

VISUAL RESOURCES PLAN

BIG CREEK HYDROELECTRIC SYSTEM

**MAMMOTH POOL PROJECT (FERC PROJECT NO. 2085)
BIG CREEK NOS. 1 AND 2 (FERC PROJECT NO. 2175)
BIG CREEK NOS. 2A, 8, AND EASTWOOD (FERC PROJECT NO. 67)
BIG CREEK NO. 3 (FERC PROJECT NO. 120)**

FEBRUARY 2007

SUBMITTED BY SOUTHERN CALIFORNIA EDISON COMPANY

TABLE OF CONTENTS

	Page
1.0 INTRODUCTION	1
2.0 EXISTING VISUAL RESOURCES	1
3.0 PROJECT FACILITIES AFFECTING VISUAL RESOURCES AND RECOMMENDED MITIGATION MEASURES.....	3
3.1 Project Facilities Affecting Visual Resources	3
3.2 Recommended Environmental Measures	3
3.2.1 Penstocks and Flow Line Conduit.....	3
3.2.2 Big Creek No.1 Project Switchyard	4
3.3 Project Facilities Painting.....	5
4.0 LITERATURE CITED	5

Figures

Figures 1A and 1B. Visual Resources Plan Study Area Map.

Attachment A

- Photo 1. Big Creek No. 1 Penstocks (viewed from Huntington Lake Road).
- Photo 2. Big Creek No. 3 Powerhouse and Penstocks (viewed from Redinger Lake and Italian Bar Road)
- Photos 3a, 3b. Mono Bear Siphon Combined Flow Line Conduit over South Fork San Joaquin River (viewed from Kaiser Pass Road).
- Photo 4. Mammoth Pool Powerhouse and Penstock (viewed from USFS Road 8S03).
- Photo 5. Big Creek No. 1 Switchyard (viewed from Huntington Lake Road looking across Big Creek Canyon).

OBJECTIVE

The objective of this Visual Resources Plan (Plan) is to address visual effects on the surrounding landscape of Project-related facilities through the use of visual screening or color scheme selection.

1.0 INTRODUCTION

This Plan has been developed for four Southern California Edison Company (SCE) hydroelectric projects that are a part of the Big Creek Hydroelectric System, located in the Upper San Joaquin River Watershed. The Plan covers the following four Federal Energy Regulatory Commission (FERC) licensed Projects: Mammoth Pool (FERC No. 2085), Big Creek Nos. 1 and 2 (FERC No. 2175), Big Creek Nos. 2A, 8, and Eastwood (FERC No. 67), and Big Creek No. 3 (FERC No. 120).

This Plan includes sections on:

- Evaluation of existing visual resources in the Project vicinity;
- Mitigation measures for five facilities that have been identified as currently having a visual effect on the landscape character; and
- Selection of colors for future painting of Project facilities to minimize potential visual impacts.

2.0 EXISTING VISUAL RESOURCES

The current United States Department of Agriculture-Forest Service (USDA-FS) Land and Resource Management Plan (LRMP) uses the Visual Management System (VMS) as guidance to inventory, evaluate, and manage visual resources. The Sierra National Forest (SNF) is in the process of revising the LRMP. The Scenery Management System (SMS) likely will be used in future scenery analysis and evaluation. The SMS differs from the VMS by adding more public involvement in the planning process and integrating ecosystem management concepts into scenic analysis. This Project has been analyzed using the VMS. The current LRMP identifies three Visual Quality Objective (VQO) classifications for lands within the Project area. These designations and their definitions are:

- **Retention.** Retention refers to landscapes where the valued landscape character “appears” intact. Deviations may be present but must repeat the form, line, color, texture, and pattern consistent to the landscape character so completely and at such scale that they are not evident.
- **Partial retention.** Partial retention refers to landscapes where the valued landscape characters “appear slightly altered.” Noticeable deviations must remain visually subordinate to the landscape character being viewed.

- **Modification.** Modification refers to landscapes where the valued landscape characters “appear moderately altered.” Deviations begin to dominate the valued landscape character being viewed, but they borrow valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles outside the landscape being viewed.

The majority of the study area has a VQO of Retention, which is the objective that strives for the highest degree of scenic integrity by providing a landscape character that appears intact. The effect analysis of Project facilities on visual resources was based on studies conducted in support of the Big Creek Alternative Licensing Process (ALP) (SCE 2003; SCE 2004). The Land Management Working Group, which was composed of stakeholders including the USDA-FS, used the study results to assess visual resource issues, identified views from Key Observation Points (KOPs) inconsistent with VQO's, and developed potential mitigation and enhancement measures. The Land Management Working Group evaluation of visual quality study results identified 27 locations where views of Project facilities may not meet with designated Forest VQOs. Of the 27 locations, it was determined that mitigation measures should be considered at five locations. These five locations are KOPs where the general public can easily view the five Project facilities. These facilities include: Mammoth Pool Penstock (FERC No. 2085); Mono-Bear Siphon Combined Flow Line Conduit over the South Fork San Joaquin River (FERC No. 67); Big Creek No. 1 Penstock (FERC No. 2175); Big Creek No. 3 Penstocks (FERC No. 120); and the Big Creek No. 1 Switchyard (FERC No. 2175). The locations of these facilities are depicted on Figures 1A and 1B and shown in Photos 1 through 5 (Attachment A).

Further evaluation of these five locations, however, indicated that the penstocks for the Big Creek No. 1 Powerhouse (Photo 1) and Big Creek No. 3 Powerhouse (Photo 2), and the Mono-Bear Siphon Flow Line Conduit (Photos 3a and 3b) are proposed contributing elements of the proposed Big Creek Historic District that includes Project facilities associated with Big Creek Nos. 1, 2, 2A, 8, and 3. Based upon results of the California State Historic Preservation Office (SHPO) future determination of the proposed Big Creek Historic District, one of two paths would be followed to develop mitigation measures for these two penstocks and flow line conduit. Should SHPO concur with the Big Creek Historic District designation and these three facilities are identified as contributing elements of the historic district, SCE will use a paint color(s) that continues to reflect the penstocks and flow line historic appearance. Should SHPO disagree with the historic district designation or the identification of one or both of the penstocks and flow line conduit as contributing elements of the historic district, then SCE will follow steps detailed under Recommended Mitigation Measures (Section 3.2 of this Plan) for the two penstocks and flow line conduit.

Measures to reduce the visual effect of the other 22 view locations were not developed because these locations are not readily accessible to the general public or it was determined that there was no practical or reasonable method to mitigate for visual effect. For example, the Federal Energy Regulatory Commission (Commission or FERC) concluded in previous relicensing proceedings that attempts to devise methods

to make Project facilities such as large dams blend in with the natural environment would be impractical.

3.0 PROJECT FACILITIES AFFECTING VISUAL RESOURCES AND RECOMMENDED MITIGATION MEASURES

3.1 PROJECT FACILITIES AFFECTING VISUAL RESOURCES

The locations where visual effects occur and where measures to reduce visual contrast are proposed are described below:

Big Creek No. 1 Penstocks. View of Big Creek No. 1 Penstocks from Huntington Lake Road (Photo 1). The landscape viewed has a VQO of Partial Retention. The facilities are noticeable deviations from the landscape character and are inconsistent with Partial Retention VQO.

Big Creek No. 3 Project Penstocks. View of Big Creek No. 3 Penstocks from Redinger Lake (Photo 2). The landscape viewed has a VQO of Partial Retention. The facilities are noticeable deviations from the landscape character and are inconsistent with Partial Retention VQO.

Mono-Bear Siphon Combined Flow Line. View of the flow line conduit over the San Joaquin River from Kaiser Pass Road (Photos 3a and 3b). The landscape viewed has a VQO of Partial Retention. The facilities are deviations from the landscape character and are inconsistent with Partial Retention VQO.

Mammoth Pool Penstock. View of Mammoth Pool Powerhouse and penstock southeast looking from Forest Route 8S03 (Photo 4). The landscape viewed has a VQO of Partial Retention. The facilities are noticeable deviations from the landscape character. The facilities are inconsistent with Partial Retention VQO.

Big Creek No. 1 Switchyard. View of the Big Creek No. 1 Switchyard can be viewed from one location along Huntington Lake Road when looking across Big Creek Canyon (Photo 5). The landscape viewed has a VQO of Retention. The landscape appears altered. The switchyard is inconsistent with Retention VQO.

3.2 RECOMMENDED ENVIRONMENTAL MEASURES

SCE will conduct the following measures at the penstocks and flow line covered in this Plan, and the Big Creek No. 1 Switchyard to reduce visual contrast.

3.2.1 PENSTOCKS AND FLOW LINE CONDUIT

- SCE will consult with the USDA-FS to select three test colors to be used in test patches for repainting the penstock and combined flow line conduit that blend best with the surrounding environment.

- SCE will paint three 10 foot by 10 foot or other readily visible and appropriately sized test panels on the penstock and conduit using the agreed upon test colors. The size of the test patches will depend on the size of the facility. These test patches will be observed for a one-year period to determine which color best blends with the natural environment. The one-year period will allow for seasonal color contrast comparisons.
- SCE will select the final color in consultation with the USDA-FS.
- SCE will repaint the penstock/conduit using the agreed upon color during the normal painting schedule for that facility.

3.2.2 BIG CREEK NO.1 PROJECT SWITCHYARD

SCE recommends that careful thinning of existing trees will be the best method to achieve long-term visual screening of the Big Creek No. 1 Switchyard. SCE has developed a prescription to promote growth of the existing trees, which should facilitate screening of the switchyard from public view. The prescription includes the following activities:

- SCE will consult with the USDA-FS on the proposed silvicultural techniques to promote growth of the existing trees to screen the view of the Project switchyard.
- A registered professional forester will survey the site to identify and select the best phenotypic tree specimens to retain. A combination of the healthiest and fullest crown trees will be selected to remain on site.
- SCE will develop a recommendation for submittal to the USDA-FS for the removal of trees.
- Upon approval by the USDA-FS, SCE will begin to implement tree removal activities. Trees will be removed in several stages with five to ten years between each stage. Each stage of tree removal will reduce screening for the short-term, however, the expected increase in the vigor of remaining trees is expected to fill in the openings over time. The first two stages of tree removal should take at least 20% of the standing trees to reduce resource competition. After several tree removal stages, smaller trees will be allowed to grow in the understory to provide lower screening and replacements for the larger trees, when they require removal. This sequence of tree removal should provide the best screening over the long-term while enhancing the vigor of the remaining trees.
- SCE will consult with the USDA-FS to discuss and evaluate the growth of the remaining trees and to evaluate the ability of the trees to screen the switchyard following each tree removal stage. This consultation will occur in the following year during the annual consultation meeting between the USDA-FS and SCE. The consultation may include a discussion with the USDA-FS to re-evaluate the need to continue this tree management prescription if it is determined that these

activities are not resulting in increased tree growth and vigor, or providing adequate screening of the switchyard.

3.3 PROJECT FACILITIES PAINTING

During the new license term, SCE Project facilities will require repainting in accordance with routine painting requirements and schedules. SCE is committed to selecting neutral paint color schemes that blend in with the surrounding landscapes, thereby reducing visual effects. SCE will consult with the Forest Service regarding the paint color selection for the penstocks and flow line conduit. Upon Forest Service approval of the paint color selected, SCE will file the paint color selection with the FERC for their final approval. Upon final approval by the FERC, painting of the penstocks and flow line conduit will be conducted as described.

A number of Project facilities associated with the four Big Creek ALP Projects are proposed contributing elements of the National Register of Historic Places (NRHP) eligible Big Creek Hydroelectric System Historic District (BCHSHD) and are proposed key components of the historic landscape. Upon determination by SHPO of the Big Creek Historic District Designation and concurrence that the penstocks and flow line conduit are contributing elements of the BCHSHD, SCE will seek guidance from SHPO regarding the selection of paint colors that will preserve the historic character of the BCHSHD. Upon approval by SHPO, SCE will seek approval from the Forest Service and final approval by the FERC. These facilities will be repainted using a color that retains the historic character of the BCHSHD.

4.0 LITERATURE CITED

Southern California Edison Company. 2003. LAND-9 Visual Quality Assessment. 2002 Final Technical Study Report Package (FTSRP) for the Big Creek Hydroelectric System Alternative Licensing Process (ALP). *In* SCE's Amended Preliminary Draft Environmental Assessment (APDEA) for the Big Creek ALP (Mammoth Pool Project (FERC Project No. 2085), Big Creek Nos. 1 and 2 (FERC Project No. 2175), Big Creek Nos. 2A, 8 and Eastwood (FERC Project No. 67), and Big Creek No. 3 (FERC Project No. 120)). February 2007 (Volume 4, SD-C, Books 9 and 21).

Southern California Edison Company. 2004. LAND-9 Visual Quality Assessment. 2003 FTSRP for the Big Creek Hydroelectric System ALP. *In* SCE's APDEA for the Big Creek ALP (Mammoth Pool Project (FERC Project No. 2085), Big Creek Nos. 1 and 2 (FERC Project No. 2175), Big Creek Nos. 2A, 8 and Eastwood (FERC Project No. 67), and Big Creek No. 3 (FERC Project No. 120)). February 2007 (Volume 4, SD-D, Book 15).

FIGURES

Placeholder for
Figures 1A and 1B. Visual Resources Plan. Study Area Map
Non-Internet Public Information

These Figures have been removed in accordance with the Commission regulations at 18 CFR Section 388.112.

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ATTACHMENT A
PHOTOGRAPHS



Photo 1. Big Creek No 1 Penstocks (viewed from Huntington Lake Road).



Photo 2. Big Creek No. 3 Powerhouse and Penstocks (viewed from Redinger Lake and Italian Bar Road).



Photos 3a and 3b. Mono Bear Siphon Combined Flow Line Conduit over South Fork San Joaquin River (viewed from Kaiser Pass Road).



Photo 4. Mammoth Pool Powerhouse and Penstock (viewed from USFS Road 8S03).

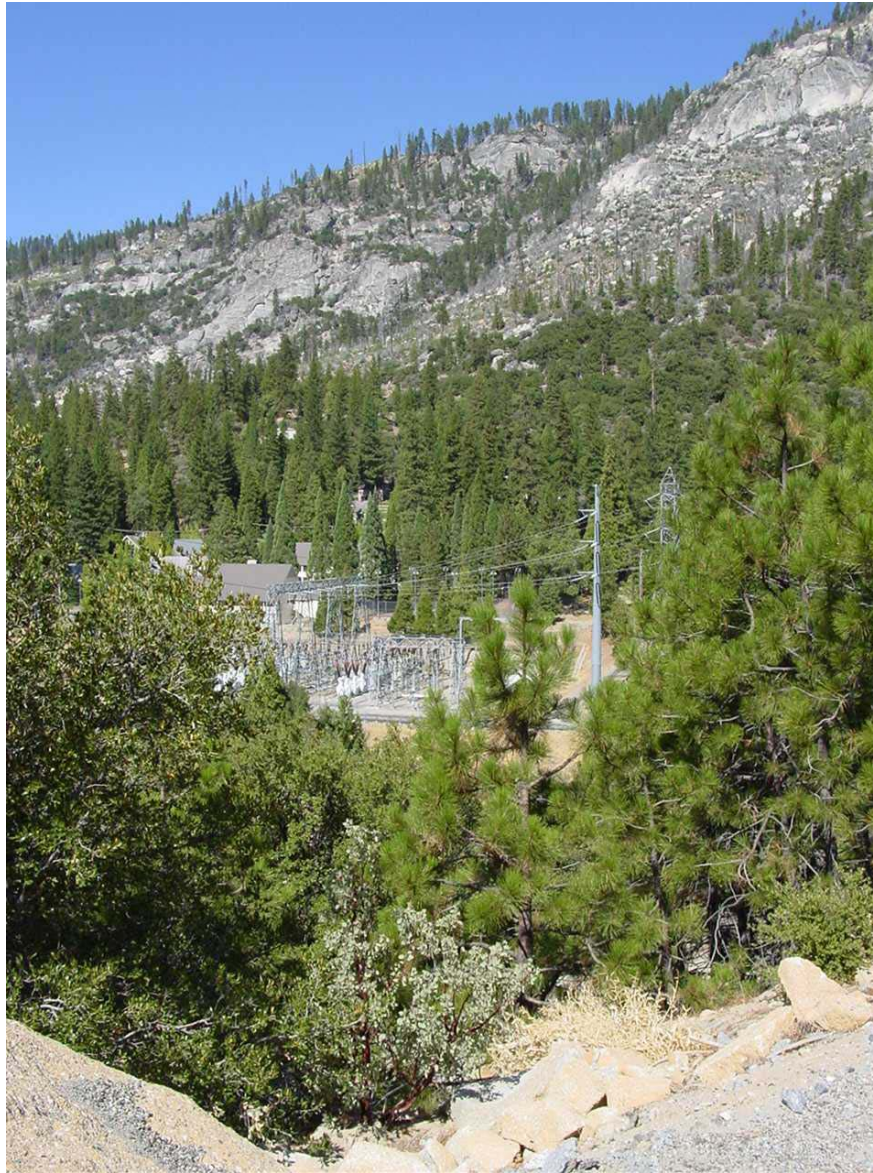


Photo 5. Big Creek No. 1 Switchyard (viewed from Huntington Lake Road looking across Big Creek Canyon).