for consideration in the relicensing:
 - Agnew Dam (full and partial dam removal)
 - Rush Meadows Dam (full and partial dam removal)
 - Gem Dam (dam modification - retrofitting)

Considerations

- Alternatives for Rush Meadows and Agnew dams under consideration to bookend the analysis, facilitate stakeholder collaboration, and represent different priorities, including:
 - Disturbance to the local community (helicopter and truck use)
 - Stakeholder acceptability
 - Wilderness Act
 - Visual footprint
 - Project complexity and schedule

Considerations

- Final Project Alternatives will be identified based on agency and stakeholder input and will be provided in the Final License Application (January 2025)
- Construction will not begin until issuance of the new license, approval of the final engineering plans by FERC and DSOD, and acquisition of regulatory permits (estimated 2029)

Proposed Project Alternatives

- Agnew Dam and Rush Meadows Dam Disposition

Objectives

- Address seismic concerns by modifying/removing the dams such that no water is impounded under the Probable Maximum Flood (PMF)
- Remove dams from FERC jurisdiction

Proposed Project Alternatives

- Agnew Dam and Rush Meadows Dam Disposition

Approach – Full Dam Removal

- Demolition of the entire dam
- All concrete/debris transported via helicopter to June Mountain Ski Area Parking Lot for transport to an approved disposal site



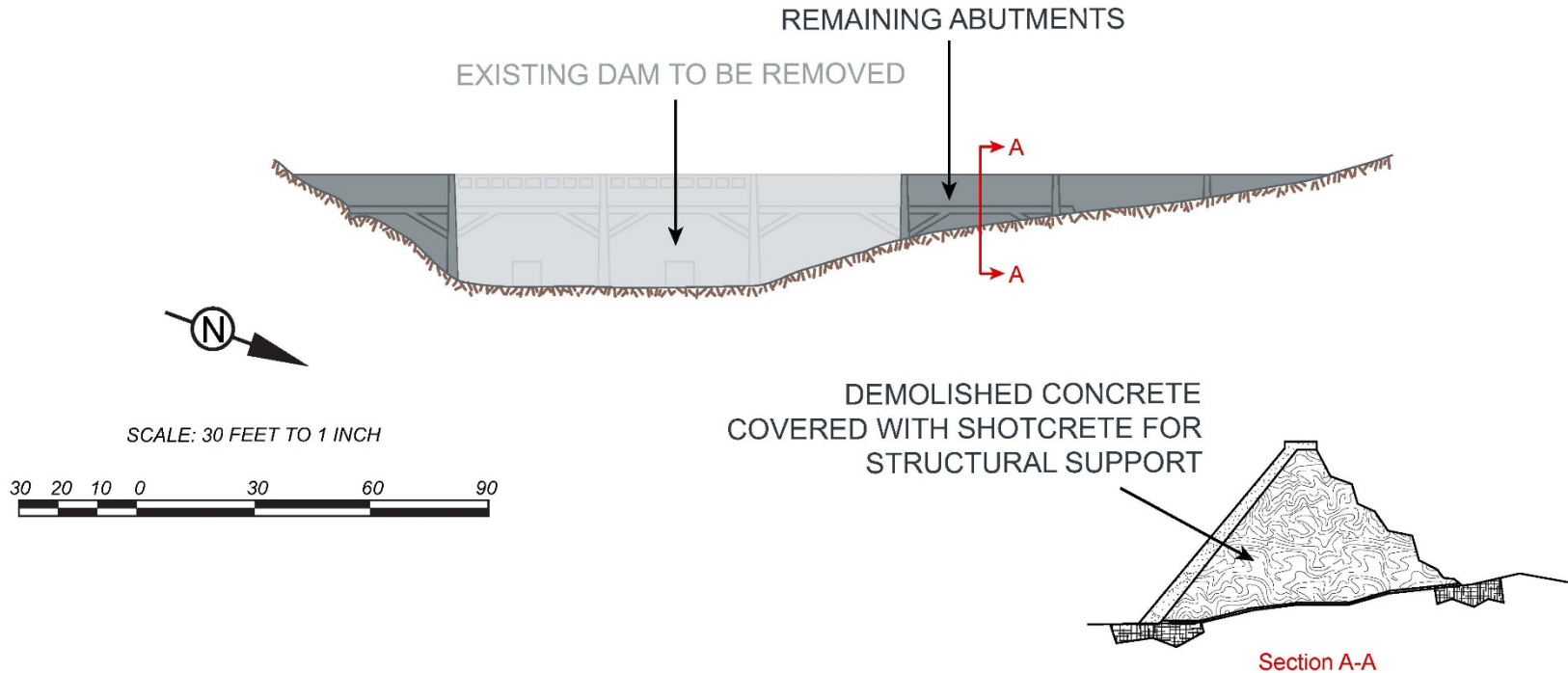
Proposed Project Alternatives

- Agnew Dam Disposition

- Approach – Partial Dam Removal

- Demolish the three center dam arches (Arches 4-6) to pass the PMF
 - Reuse the demolished concrete as fill material on the inside of the remaining arches (Arches 1-3, 7) to provide stabilizing support – leave in place
 - Limited transport of material off-site

Agnew – Partial Dam Removal



Proposed Project Alternatives

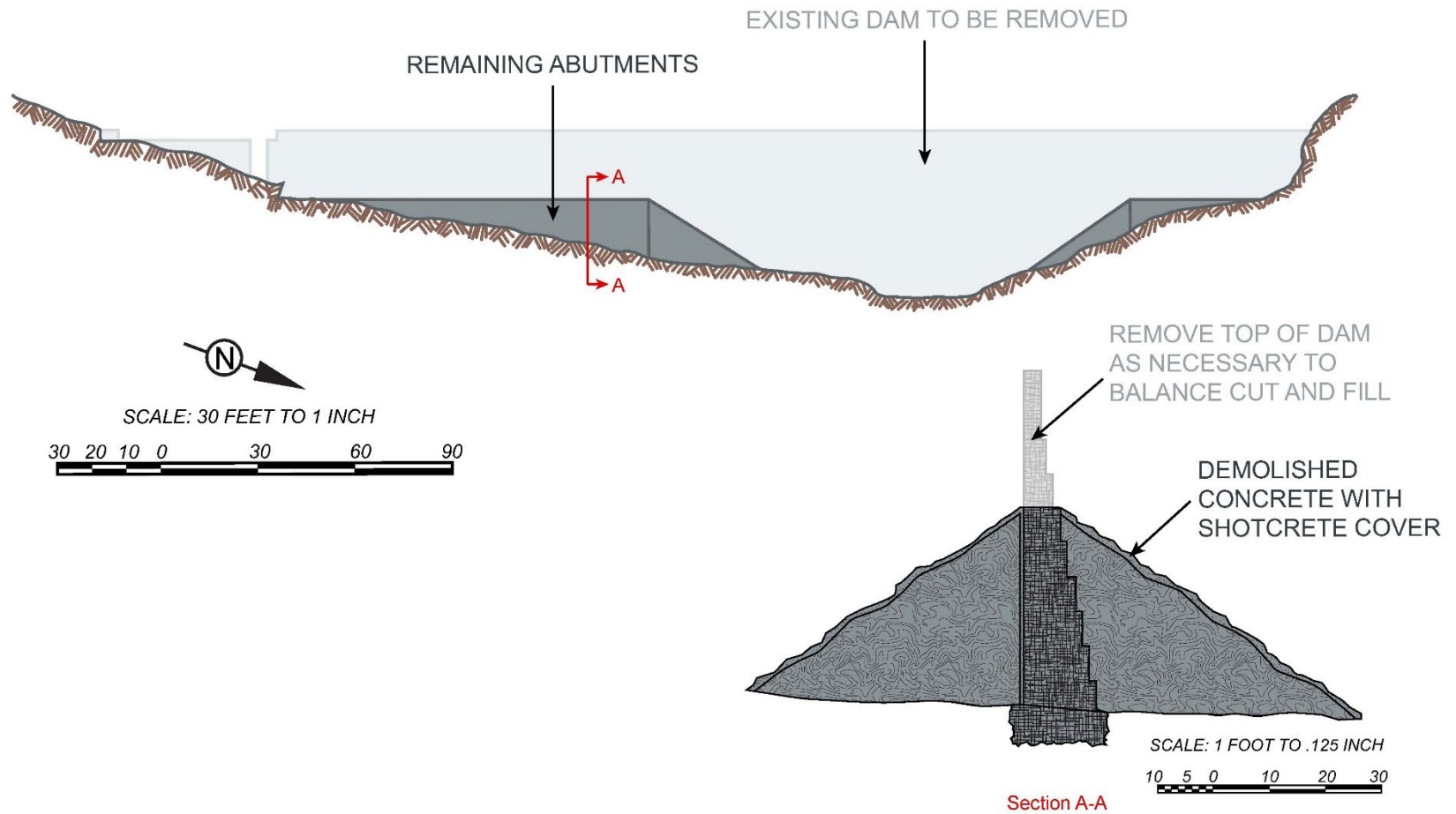
- Rush Meadows Dam Disposition



Approach – Partial Dam Removal

- Construct a 140-foot-wide notch in the center of the dam to pass the PMF
- Remove the top 15 feet of the remaining dam sections – leave in place
- Reuse the demolished concrete as fill material on the upstream and downstream sides of the remaining abutments to provide stabilizing support
- Limited transport of material off-site

Rush Meadows – Partial Dam Removal



Proposed Project Alternatives

- Gem Dam Retrofitting

Objective

- Retrofit the dam to meet seismic restrictions under PMF and allow for continued operations of the Project under FERC jurisdiction



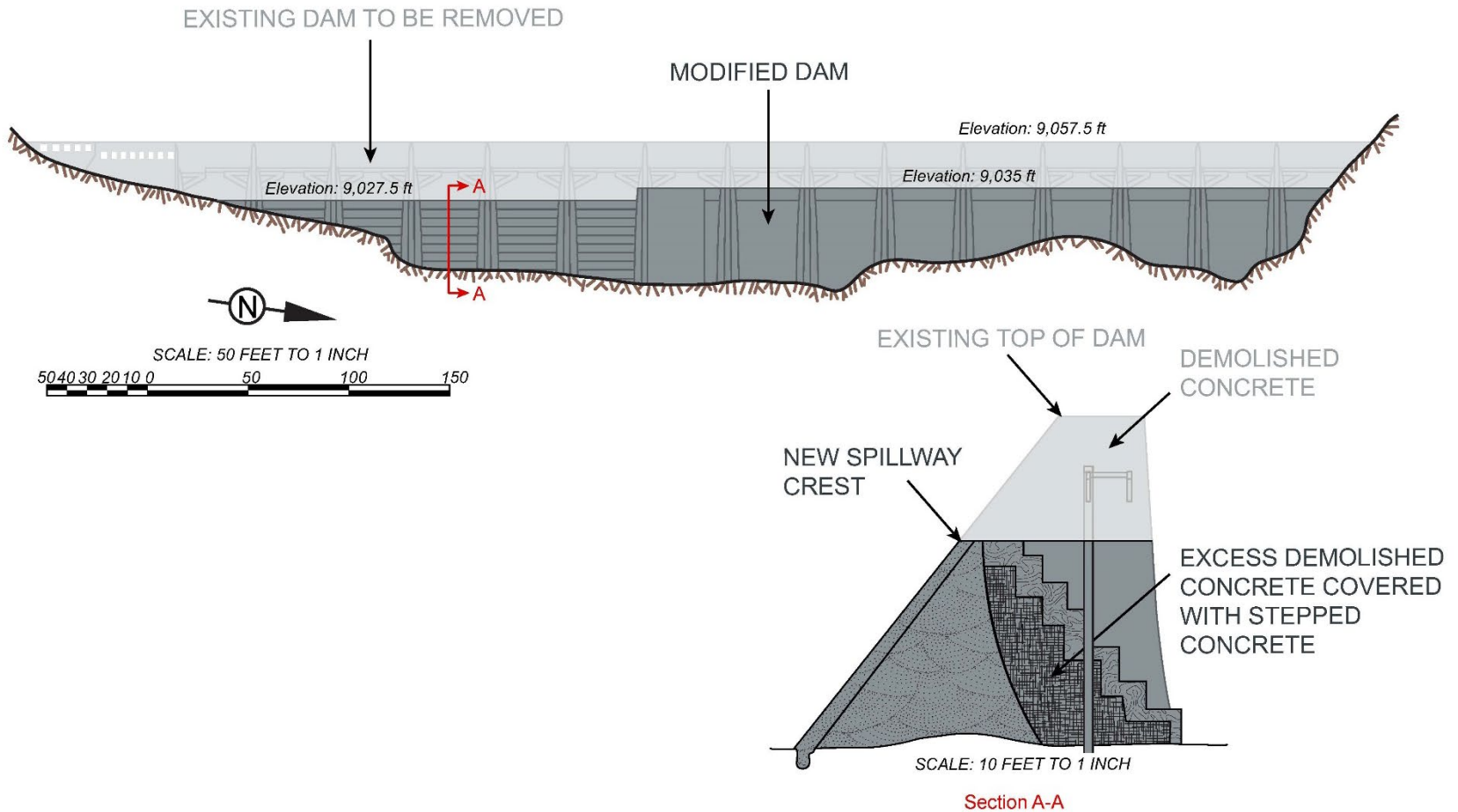
Proposed Project Alternatives

- Gem Dam Retrofitting

Approach

- Remove the upper portions of Arches 10-14 to develop new ungated spillway to pass PMF with crest elevation corresponding to top of existing gravity infill sections (9,027.5 feet – seismic restriction elevation)
- Remove the top 22 feet of the remaining arches (1-9) and top 10 feet of the vertical piers
- Use demolished concrete as fill in Arches 10-14 to support new spillway chute
- Majority of removed material reused on-site (limited transport)

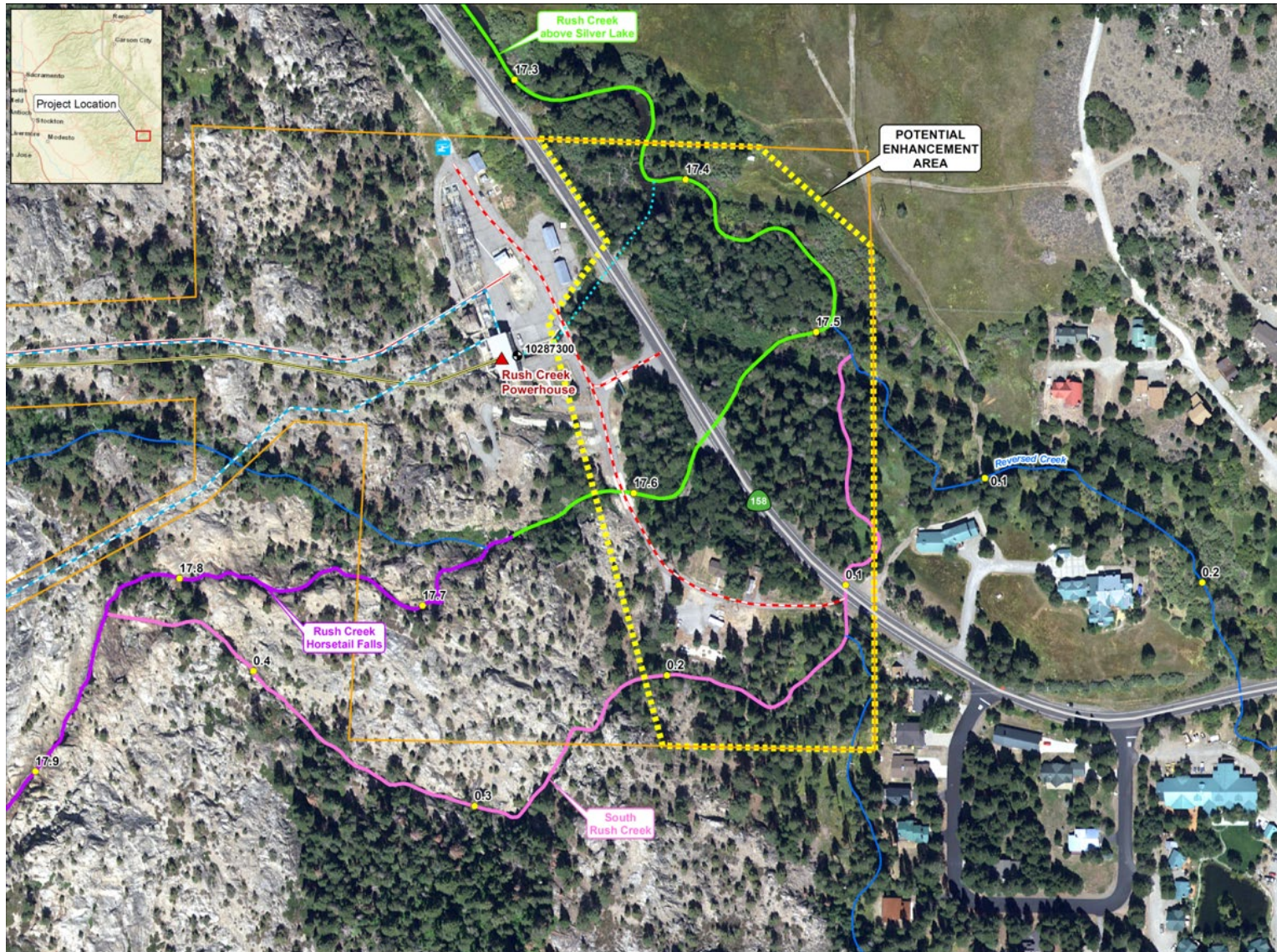
Gem – Dam Retrofit



Rush Creek Channel Evaluation

- Proposed Project includes evaluation of the Rush Creek channel to assess local flooding near SR-158 during high-runoff events
- An enhancement plan, if appropriate based on technical study results, will be developed in collaboration with stakeholders for inclusion in the Final License Application

Rush Creek Channel Evaluation



Rush Creek Project

FERC Project No. 1389

Relicensing Process Overview
Technical Study Development
Study Implementation
License Application Development

ESSLIA Discussion
July 6, 2022

Purpose of Relicensing

- Process of an applicant obtaining a new license from the Federal Energy Regulatory Commission (FERC) to continue operating an existing hydroelectric project after the end of the project's current license term
- Establishes new license conditions which balance the beneficial uses of project-affected resources consistent with current social priorities

Relicensing Process and Schedule

- The relicensing process and requirements are codified in the Federal Power Act and other laws
- The environmental review process is under FERC jurisdiction
 - Other state and federal agencies and Tribes have key roles
- Relicensing takes a statutory minimum of five years to complete

FERC Relicensing Process

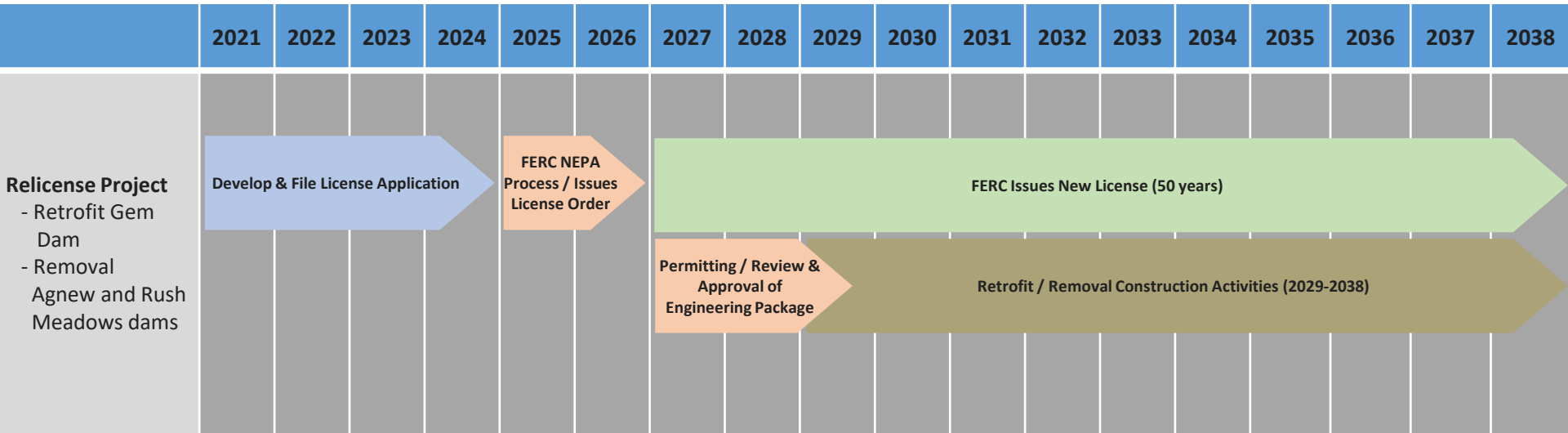


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Relicensing Process and Schedule

- **Year 1:** PAD and NOI filed, FERC performs NEPA scoping, Applicant and Relicensing Stakeholders collaborate on study plans, FERC issues Study Plan Determination, and Applicant may begin performing studies
- **Year 2 & 3:** Applicant gathers information, performs studies, and prepares and files license application with input from Relicensing Stakeholders
- **Year 4 & 5:** FERC and State perform environmental analyses (NEPA and CEQA), regulatory agencies file recommendations and mandatory conditions, Federal fish and wildlife agencies may issue Biological Opinion under ESA, and SHPO completes Section 106 compliance
- **Year 5+:** FERC issues new license with updated conditions

Proposed Schedule



Technical Study Development

Draft Study Plans

- The Pre-Application Document (PAD) included 15 Draft Technical Study Plans (TSP)

Aquatic Resources

AQ 1 – Instream Flow
AQ 2 – Hydrology
AQ 3 – Water Temperature
AQ 4 – Water Quality
AQ 5 – Geomorphology
AQ 6 – Fish Population and Barriers
AQ 7 – Special-status Amphibians

Cultural and Tribal Resources

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

Land Resources

LAND 1 – Aesthetics
LAND 2 – Noise

Recreation Resources

REC 1 – Recreation

Terrestrial Resources

TERR 1 – Botanical
TERR 2 – Wildlife

Draft Study Plans

- Draft TSPs were developed to address:
 - Continued O&M of the modified Project
 - Partial or full removal of Agnew and Rush Meadows dams
 - Modification and retrofitting of Gem Dam
 - Restoration of the former inundation zone of Waugh (Rush Meadows), Agnew, and Gem lakes
 - Potential enhancement of the Lower Rush Creek and South Rush Creek channels
 - Assessment of sediment deposition in Rush Creek near the Silver Lake inlet

Draft Study Plans

- Following filing of PAD, SCE convened a series of Technical Working Group (TWG) meetings
 - Conducted February, March, and April 2022
 - Purpose was to review and refine the Draft TSPs included in the PAD prior to filing of SCE's Proposed Study Plan
 - At the conclusion of the TWG meetings, SCE prepared Updated TSPs and distributed them to participants on April 5, 2022

Draft Study Plans

- In response to FERC's Notice of Commencement of Proceeding, the following entities filed comments with FERC:
 - U.S. Forest Service*
 - California Department of Fish and Wildlife*
 - Friends of the Inyo*
 - California State Water Resources Control Board*
 - American Rivers and California Sportfishing Protection Alliance
 - East Shore Silver Lake Improvement Association
 - Environmental Protection Agency
 - June Lake Regional Planning Advisory Committee

*Study Request/Study Comment

Proposed Study Plan

- The Proposed Study Plan only addressed stakeholder comments directly associated with study requests/study comments
- The Proposed Study Plan does not address:
 - Comments on SD 1
 - General comments on the PAD
 - Recommendations for license conditions, such as PM&E measures
 - Comments on impact analyses in SCE's license application
 - Comments on FERC's NEPA analysis
 - FERC issues that are administrative in nature

Proposed Study Plan

- Brief review of TSP content that directly relates to assessment of sediment deposition in Rush Creek near the Silver Lake inlet
 - AQ 1 – Instream Flow
 - AQ 2 – Hydrology
 - AQ 5 – Geomorphology
 - AQ 6 – Fish Population and Barriers

Proposed Study Plan

- Discuss PSP Table 2, Stakeholder Study Requests and Associated SCE Responses
- Discuss PSP Table 3, SCE-Initiated Revisions to Updated TSPs
- Discuss recent Forest Service comment related to AQ 6 – Fish Population and Barrier TSP (gillnetting)

Proposed Study Plan

- Stakeholders review PSP and file comments with FERC prior to August 28, 2022
- Obtain PSP from:
 - FERC’s eLibrary: <https://elibrary.ferc.gov/eLibrary/search>
 - Docket No. P-1389
 - SCE’s relicensing website: www.sce.com/rushcreek
- Submit comments via FERC’s eComment or eFiling System: <https://www.ferc.gov/ferc-online/overview>

Next Steps

Responsible Entity	Milestone	Date	FERC Regulation
Stakeholders	File Comments on SCE's Proposed Study Plan	8/28/2022	5.12
SCE	File Revised Study Plan	9/27/2022	5.13(a)
Stakeholders	File Comments on SCE's Revised Study Plan	10/12/2022	5.13(b)
FERC	Issue Study Plan Determination	10/27/2022	5.13(c)
Mandatory Conditioning Agencies and Tribes	File Study Disputes	11/16/2022	5.14(a)
FERC	Study Plan Approved (if no study disputes filed)	11/16/2022	5.14(d)

Study Implementation

Study Implementation

- 2022 Early Study Implementation
 - Prior to FERC Study Plan Determination
 - Water temperature data (low elevation sites)
 - Habitat mapping
 - Transect selection
 - Flow data (low elevation sites)

Study Implementation

- 2023 Study Implementation
 - All studies implemented
 - Study results documented in technical study reports (TSR)
 - Draft TSRs provided to stakeholders for review and comment
 - Conduct TWG meetings, as needed

Study Implementation

- 2023 Study Implementation
 - Initial and Updated Study Progress Reports
 - Distributed October 2023/2024
 - Reports Describe:
 - Overall study implementation progress
 - Data collected to date
 - Deviations in approach or schedule
 - Proposed schedule for completion of remaining components
 - Proposed modifications to approved studies or new studies proposed by SCE
 - Initial and Updated Study Progress Meetings with stakeholders to discuss reports
 - Stakeholder review/comment period

License Application Development

License Application Development

- Using technical study results, SCE will prepare a Draft License Application (DLA)
- DLA required to be filed no later than 150 days prior to the deadline for filing a Final License Application (FLA)
 - DLA: September 3, 2024
 - FLA: January 31, 2025

License Application Development

- License Application Contents:
 - Initial Statement
 - Exhibit A: Description of the Project
 - Exhibit B: Project Operation and Resource Utilization
 - Exhibit C: Construction History
 - Exhibit D: Statement of Costs and Financing
 - Exhibit E: Environmental Exhibit
 - Exhibit F: Design Drawings (CEII)
 - Exhibit G: Project Maps
 - Exhibit H: General Information

License Application Development

- Exhibit E:
 - Provides the necessary technical information and analyses to identify and evaluate potential impacts of:
 - Operation and maintenance of the Project under the Proposed Action compared to the No-Action Alternative
 - Construction activities associated with removal/modification of dams
 - Restoration of former reservoir inundation zones
 - Potential enhancement of the Lower/South Rush Creek channels
 - Sediment deposition in Rush Creek near the Silver Lake inlet
 - Specifies new measures to protect and enhance environmental and cultural resources

Relicensing Process Schedule

