

EXHIBIT E – ENVIRONMENTAL REPORT

SUBPART E.8 AESTHETIC RESOURCES

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E.8.1 INTRODUCTION

This section describes aesthetic resources within the proposed Enloe Hydroelectric Project Area, the expected impacts of the Project on those resources, and the mitigation, enhancement, or protection measures proposed. Some of this information was synthesized from reports and information available for this area. Additional information was gathered from surveys and studies conducted in consultation with applicable state and federal agencies in accordance with Title 18, Part 4, Section 41 of the Code of Federal Regulations (18 CFR 4.41): Application for Major Modified Project-Existing Dam.

Situated in north-central Washington (near the Canadian border) on the east side of the Cascade Mountains near the rural community of Oroville, the Enloe Hydroelectric Project Area is characterized by its remote, relatively undeveloped landscape. Accessed via the narrow and the light-duty Loomis-Oroville Road, the Project Area features moderately steep mountainous terrain incised by eroded canyons. Created by the Similkameen River, the Project Area's topography is distinguished by gradual to steep sloping canyon walls. These walls rise to elevations between 700-800 feet with Kruger Mountain rising 878 feet to the north of the Project Area and a series of smaller un-named 750 to 800-foot peaks line the southwest side. A small stream, the Ellemeham Draw, is situated just below the Enloe Dam and visually cleaves the southeast canyon wall. Most of the Project Area is undeveloped with a cluster of industrial structures and abandoned buildings assembled immediately around and just below the Enloe Dam.

For visual resources, therefore, the topography of the Similkameen River canyon defines the Project Study Area. The areas to the east and west that extend beyond the peaks of the canyon are visually separate from the areas within the canyon where the Project is located. The overall viewshed of the Project is confined to the canyon itself and the canyon rims and/or peaks.

Visitation to the Enloe Project Area is largely confined to those persons traveling along the Loomis-Oroville Road or pursuing outdoor recreation activities in the canyon, as well as Native Americans who attach cultural value to the natural setting and associated fishing areas.

E.8.2 DESCRIPTION OF EXISTING CHARACTER

The land surrounding the Project Area is greatly influenced by its climate and geologic history. The eroded canyons that characterize the Project Area are generally the result of retreating glaciers that last covered the area about 15,000 years ago. The eroded canyon slopes feature both gradual slopes as well as steep, rocky inclines that rise to 800 feet (about 500 feet above the mean Project Area elevation). Upstream, the Similkameen River follows a horseshoe-shaped turn enclosed between steeply sloped canyon walls, known as Shanker's Bend. The river within the Project Area flows placidly through a shallow reservoir before spilling over Enloe Dam and plunging down steep falls immediately downstream.

The hills on either side of the river are a combination of rocky outcrops and large areas of shrub steppe vegetation (see Exhibit E.3.4 for a description of vegetation communities) spotted with evergreen trees. Riparian forest, dominated by black cottonwood in stands, is found along the reservoir shore. In the spring, summer, and fall, colors in the landscape are primarily brown hues dotted with dark green vegetation. Snow is common in the winter months. Textures in the landscape include rocks, sagebrush, trees, and water.

The overall landscape is a combination of natural and human-made elements. The natural elements are characterized by unnamed mountains, sparse low level vegetation, and the Similkameen River snaking through the canyon. Several human-made elements are included in the landscape of this region, but not all are located in the Project Area. These include a vineyard, golf course, and residences approximately 2 miles north of Oroville. Linear elements include the Loomis-Oroville Road, which is located on the canyon rim above the Similkameen River and roughly follows the river's twists and turns, the abandoned Great Northern Railroad grade that lines much of the south or east shoreline of the river at the canyon floor, power distribution lines that run along the canyon walls and rim, and two dirt tracks that extend south from Loomis-Oroville Road and lead to the dam. The access roads proceed along the river's eastern perimeter to the dam, which is located at a point where the canyon narrows. While minimally visible from the upstream Project Area, the Enloe Dam rises quite prominently when viewed from downstream. The historic powerhouse is similarly sheltered from view, perched against a sharp slope on the west side of the river, nestled within a rocky eddy. It is accompanied by horizontal penstocks, and prominently positioned cylindrical surge tanks that rest on raised concrete foundations. Human-made elements on the east side of the river include: a bridge remnant (which once connected the east side of the river to the powerhouse); two small outbuildings; and an abandoned concrete irrigation ditch. The town of Nighthawk, approximately 6 miles west of Enloe Dam, is a historic mining community comprised of wood-frame buildings (residences and associated agricultural buildings) along a two-track dirt road. The Project Area is not visible from Nighthawk.

VISUAL RESOURCES INVENTORY METHODOLOGY

In consultation with the BLM, the District has employed the BLM's Visual Resource Management (VRM) as a methodology for conducting the visual resources analysis.

The BLM's VRM methodology is composed of two parts: inventory and analysis. At the time of this report, the BLM had not conducted an official Inventory of the Project Area or any other area with similar landscape in Washington State (Yaeger 2006). However, the Spokane District of BLM provided a scenic quality evaluation and visual resources classification of the area to the District based on their knowledge of the Project Area.

The inventory phase involved identifying the visual resources of an area and assigning them to inventory classes. The process has four steps, including Scenic Quality Evaluation; Sensitivity Level Analysis; Delineation of Distance Zones; and Visual Resource Classes and Objectives. The methodology for the inventory phase followed the "BLM Handbook H-8410-1, Visual Resource Inventory" and is included in the appended Visual Resources Technical Report.

The analysis stage involves determining whether the potential for visual impacts from proposed surface-disturbing activities or developments will meet the management objectives established for the area, or whether design adjustments will be required. A visual contrast rating is used for this analysis, which entails comparing Project features with the major features in the existing landscape using the basic design elements of form, line, color, and texture. The steps in the contrast rating process are outlined in the BLM's "Manual 8431 – Visual Resources Contrast Rating" and are included in the appended Visual Resources Technical Report.

INVENTORY OF ENLOE DAM PROJECT AREA

Scenic Quality Evaluation

The Scenic Quality Evaluation is a measure of the visual appeal of a tract of land. Public lands are given an A, B, or C rating based on the apparent scenic quality determined by seven visual qualities: landform, vegetation, water, color, influence of adjacent scenery, scarcity, and cultural modifications. All but the cultural modifications are scored on a scale of 5 to 1 with a 5 representing the most dramatic visual presence and 1 the least. Cultural modifications are scored on a scale from 2 to 4 based upon their ability to harmonize or detract from the surrounding landscape. Those areas with the most variety and most harmonious composition have the greatest scenic value. Scores given to each visual quality reflect the evaluator's overall impression of the area and range from a high of more than 19 (an A-rating), to a mid-range of 12-19 (B-rating), or may be as little as 11 (C-rating). The seven scenic qualities within the Project Area received a total score of 11 and thus earned a "C" or relatively low scenic quality rating.

Sensitivity Level Analysis

This analysis measures public concern for scenic quality. Public lands are assigned a high, medium, or low sensitivity level by analyzing the various indicators of public concern, including type of users, amount of use, public interest, adjacent land uses, special areas, and other factors.

The types of users in the Project Area include travelers on Loomis-Oroville Road and recreators on the Similkameen River. The District employees were not included in this evaluation. Recreators in the Project Area would have a high visual sensitivity, whereas travelers would have a low visual sensitivity. The amount of use of the Project Area is seasonally driven for recreators with visitation occurring predominately between June and September. The Recreational Use Survey Report (Appendix E.7.1) notes that visitors average 1,378 user days in the Project Area during the peak recreation season. Of all the visitors surveyed, “sightseeing” is the primary activity for an estimated 12.4 percent of Project Area users. The Project Area is also of interest to the Colville Confederated Tribes (CCT) who attach cultural significance to natural landscape components as well as the fisheries. Other factors to consider are the number and diversity of human-made objects in the landscape, including the Enloe Dam and powerhouse, the Great Northern Railroad grade, and Loomis-Oroville Road.

The Similkameen River near the Project Area is not considered a “Special Area” as it has not been recognized as a Natural Area, Wilderness Area, Wild and Scenic River, Scenic Area, or is associated with Scenic Roads or Trails and Areas of Critical Environmental Concern. Given these circumstances, the overall visual sensitivity level analysis would be considered “medium” for the Project Area. Thus, while not a Special Area, the Project Area is moderately used by the public who has expressed some interest in its visual qualities.

Delineation of Distance Zones

The delineation of a distance zone involves identifying the Project Area’s relative visibility from travel routes or observation points. These distance zones are “foreground-midground”, “background”, and “seldom seen”. As defined by BLM criteria, the foreground-midground zone is an area less than 3 to 5 miles away from viewers and the background zone is an area between 5 to 15 miles away. Areas that are not in the foreground-midground or background zones are in the seldom seen zone. Visitors to the Project Area largely consist of travelers on Loomis-Oroville Road and recreators. In evaluating the distance zones for each viewer type the following results were observed:

- Travelers on Loomis-Oroville Road: foreground-midground zone
- Similkameen River recreators: foreground-midground zone

Thus, following the criteria, each set of viewers would be at a distance of no more than 3 to 5 miles from the Project Area. However, actual views in the Project Area do not typically extend that far.

Visual Resources Classes and Objectives

The visual resource inventory class was determined using Illustration 11 from the BLM Manual 8410 – Visual Resource Inventory. Given the visual sensitivity level of “medium” and the scenic quality of “C”, the resulting Inventory Class would be “IV”. For more information on the management implications of the Inventory Class rating see Section E8.4.

Summary

Using the BLM VRM Methodology outlined in “Manual H-8410-1 – Visual Resource Inventory”, the Enloe Dam Project Area is determined to have the following characteristics with most of the visitors in the foreground/midground distance zone:

Scenic Quality = C

Sensitivity Level = Medium

Inventory Class = IV

ANALYSIS OF ENLOE DAM PROJECT AREA

Existing Power Generation Equipment and Buildings

The District is developing an application for a license under the Federal Power Act to restore hydroelectric power generation at Enloe Dam. Enloe Dam is a 315 foot long concrete gravity arch dam structure with a hydraulic height of 54 feet. The spillway is a 276 foot long, ungated overflow section that spans the center of the dam. The spillway crest has pipe sockets at 4-foot centers set in the crest for installation of flashboard type crest gates to a height of 5 feet.

A power intake structure near the right (west) abutment has intakes for two 7-foot diameter wood stave penstocks. The powerhouse which is located on the west bank of the river about 850 feet downstream of the dam initially once contained two hydroelectric turbine-generator units. Both units were operated by the Washington Water Power Company until 1945 when the Project was acquired by Public Utility District No. 1 of Okanogan County. Power generation ceased in 1958.

Enloe Dam remains in place; one penstock and both surge tanks also remain. The powerhouse also remains but is in poor condition and has been vandalized. A suspension bridge that provided foot-access across the river to the powerhouse has been removed.

The railroad that once provided freight access to the powerhouse on the west side of the river has also been removed; however, there is single-lane vehicle access along the old railroad grade.

Project Modifications to Existing Aesthetic Resources

In order to determine whether the Project meets the objectives of the VRM, the following section describes proposed modifications to the visual qualities (namely landform, water, vegetation, and structures) within the Project Area. For the purposes of the visual resources analysis, this section describes the modifications to the Project Area that will occur due to the proposed construction of the Project on the east bank.

Project modifications of existing aesthetic resources principally come in the form of new structures related to hydroelectric power generation. The proposed locations for the new Project improvements are shown as an overlay to the aerial photograph, in Figure E.8-1. These new facilities include:

- the reintroduction of five-foot high extension on Enloe Dam (crest gates)
- headworks that include an approach channel, river intake, and intake canal
- penstock intake
- two penstocks
- powerhouse
- tailrace
- recreational facilities north of the dam (picnic tables, vault toilet, boat launch)
- improved access road

Other Project modifications are in the form of an expansion of surface water area in the impounded section of the Similkameen River to the north of Enloe Dam, and the seasonal dewatering of the falls. Another option that may be exercised could be the potential stabilization of the existing historic powerhouse, water tower, and penstock. These modifications are more specifically explained below.

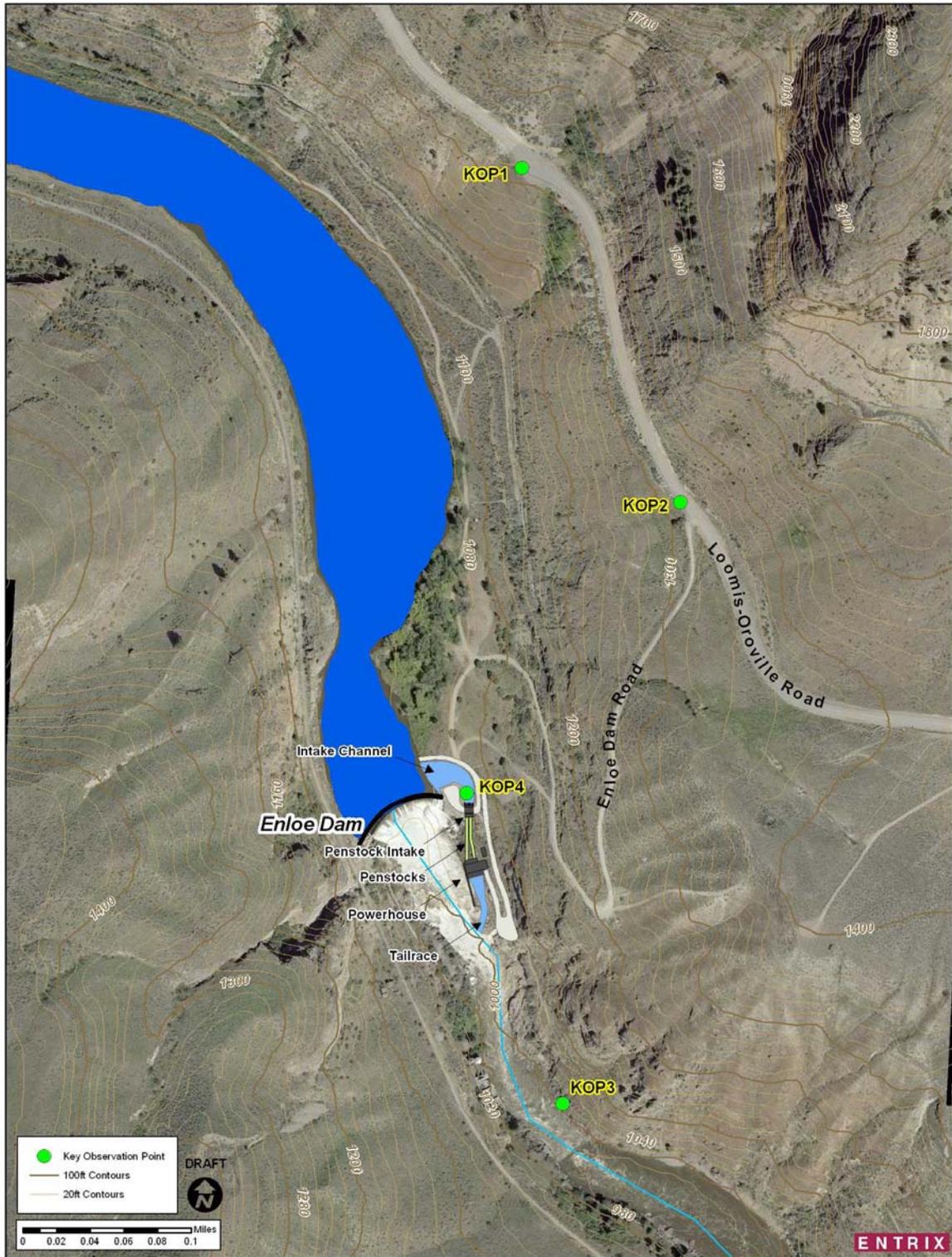


Figure E.8-1: Aerial Mapping with Overlay Showing Proposed Improvements and Locations of Key Observation Points (KOP)

Specific Project Features: Landform and Water

The color of the exposed soils, and bedrock, can be characterized as pale, warm grays ranging to medium warm grays, and warm yellow-browns. These colors will not be substantially modified by the Project.

The anticipated water coloration of the reservoir is not expected to change greatly from the existing colors seen today. Operation of the Project, through the installation of the crest gates, will result in a greater surface area of water within the reservoir. The existing average size of the impoundment area is 60.1 acres that is spread along about 2 miles of the river. During normal operation of the Project, the water surface area would increase to 76.6 acres at the proposed minimum elevation, with a reservoir length of about 2.2 miles. This corresponds to an approximate rise of four feet of water within the impoundment area during normal operation of crest gates.

It is anticipated that seasonal dewatering of the dam and falls will occur when flow levels drop below those required to operate the Project. The dewatering would normally begin in July and continue to the following April, exposing the dry face of the dam and dry falls to recreators below the dam. Recreators would typically be exposed to these effects during the period from mid-July to mid-October (the close of the recreation season).

The final landform appearance (grades, slopes, drainage patterns) is expected to remain similar to the existing landform appearance, in as much as the approach channel, river intake, and intake canal occupy the existing level ground adjacent to the dam's east abutment, and the powerhouse, penstocks, and tailrace will be placed within the existing canyon below the dam.

Specific Project Feature: Vegetation

The extent of clearing and modification to existing vegetation is expected to be minor for both the construction of the new powerhouse and intake as well as the demolition of the historic powerhouse. Disturbed areas will be vegetated to stabilize them against erosion.

Specific Project Feature: Structures

The details of Project features are described in Exhibit A. The Project intends to utilize the existing dam and reservoir to impound water for diversion through the power plant. On the dam, flashboards would be reintroduced by retrofitting five-foot high crest gates and flows over the dam will be seasonally interrupted (generally from mid-July until April) depending upon water year type.

The headworks, situated just north of the dam on the east side of the river will include an approach channel, river intake, and intake canal. An enclosure building would be erected on top of the intake structure. Much of the area near the proposed headworks

and penstock intake is currently lightly vegetated and relatively flat and thus aesthetically undistinguished.

Two above-ground penstocks would lead to the new powerhouse that would be situated in an alcove about 230 feet downstream from the east abutment of the Enloe Dam. The reinforced concrete powerhouse structure would be founded on bedrock. The reinforced concrete walls will transition to walls of structural steel and insulated metal cladding. The repair bay and laydown area would be located at the east end of the powerhouse. While introducing a linear element to the rocky contours of the east bank, this structure, as well as the penstocks, will be minimally visible from Key Observation Points (KOPs) #3 and #4.

The tailrace channel will be an unlined channel excavated in rock by controlled blasting techniques. The visibility of this new linear feature would be minimal due to its overall location, low profile and unlined construction.

Along with the introduction of new structures into the visual environment, it is preferred that some existing buildings be removed unless a qualified third party operator assumes ownership and management of the powerhouse to maintain it for historic and recreation purposes (See E.4.2.3). If a qualified third party operator is not identified, then the historic Enloe Powerhouse, associated surge tanks, and the lone surviving penstock (all located on the west side of the Similkameen River and below Enloe Dam), would be demolished. This would remove a prominent human-made structure from the Project Area. While a historic resource would be removed, the demolition would improve the human-made visual environment by removing the most dilapidated portions of the structure. The foundation of the powerhouse and surge tanks, which accounts for about 50 percent of the visible portions of the building, would be retained. As noted in the Landform section above, the removal of the historic powerhouse would enhance the visibility of the rocky outcrop behind the building.

As described in Exhibit A, the District is also currently considering working with Okanogan County to vacate the existing Enloe Dam road to private vehicles and reconstructing segments of the OTID Ditch Road to provide public access to the site on the east side of the Similkameen River. The improved OTID Ditch Road Segment C would descend in a diagonal direction down a medium pitch slope to join with Segment D of the existing road (see Figures A.2 and Figure E.7.2). Lastly, drive-in recreational facilities consisting of picnic tables, a boat launch, and vault toilet are currently being proposed for a Recreational Area (see Figure E.7.3).

VRM Objectives

As a Class IV landscape, the VRM objectives include:

- Level of change to landscape can be high

- Management activities may dominate landscape
- Management activities may be major focus of viewer attention
- Minimize impact of management activities through careful location, minimal disturbance, and repeating basic elements.

To ascertain whether the objectives of this VRM class are met, viewsheds from four KOPs were analyzed. These four viewpoints are along commonly traveled routes or areas of public use. Factors considered in the choice of these sites include the angle of observation, number of viewers, length of time the Project is in view, relative Project size, season of use, and light conditions.

Key Observation Points (KOPs)

There are four key KOPs in the Project Area. The KOPs were documented in the field using GPS, with locations marked on Figure E.8-1. These KOPs were chosen because they are the most critically traveled routes or observation points in the Project Area. The identified viewer user groups include travelers along Loomis-Oroville Road and recreators on the Similkameen River. Viewsheds for each of the KOPs were modeled using a geographic information system and a three-dimensional digital elevation model. Visible areas for each KOP are shown with a tone overlaid on the topographic map, on Figures E.8-2, E.8-3, E.8-4, and E.8-5. The Project Area is not visible from much of the surrounding area due to the topography. The dam and powerhouse are located at the base of steep rock walls.

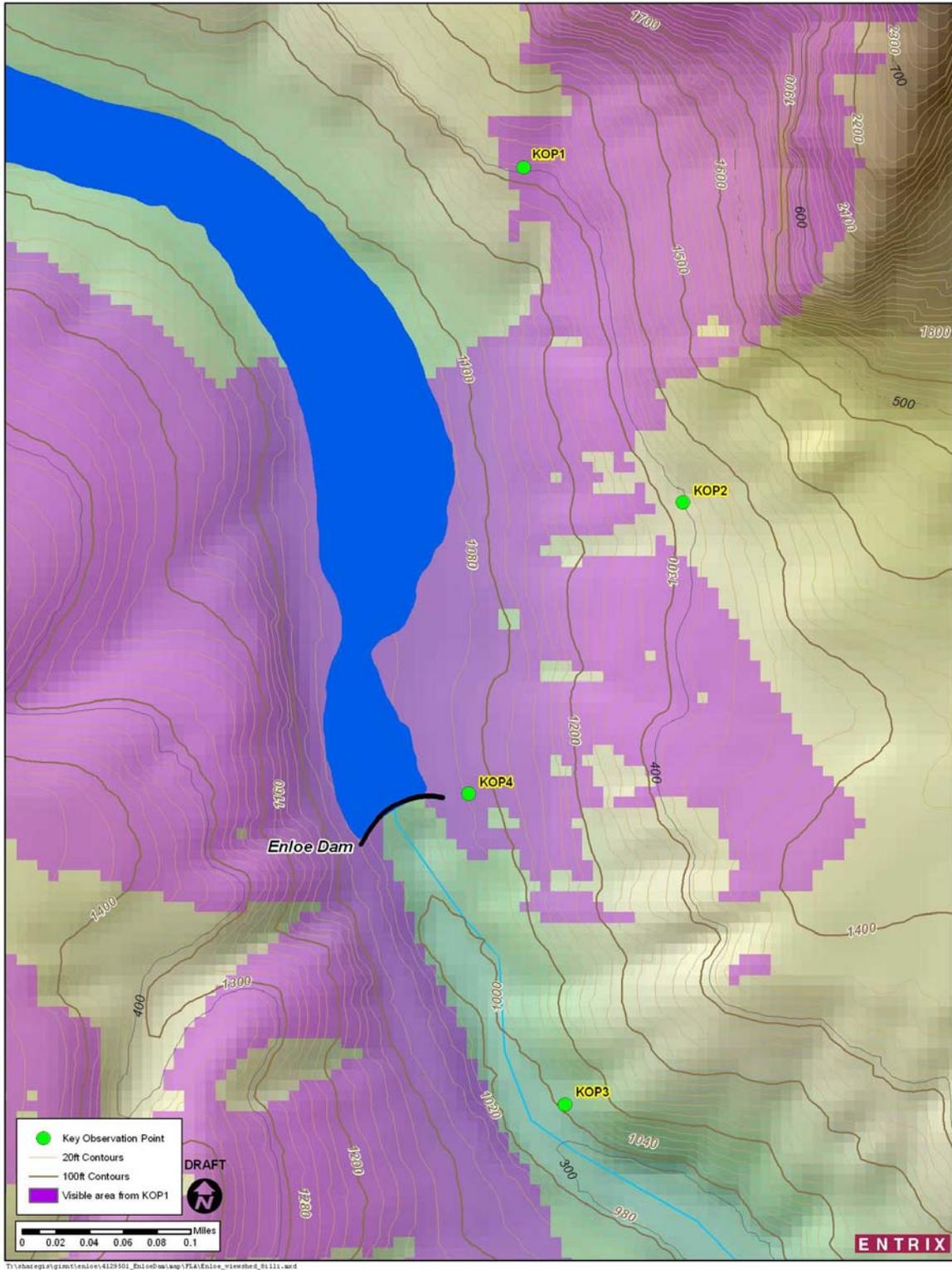


Figure E.8-2: Areas Visible from Key Observation Point 1 (Viewshed)

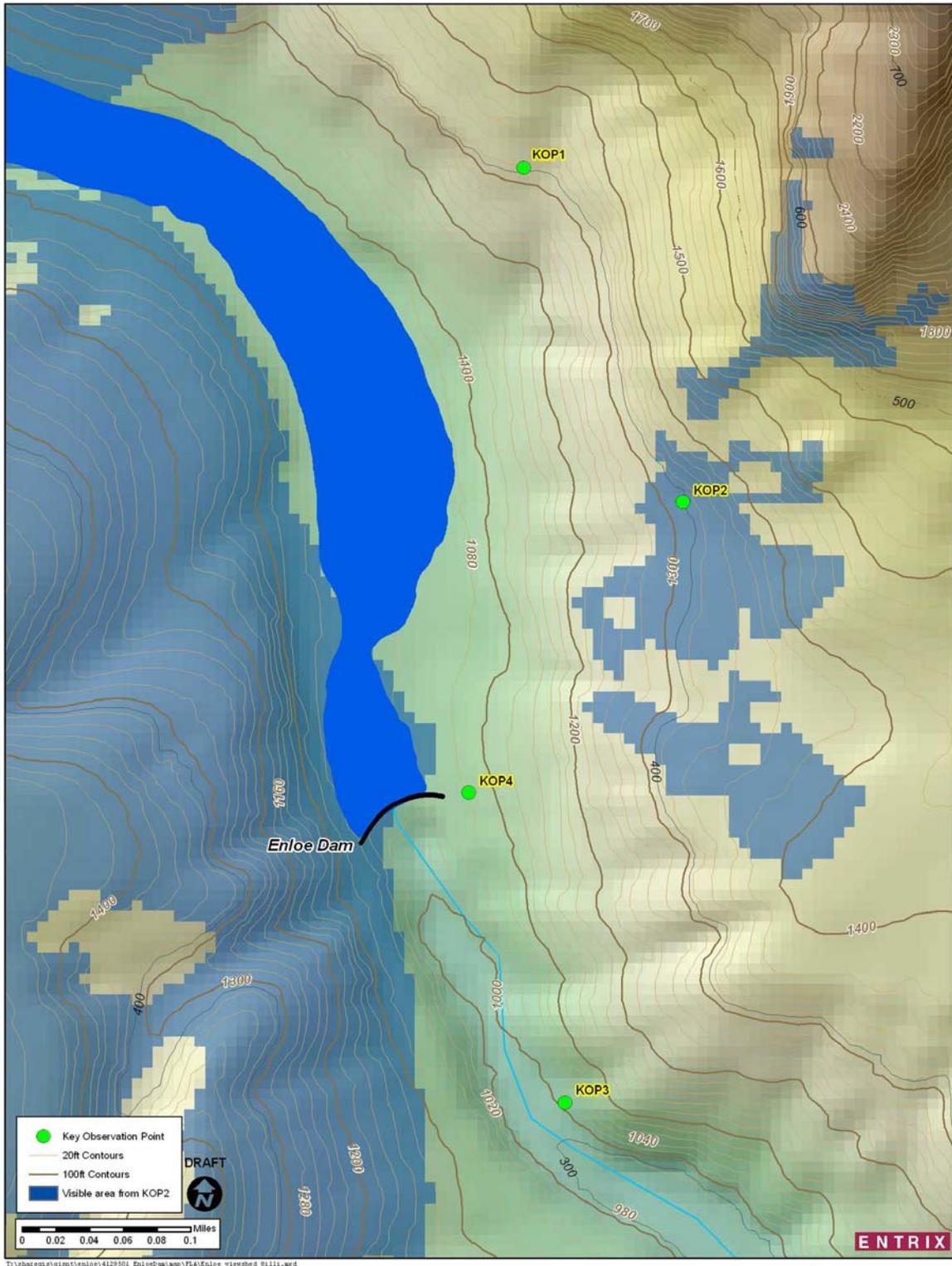


Figure E.8-3: Areas Visible from Key Observation Point 2 (Viewshed)

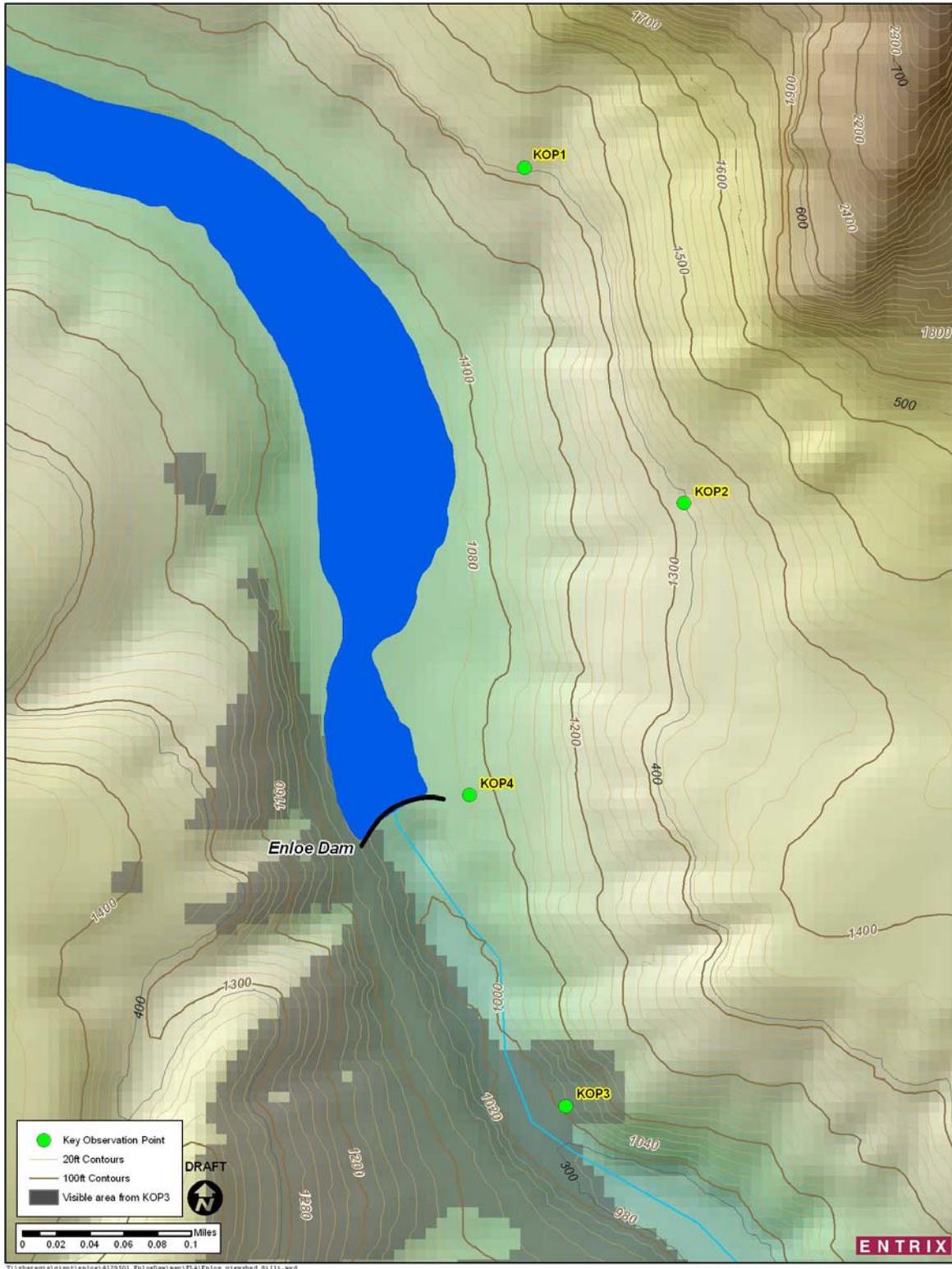


Figure E.8-4: Areas Visible from Key Observation Point 3 (Viewshed)

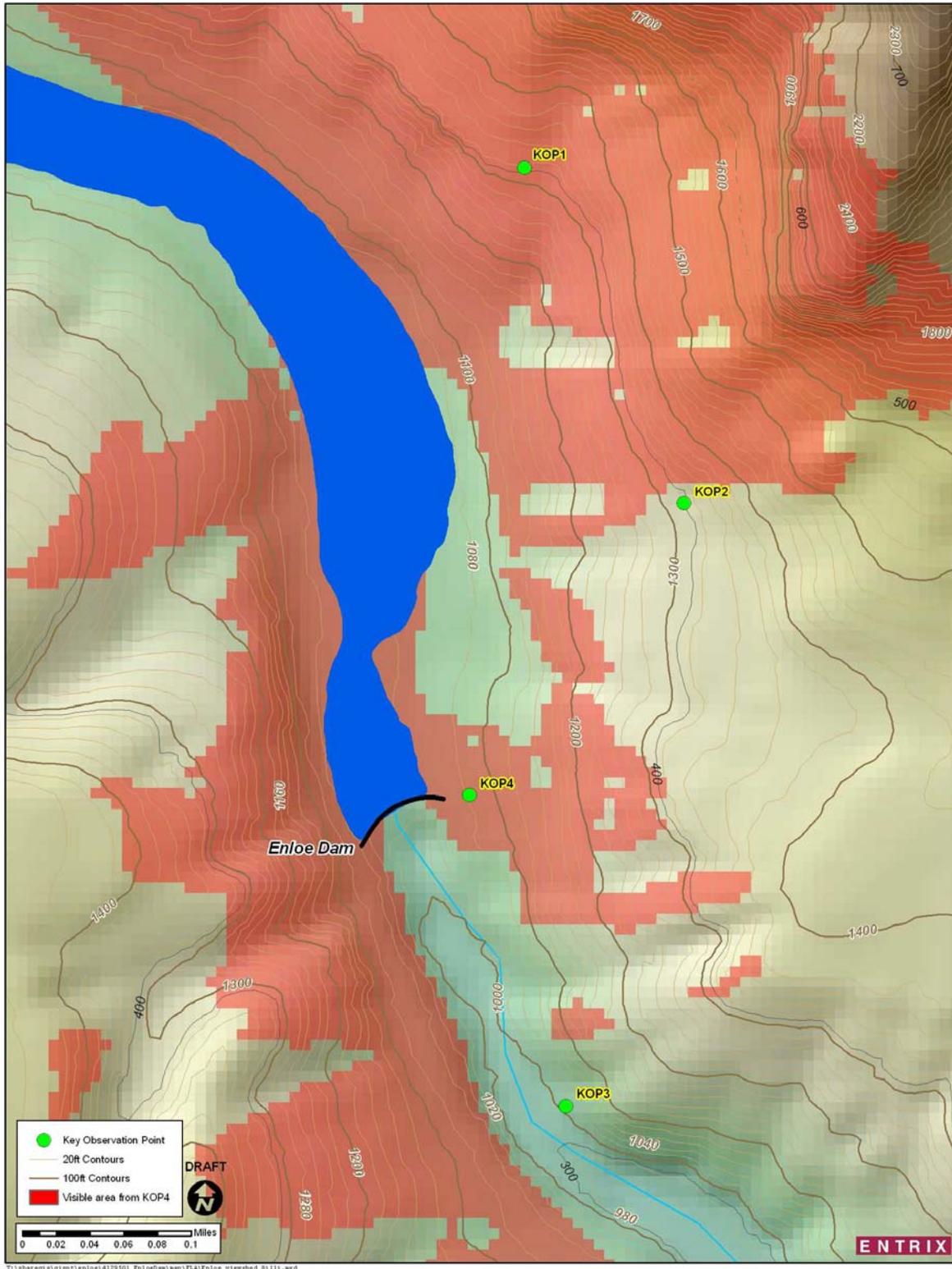


Figure E.8-5: Areas Visible from Key Observation Point 4 (Viewshed)

KOP#1: Loomis-Oroville Road – Travelers on Loomis-Oroville Road will see the Project Area for a relatively short-time in the foreground-middleground. The facilities related to power production (i.e., new powerhouse, intake canal, etc.) that will be added to the existing human-made landscape will only partially (if at all) be viewed by the travelers. The new recreation area will be visible by travelers, but the facilities constitute only small scale modifications to the existing natural landscape. The water level at the dam is expected to change, which would also be viewed by the travelers. Visibility of the Project Area is generally unobstructed to travelers on Loomis-Oroville Road; however, the topography of the Project Area (it is located in a canyon) makes it difficult for the travelers to view. The simulation for KOP #1 shows the long view to the project area, where only a small glimpse of the inlet channel and recreation area is possible, due to topographic position and minimal size and scale of the recreation-related facilities.

KOP#2: Overlook from Loomis-Oroville Road approximately 3 miles north of Oroville – People stopping at the overlook on Loomis-Oroville Road will have opportunities for extended views of the Project Area. From this viewpoint, the dam is visible as are the existing surge tanks and the roof of the old powerhouse. Due to the topography, a new powerhouse on the east side of the river would be either not visible to this viewer, or only a small portion of the roof would be visible. Changes in water levels at the dam would be visible. The Project Area is generally unobstructed, however, only the inlet channel and the recreational area would clearly be in view.

KOP#3: Rocks below Enloe Dam on Similkameen River – Recreators on the river would have extended views of the Project Area. From this viewpoint, changes to the landscape would include the construction of the new powerhouse on the east side of the river and seasonal dewatering of the falls. The Project components would add to the existing human-made elements in the Project Area, which include the existing powerhouse and dam. The Project would also modify the water features as no spill would occur over the dam from mid-July to the following April in an average year. Visibility of the Project Area would be partially obstructed by the existing topography.

KOP #4: Overlook near Enloe Dam. This perspective is from the work area immediately east of the Enloe Dam. From this viewpoint, the dam and existing penstock are clearly visible. Changes to the landscape prompted by the Project would include the construction of the intake canal in the immediate foreground with the attendant safety fencing and removal of the penstock on the far side of the dam. Views from this point to the south towards the new powerhouse, penstocks, and tailrace would be partially obstructed by the existing topography. The recreation area, located north of this KOP would not be visible.

Visual Simulations

Following BLM VRM methodology, visual simulations were created from the four identified KOPs in the Project Area. The photo simulations show the proposed Project facilities as seen from the key viewer groups as well as the option that results in the

stabilization of the existing powerhouse. Digital photographs taken from the Key Observation Points serve as the base image for the photo simulations.



**KOP#1: Travelers view from Loomis-Oroville Road looking SW
(EXISTING)**



**KOP#1: Travelers view from Loomis-Oroville Road looking SW
(PROPOSED)**

Note the inlet channel in the middle ground to the left side of the existing dam and pool. Most of the improvements are not visible from this location, due to their topographic position, in the canyon of the Similkameen River, below the dam.



KOP#2: Overlook from Loomis-Oroville Road looking SW (EXISTING)



KOP#2: Overlook from Loomis-Oroville Road looking SW (PROPOSED)

Note the inlet channel in the middle ground to the left side of the existing dam and pool as well as the removal of the tank, penstocks, and powerhouse near the ridgeline in the

left middle ground. Most of the improvements are not visible from this location, due to their topographic position, in the canyon of the Similkameen River, below the dam.



**KOP#3A: Recreators' view on Similkameen River looking NW
(EXISTING)**



**KOP#3A: Recreators' view of Similkameen River looking NW
(PROPOSED)**

The proposed powerhouse is mostly obscured by the existing topography, yet the upper portion of the concrete structure, and the metal cladding and roof above (to elevation 1017) can be seen above the existing rock wall of the canyon, on the right.



KOP #3A: Recreators' view of Similkameen River with no spill over dam looking NW (PROPOSED)

Taken from the same point as KOP #3A, KOP #3B shows the visual impact of removing the old powerhouse and surge tanks.



KOP#3B: Recreators' view on Similkameen River looking west towards old powerhouse (EXISTING)



KOP #3B: Recreators' view on Similkameen River looking west towards old powerhouse (PROPOSED)



KOP #3B: Recreators' view on Similkameen River looking west towards existing powerhouse showing stabilization option



KOP #4: View on Similkameen River looking SW along crest of Enloe Dam (EXISTING)



KOP #4: View on Similkameen River looking SW along crest of Enloe Dam (PROPOSED)

This KOP is actually taken from within the intake canal and shows a safety fence in the foreground.



KOP #4: View on Similkameen River looking SW along crest of Enloe Dam showing crest gates deployed with no spill (PROPOSED)

E.8.3 ANTICIPATED IMPACTS

This portion of the application considers how Project-related operations and construction activities will impact the visual resources within the Project Area. The principal measure for assessing impacts to visual resources lies in the BLM's use of a "contrast rating." Using the information from the visual resources inventory and analysis, a contrast rating is used to summarize changes to a landscape's existing condition.

Analysis indicates that aesthetic issues related to the Project are consistent with the objectives outlined in the approved VRM Class for the Project Area.

Project Operation Impacts Upon Visual Resources

From a visual resource perspective, project operations will have minimal visual impacts as the Similkameen River's seasonal flow fluctuations will not be changed with the exception of a longer period of inundation due to crest gate operation and an increase in the surface area of water within the reservoir. The total surface area normally inundated will increase by about 27 percent due to operation of the crest gate, but the increase will occur within a long narrow corridor, and the increase will largely occur at its upstream end. Other than extending the upstream extent of inundation, operation of the facility will have minimal impacts upon the existing visual resources within the Project Area. The installation of the crest gates will have a moderate visual impact upon the dam, but the use of the gates will reduce the periods when spill is permitted over the dam, thus affecting water flows below the dam. Less water below the dam will reveal more of the

rocky outcrops that would be otherwise submerged. These changes in appearance already occur during seasonal changes in water flow, therefore the effect is moderate.

The face of the dam and the falls will be dewatered when flows drop below the levels required to operate the project (all flows will be routed through the powerhouse, around the dam and falls). The linear nature of the dam crest and the overall form of the dam would remain similar during no spill periods, but the smooth texture of the dam structure will be exposed when no longer covered by spill water. The color of the dam face would roughly approximate the colors of the surrounding landforms. The no spill period would normally occur from about mid-July to the following April and affect views primarily from mid-July to mid-October, thus only the latter portion of the recreational use season. After mid-October, few people use the area due to inclement weather. While perceptible, the visual contrast associated with the no spill period would be moderate and remain consistent within the VRM objectives of a Class IV landscape that has already been modified by existing Project facilities.

Project Construction Impacts upon Visual Resources

While no serious adverse visual impacts would be caused by Project features, the construction impacts associated with location of a new Powerhouse and related structures will introduce new human-made elements into the Project Area. This new construction, however, will occur in areas that are not prominent and largely hidden by topography and vegetation. The visual impacts associated with eliminating the powerhouse may improve the Project Area's human-made visual qualities or natural visual qualities, respectively. The introduction of a recreation area north of the dam will introduce additional human-made elements into the Project Area, but the facilities (roadway, picnic tables, boat launch, & vault toilet) will be scattered around a sparsely vegetated clearing (the former location of Project-related housing quarters that were previously demolished), extend into the Similkameen River (boat launch) and be minimal in size and scale.

Contrast Rating for Project Operations

The degree of visual change is measured through a contrast rating. Based upon the criteria of form, line, color, and texture, this analysis uses the photo-simulations as guides for evaluating changes to the landscape caused by Project operations and construction. This comparison assists in determining whether Project features meet the VRM objectives. Contrast ratings are noted as being none, weak, moderate, and strong depending on the degree of change. The contrast rating is provided below from each of the KOPs.

**Table E.8-1: Contrast Ratings for Key Observation Points (KOP):
Proposed Project**

Viewpoint	Landform/Water Features	Structural Features
KOP #1	Weak	Weak
KOP #2	Moderate	Weak
KOP #3	Moderate	Moderate
KOP #4	Moderate	Moderate

The moderate contrast rating for the landform/water features visible from KOP #2 is related to the introduction of new linear components and forms from recreational facilities to natural elements of the landscape. The moderate contrast rating for both the landform/water features as well as the structural features visible from KOP #3 and KOP #4 reflects a limited view of the new powerhouse that introduces new linear components and forms to the structural and natural elements of the landscape. The moderate contrast rating for KOP #3 and KOP #4 does take into account the impact that the no spill period will have on the face of the dam. The coloration of the dam face will change from white to a patchy light-brown thus reducing the visual presence of the water visible from KOP #3 and KOP #4 during the no spill period. Visual receptors (recreators) would typically be exposed to these effects during the period from mid-July to mid-October (the close of the recreation season).

E.8.4 PROTECTION, MITIGATION & ENHANCEMENT MEASURES

A summary of Project PM&Es is provided in Appendix D.1.

In keeping the BLM's VRM guidelines, the objectives for a Class IV landscape include:

- Level of change to landscape can be high
- Management activities may dominate landscape
- Management activities may be major focus of viewer attention
- Minimize impact of management activities through careful location, minimal disturbance, and repeating basic elements

Given the nature and appearance of the proposed improvements, the Visual Resource Management (VRM) objectives for Classes I, II and III would be met whether or not the original powerhouse is demolished or transferred and rehabilitated.

ISSUE: THE ORIGINAL ENLOE POWERHOUSE IS DETERIORATING AND HAS BEEN VANDALIZED

It is proposed to consider demolition of the old structure and construction of a new powerhouse on the opposite bank.

Potential Impact

Demolition of the existing historic powerhouse, construction of new facilities on the east side of the Similkameen River and the construction of facilities related to a new recreational area north of the dam will impact visual resources.

Proposed PM&E AES-01: Use Visually Compatible Colors and Building Materials

Under this PM&E the District will use visually compatible colors and building material textures that harmonize with the existing landscape for the new east-bank construction. This is estimated to add \$10,000 to the cost of construction.

Proposed PM&Es BOTA-02: Plant Riparian Vegetation, BOTA-07: Monitor Restored Areas and Replant if Necessary, BOTA-08: Employ BMPs to Protect Riparian and Wetland Vegetation

The District will restore the area where the building would be removed by grading, planting grasses and repairing slopes damaged by construction activities and the planting native vegetation in areas where buildings and structures were removed. These costs are captured in PM&Es BOTA-02, BOTA-07, and BOTA-08.

Proposed PM&E AES-02: Consult with the CCT during Restoration Activities

This PM&E requires that the CCT be consulted during the restoration activities as there are known Traditional Cultural Properties within the APE. Coordination is estimated to cost \$20,000.

Expected Outcome

The outcome of these PM&Es would be a landscape that resembles the natural vegetation community where facilities were removed and construction areas restored. The new facilities will be made visually compatible through the use of building materials and paint that help the facilities harmonize with the landscape and through compatible site location, and design.

ISSUE: SHORT-TERM VISUAL IMPACTS DURING PROJECT CONSTRUCTION**Potential Impact**

Short-term visual impacts may occur during construction.

Proposed PM&Es AES-03: Use Non-Reflective Surfaces Where Possible During Construction, BOTA-02: Plant Riparian Vegetation, BOTA-07: Monitor Restored Areas and Replant if Necessary, BOTA-08: Employ BMPs to Protect Riparian and Wetland Vegetation

Non-reflective surfaces will be used where possible during construction. There is no additional cost associated with AES-03. Areas disturbed during construction will be protected as required by BOTA-08, monitored (BOTA-03), and restored (BOTA-02).

Expected Outcome

Expected outcomes of these PM&Es are reduction of visual impacts during construction and a restored site that would be visually compatible with the surrounding area and the successful development of a monitoring and maintenance plan.

ISSUE: MODERATE VISUAL EFFECTS TO RECREATIONAL USERS BELOW ENLOE DAM

Project Impact

Construction of new facilities on east side of Similkameen River below dam and the seasonal dewatering of the dam will be visible to some recreators. However, impacts on visual resource receptors will be limited to the portion of the recreation season which overlaps this period (mid-July to mid-October).

Proposed PM&Es AES-01: Use Visually Compatible Colors and Building Materials, BOTA-02: Plant Riparian Vegetation, BOTA-07: Monitor Restored Areas and Replant if Necessary, BOTA-08: Employ BMPs to Protect Riparian and Wetland Vegetation

Previously described PM&Es AES-01, BOTA-02, BOTA-07, and BOTA-08 will mitigate visual effects to recreational users below the dam. Under these PM&Es the District will use materials that are compatible with the site and are natural in appearance, appropriate in color and texture, and non-reflective. Locations of facilities may be sought as a means to minimize visibility from KOPs. Grading, planting grasses, and repairing slopes damaged by erosion would be accomplished as the new facilities are constructed.

Proposed PM&E HIST-03: Install Interpretive Panels

As described for HIST-03 in Exhibit E.4, the District will also install interpretive panels that describe historic operations of the dam with historic images of water over the dam to enhance recreational experiences of visitors. The costs associated with this PM&E are included under Exhibit E.4.

Expected Outcome

The implementation of these PM&Es would minimize visual impacts of the new construction, helping the buildings to blend into their surroundings and would also provide information on the history of the area.

E.8.5 CONSULTATION SUMMARY

In compliance with 18 CFR 4.41, consultation concerning aesthetics was undertaken with Federal, state, and local agencies that have managerial responsibility over any portion of the Project lands or lands abutting the Project. In addition, consultation was undertaken with interested Native American tribes whose cultural values are intimately tied to the visual appearance of the Project Area.

Early consultation on aesthetic issues began in March/April 2006 with phone calls and emails to the BLM that discussed existing management plans or visual resource classifications in the Project Area, their process for understanding the visual importance of the Project Area, and how they evaluate impacts to visual resources. The BLM required that the District use its VRM guidelines; Handbook H-8410-1, Visual Resource Inventory and Manual 8431 – Visual Resources Contrast Rating. These guidelines provided a framework for identifying visual resources and understanding impacts to the resources.

With the methodology established, fieldwork for the visual resource study was undertaken and completed in spring 2006 and the study was subsequently drafted from June 2006-April 2007. Consultation with the public concerning visual resources was integrated into the Recreational Use Survey conducted from June 10 – October 15, 2006. The survey helped determine the importance of visual resources as a portion of recreational use. Of all the visitors surveyed, “sightseeing” accounted for 12.4 percent of area use – surpassed only by boating (18.1 percent) and mining (30.5 percent).

Another group with profound interest in visual resources is the Colville Confederated Tribes (CCT). The CCT attaches cultural significance to several natural features and components within the Project Area that are considered Traditional Cultural Properties (TCPs). In February 2007, the CCT, as well as other members of the Cultural Resources Working Group (CRWG) that included the Washington Department of Archaeology and Historic Preservation (WDAHP), FERC, the District, and BLM were provided a copy of the *Visual Resources Technical Report*. The report was discussed during the March 6, 2007 meeting of the work group and need for the visual report to recognize the cultural significance of the Project Area’s visual attributes particularly in areas identified as TCPs. Further discussion of the CRWG in June 5, 2007 stressed the need for more visual simulations that showed the seasonal de-watering of the dam due to operation of the Project, the visual appearance of the proposed powerplant and penstocks, as well as the visual impact of the new crest gates upon the dam. Potential mitigation measures for new buildings within the Project Area were also discussed. This

included the use of non-reflective building materials and buildings would be painted in earth tones to meld with the surrounding landscape.

Following the submittal of the DLA, the District received several comments from stakeholders regarding aesthetic resources in February 2008. Comments were received from the NPS, BLM, and Washington Department of Ecology. The comments requested additional information and studies that expands the analysis of the aesthetic impacts of dewatering the dam and the new recreational facilities. While no additional studies will be conducted as they are beyond the scope and context of this Project, the District has provided additional explanatory text and photographic simulations in Appendix E.8 to address the visual impacts of seasonal dewatering of the dam and the new recreational facilities. A PM&E has also been added to the LA to address the impacts of dewatering. The technical report has been updated with this additional information.

Further consultation with the BLM, WDAHP, CCT, District, and FERC will seek to address comments and integrate all changes into the Visual Resources Technical Report.

Aside from the CRWG meetings and the written comments received following the submittal of the DLA, no other written comments have been received from any consultation targets concerning the Visual Resources Technical Report.

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