

9.1 Aesthetics Study Plan

9.1.1 Pertinent Issue Questions

The Aesthetics Study Plan addresses the following Recreation and Aesthetics Resource Issue Questions:

42. Are Project facilities and operations consistent with the visual quality objectives in the Forest Service plan?
45. What is the visual impact of spoils pile (e.g. Slab Creek and White Rock adit)?
46. What are the visual impacts of stumps in the lakes (Buck Island or Rubicon Lakes)?
47. What are the Project related effects on aesthetics of lands under transmission lines?
67. What are the effects of Project facilities and operations on wilderness visual quality?

9.1.2 Background

The Aesthetics Resource Study will address visual resources and any specific issues regarding auditory resources associated with existing Project facilities and operations. The study will determine if there are visual Project-related affects associated with on-going Project operations, and if so how they could be mitigated or lessened.

The Project is located within a FERC Project Boundary surrounded by lands under federal management and county jurisdiction, for which there are differing approaches to the management of aesthetic resources. The Forest Service (USFS), which manages most of the land within the FERC Project Boundary, and Bureau of Land Management (USBLM), which manages a 40-acre parcel within the FERC Project Boundary, have established visual management systems that are used in the agency planning process to establish visual management objectives for the respective agency lands and waters. The USFS and USBLM have developed these management systems to comply with the National Environmental Policy Act (NEPA). Neither of these systems addresses auditory resources.

Most of the Project is located within the Eldorado National Forest (ENF) on lands managed by the USFS. The ENF is currently using the USDA Visual Management System (VMS) to manage the visual resources of the Forest (USDA Forest Service, 1974). The visual resources have been inventoried, and the management direction is reflected in the 1988 Land and Resource Management Plan (LRMP) (USDA Forest Service 1988) in terms of visual quality objectives (VQOs). The VQOs represent a composite rating of the scenic integrity or visual “variety” of the landscape, combined with a “sensitivity level” rating that reflects the number and relative concern of viewers for the scenic quality of the landscape. Landscape variety and sensitivity levels are combined with a “distance zone” rating which identifies the distance from which viewers typically experience the landscape. Based on inventory ratings and management direction, areas of the Crystal Basin are managed for retention, partial retention and modification VQOs:

- Preservation (P). “This visual quality objective allows ecological changes only. Management activities, except for very low visual impact recreation facilities are prohibited. The objective applies to Wilderness Areas, primitive areas, other special classified areas, areas awaiting classification and some unique management units which do not justify special classification (USDA Forest Service 1974).” The Desolation Wilderness has a preservation VQO. Approximately 1,200 acres of the FERC Project Boundary, are located within the Desolation Wilderness including the Rubicon diversion, reservoir and tunnel. The 1969 Desolation Wilderness Act (Public Law 91-82) excludes the land within the FERC Project Boundary from wilderness designation. However, the act calls for the excluded lands “to be managed in a manner that is consistent with the adjacent wilderness.” Since it is not feasible to achieve a Preservation VQO (ecological change only) for the Project, the Forest Service management goal is to move as close to a Preservation VQO as is reasonable.
- Retention (R). “This visual quality objective provides for management activities which are not visually evident. Under Retention, activities may only repeat form, line, color and texture which are frequently found in the characteristic landscape. Changes in their qualities of size, amount, intensity, direction, pattern, etc., should not be evident (USDA Forest Service 1974).”
- Partial Retention (PR). “Management activities remain visually subordinate to the characteristic landscape when managed according to the partial retention visual quality objective. Activities may repeat form, line, color, or texture common to the characteristic landscape but changes in their qualities of size, amount,

intensity, direction, pattern, etc., remain visually subordinate to the characteristic landscape. Activities may also introduce form, line, color, or texture which are found infrequently or not at all in the characteristic landscape, but they should remain visually subordinate to the visual strength of the characteristic landscape (USDA Forest Service 1974).”

- Modification (M). “Under the modification visual quality objective management activities may visually dominate the original characteristic landscape. However, activities of vegetative and land form alterations must borrow from naturally established form, line, color, or texture so completely and at such a scale that its visual characteristics are those of natural occurrences within the surrounding area or character type. Additional parts of these activities such as structures, roads, slash, root wads, etc., must remain visually subordinate to the proposed composition. Activities which are predominantly introduction of facilities such as buildings, signs, roads, etc., should borrow naturally established form, line, color, and texture so completely and at such a scale that its visual characteristics are compatible with the natural surroundings (USDA Forest Service 1974).”

The USBLM has a similar system to that of the USFS: the Visual Resource Management (VRM) system (USDI Bureau of Land Management 1984). The White Rock spoil pile is located on a parcel of land that is under BLM management. The applicable VRM classifications will be used for this parcel.

The general plans for El Dorado and Sacramento counties include goals and objectives associated with the protection of visual resources, however there are no inventory and assessment systems similar to those of the Federal agencies for managing visual resources. Therefore the aesthetic assessment of Project facilities on lands outside the ENF (except for BLM lands where the VRM system applies) will use the environmental checklist questions from the CEQA Guidelines for evaluating any on-going visual or auditory effects of the Project within El Dorado and Sacramento counties.

9.1.3 Study Objectives

The study objectives are listed below.

1. Identify the aesthetic condition of Project facilities.
2. Identify the aesthetic condition of Project operations in Project reservoirs and bypass reaches.
3. Identify the consistency of the Project with the aesthetic resource elements of management plans.
4. Identify opportunities to mitigate or lessen on-going Project-related impacts.

9.1.4 Study Area and Sampling Locations

The study area for the aesthetic assessment is defined as the portion of the Project that is within viewsheds managed by their respective agencies for visual quality. Viewsheds include foreground (0 to 0.5 miles) and middleground (0.5-5.0 mile) distance zones.

Within the ENF, sensitive viewing locations include primary and secondary travel routes (trails and roads) and recreation use areas (campgrounds, rivers, reservoirs and Desolation Wilderness) where the concern for visual quality is high. These travel routes and use areas are designated as Sensitivity Level 1 (high) or 2 (moderate) in the VMS. The study area within the ENF, is defined as the area containing Project facilities and operations that can be seen from foreground and middleground distance zones of sensitivity level 1 and 2 travel and river corridors and use areas.

For Project facilities and operations outside the ENF, sensitive viewing locations are defined as scenic vistas, scenic travel routes, and other public use areas of scenic value formally designated in the USBLM, El Dorado and Sacramento County planning documents. The study area is defined as Project facilities and operations that can be seen from foreground and middleground distance zones of sensitive viewing locations.

9.1.5 Information Needed From Other Studies

The following information will be needed from other UARP relicensing studies:

- Recreation Studies - Throughout the analysis, information from the Recreation Supply, Recreation Demand, Recreation Needs, Recreation Carrying Capacity, and Visitor Use and Impact Survey studies will be monitored to identify potential changes to VQOs in response to changes in recreation use patterns that could affect sensitivity level ratings. Results from the Visitor Use and Impact Survey will also be monitored for information on Project areas where noise may be an issue. Noise information will be identified from open-ended survey questions regarding the quality of the recreation experience. Information on the type, source, location and duration of noise sources will be incorporated into the auditory assessment of the Project.
- Hydrology Study - To photographically document the aesthetic effect of on-going Project operations in reservoirs and bypass reaches, hydrology of the Project will be reviewed and representative summer high, normal and low water surface elevations, and the minimum bypass flows will be identified.

9.1.7 Study Methods And Schedule

SMUD's goal for the aesthetic study will be to analyze the existing visual condition to determine to what degree it meets the agencies' respective visual management objectives. The Project will be evaluated by the TYG from sensitive viewing locations to determine if the existing on-going operation of the Project is in compliance with the respective land management direction for the visual resource. Where the Project meets the visual objectives, no actions will be proposed. Where the evaluation shows the management objective is not met, mitigation and/or enhancement measures will be proposed.

The Aesthetics Study will consist of three separate methodologies: 1) a visual assessment of Project facilities; 2) a visual assessment of Project operations; and 3) an auditory assessment of Project facilities and operations.

For Project lands within the ENF, which include Desolation Wilderness, the Forest's current VQO designations will provide visual management direction for the Project. VQO information will be obtained from the ENF, and the Sensitivity Level 1 and 2 areas identified. Areas of the Project where the Existing Visual Condition (EVC) may need field verification and will be noted for field checking.

For lands outside the ENF, the visibility of the Project will be documented and analyzed from scenic vistas, designated scenic highways, and other sensitive viewing locations identified in USBLM, El Dorado County and Sacramento County planning documents. Visual management direction for the USBLM, El Dorado and Sacramento counties is defined by specific goals and objectives in planning documents regarding visual and scenic resources.

Visual Assessment of Project Facilities

Project facilities will be assessed based on their compatibility with established management direction for the visual resource. This will be evaluated by documenting the existing visual condition and visibility of Project facilities from Key View Points (KVPs). KVPs are photo locations that will be located in sensitive viewing locations and represent the typical views experienced by visitors in the area. Existing KVPs established by the ENF for the Project will be used where available. Photographs from KVPs will be used to evaluate the visual contrast that exists between Project facilities and the surrounding landscape. The degree of visual contrast with the surrounding characteristic landscape will determine the extent to which Project facilities are consistent with visual management direction.

For the ENF, sensitive viewing locations are defined by sensitivity level 1 or 2 travel and river corridors and use areas. For El Dorado and Sacramento counties, sensitive viewing locations are designated scenic vistas and roadways and other public areas identified in planning documents. For BLM lands, VRM designations for high and moderate sensitivity level areas will define the sensitive viewing locations.

Visual Assessment of Project Operations

The visual assessment of Project operations will identify reservoirs and sections of bypass reaches that are seen from sensitive viewing locations, as defined above. Representative views of each reservoir and bypass reach will be selected as a KVP from which photographs of reservoir water surface elevations, and instream flows will be documented. For Project reservoirs, documentation will consist of a representative summer high, normal and low water surface elevation. For Project bypass reaches, documentation will consist of the minimum instream flow.

Union Valley, Loon Lake and Ice House reservoirs have been identified by the Recreation TWG as Project reservoirs where draw down may potentially affect the aesthetic and recreation experience of visitors. To address this issue, the Licensee will develop a survey instrument in consultation with the Forest Service and other interested parties, and implement it to evaluate visitor's aesthetic expectations for, and satisfaction with water surface elevations at Union Valley and Ice House reservoirs (the Visitor Use and Impact Study will address facility issues such as boating access associated with water surface elevations). The survey will document visitors' historical and current visit to the reservoirs and the expectations and satisfactions with the water surface elevations during those visits. Where visitor use has been displaced due to dissatisfaction or other Project-related factors, the alternate use locations will be identified. Surveys will be conducted during the primary recreation season (Memorial Day through Labor Day) and visual simulations of reservoir surface elevations will be used to assist respondents in identifying historical reservoir elevations that are not present on the day of the survey. The goals of the survey will be to (1) identify a water surface elevation or elevation range, at the reservoirs where visitors' expectations for and satisfaction with water levels are adversely affected by Project operations, and (2) identify actions visitors take when they are dissatisfied and the location of displaced use that may occur as a result of reservoir levels.

Noise Assessment of Project Facilities and Operations

Potential noise issues will be identified during field studies for the visual assessment of Project facilities, which will be conducted during times of recreation use. During field visits, potential sources of noise associated with the Project (generation, transmission, or recreation use) will be noted on field forms, including the source, location, duration and relative sound level. Field information will be cross-referenced with results from the (Visitor Use Survey to determine where noise is perceived to be an issue by visitors. Information on the type, source, location and duration of noise sources will be documented.

9.1.8 Analysis

The aesthetic assessment of the Project from KVPs may identify areas where the Project results in visual contrasts that are inconsistent with visual management direction. Where the Project is determined to not be in compliance with visual management direction, potential measures will be proposed to enhance the aesthetic resources of the Project. The purpose of such measures will be to lessen visual contrasts and bring the Project further into compliance with visual management direction. Examples of such measures could include vegetation screening or painting of facilities.

The auditory assessment of the Project will identify areas where noise is perceived to be an issue by sensitive viewers, primarily recreationists. Where noise issues exist, the source of the noise will be identified, and potential auditory measures to lessen the noise impacts defined. An example of an auditory measure could include development of use regulations to control or limit the generation of noise associated with recreation activities.

9.1.9 Study Output

Preliminary study results will be presented to the Recreation and Aesthetics Technical Working Group (TWG) and the Plenary Group in late 2002. The study output will be a written report that includes issue question(s) addressed, objectives, study area, methods, analysis, results, discussion, and conclusions. The report will include maps of the KVPs and Project facilities, and photographs of the view from KVPs. The report will be prepared in a format that allows the information to be inserted directly into the Licensee's application and will include any recommended PM&Es.

9.1.10 Preliminary Estimated Study Cost

A preliminary cost estimate for this study will be developed after approval by the Plenary Group.

9.1.11 Plenary Group Endorsement

This study plan was approved on February 19, 2002 by the following entities of the TWG: ENF, SWRCB, American River Recreation Association, NPS, BLM and SMUD. This study plan will be sent out to other members of the Recreation and Aesthetics TWG for their consideration. The Plenary Group approved the plan on June 5, 2002. The participants at the meeting who said they could “live with” this study plan were PCWA, El Dorado County, BLM, BOR, USFS, CSPA, SMUD, FOR, PG&E. None of the participants at the meeting said they could not “live with” this study plan.

9.1.12 Literature Cited

SMUD (Sacramento Municipal Utility District). 2001. Initial Information Package for Relicensing of the Upper American River Project.

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