

Study 10.1

## **VISUAL QUALITY ON FEDERAL LAND**

August 2011

### **1.0 Project Nexus and Issue**

Yuba County Water Agency's (YCWA or Licensee) continued operation and maintenance (O&M) of the Yuba River Development Project (Project) may have an effect on visual quality.

### **2.0 Resource Management Goals of Agencies with Jurisdiction Over the Resource to be Studied**

YCWA believes that one agency has jurisdiction over visual quality in the geographic area included in this study proposal: 1) the United States Department of Agriculture, Forest Service (Forest Service) on National Forest System (NFS) land.

#### Forest Service

The Forest Service's jurisdiction and applicable management goals are described by the Forest Service from page 59 to 76 in the Forest Service's March 2, 2011 letter to FERC providing the Forest Service's comments on YCWA's Pre-Application Document, or PAD (YCWA 2010). The Forest Service's jurisdiction and management goals are not repeated here.

### **3.0 Study Goal and Objectives**

The goal of the study is to identify known adverse visual quality effects due to continued O&M of the Project. The objectives of the study are to identify, map, and describe United States Department of Agriculture Forest Service (Forest Service) inventories associated with Project facilities and features on public land managed by the Forest Service, and document the existing visual condition (EVC) of all Project facilities and features from associated viewsheds on public land managed by the Forest Service.

### **4.0 Existing Information and Need for Additional Information**

Section 7.10.4 of YCWA's PAD describes in detail for each Project facility or feature: the form of access to the facility or feature; relationship to the land form; the surrounding area's outstanding visual features; predominant vegetation in the Project Vicinity;<sup>1</sup> visibility from the surrounding area; relative number of viewers that can normally see the facility or feature; and the Forest Service visual quality management objectives applicable to the area of the Project facility or feature. The Forest Service currently uses the Visual Management System (VMS) to address aesthetic resources. The VMS information is found in the Land and Resource Management

---

<sup>1</sup> For the purposes of the relicensing, the Project Vicinity is defined as the area surrounding the Project in the order of a county or United States Department of Interior (USDOI), United States Geological Survey (USGS) 1:24,000 topographic quadrangle.

Plans for the Tahoe National Forest (TNF) and the Plumas National Forest (PNF) (USDA-FS 1998, 1990).

Existing information is not adequate to meet the goal of the study for public land administered by the Forest Service because the Forest Service inventories and objectives associated with the Project have not been mapped and described.

## **5.0 Study Methods and Analysis**

### **5.1 Study Area**

The study area includes all Project facilities and features on public land administered by the Forest Service, and their associated viewsheds. The viewsheds include travel routes, recreation areas, and water bodies from which the Project facilities and features on NFS land are visible to the public. The primary Project facility to be assessed is New Bullards Bar Dam and the facilities associated with the dam. Our House Diversion Dam and Log Cabin Diversion Dam will be assessed only to the degree they are visible from sensitivity level 1 and 2 routes and recreation use areas.

The following travel routes, recreation areas and water bodies have been identified as potentially viewing Project facilities and features:

- County Route 8 also referred to as Marysville Road
- Dark Day Campground and Boat Launch
- Cottage Creek Boat Launch
- Bullards Bar Reservoir Vista Point (Picnic Site)
- Madrone Cove Campground
- Garden Point Campground
- Bullards Bar Reservoir
- Cottage Creek Campground
- Burnt Bridge Campground (closed site – has potential to be opened in future)
- Moran Road as it terminates at New Bullards Bar Reservoir

If YCWA proposes an addition to the Project, the study area will be expanded if necessary to include areas potentially affected by the addition. In addition, if additional Project facilities, features, recreation facilities, or dispersed concentrated use areas outside the study area are identified, the study area will be expanded, if necessary, in collaboration with Relicensing Participants, to include these areas.

### **5.2 General Concepts and Procedures**

The following general concepts and practices apply to the study:

- Personal safety is the most important consideration of each fieldwork team.
- Licensee will make a good faith effort to obtain permission to access private property where needed well in advance of entering the property.
- Field crews may make minor variances to the FERC-approved study in the field to accommodate actual field conditions and unforeseen problems. When minor variances are made, Licensee's field crew will follow the protocols in the FERC-approved study.
- When Licensee becomes aware of major variances to the FERC-approved study, Licensee will issue an e-mail to the Relicensing Contact List describing the variance and reason for the variance. Licensee will contact by phone the Forest Service (if the variance is on National Forest System land), USFWS, SWRCB and CDFG to provide an opportunity for input regarding how to address the variance. Licensee will issue an e-mail to the Relicensing Contact List advising them of the resolution of the variance. Licensee will summarize in the final study report all variances and resolutions.
- Licensee's performance of the study does not presume that Licensee is responsible in whole or in part for measures that may arise from the study.
- Global Positioning System (GPS) data will be collected using either a Map Grade Trimble GPS (sub-meter data collection accuracy under ideal conditions), a Recreation Grade Garmin GPS unit (3 meter data collection accuracy under ideal conditions), or similar units. GPS data will be post-processed and exported from the GPS unit into Geographic Information System (GIS) compatible file format in an appropriate coordinate system using desktop software. The resulting GIS file will then be reviewed by both field staff and Licensee's relicensing GIS analyst. Metadata will be developed for deliverable GIS data sets. Upon request, GIS maps will be provided to agencies in a form, such as ESRI Shapefiles, GeoDatabases, or Coverage with appropriate metadata, that is useful for interactive data analysis and interpretation. Metadata will be Federal Geographic Data Committee (FGDC) compliant.<sup>2</sup>
- Licensee's field crews will record incidental observations of aquatic and wildlife species observed during the performance of this study. All incidental observations will be reported in the appropriate Licensee report (e.g., incidental observations of special-status fish recorded during fieldwork for the Special-Status Turtles – Western Pond Turtle Study will be reported in Licensee's Stream Fish Populations Study report). The purpose of this effort is not to conduct a focus study (i.e., no effort in addition the specific field tasks identified for the specific study) or to make all field crews experts in identifying all species, but only to opportunistically gather data during the performance of the study.
- Field crews will be trained on and provided with materials (e.g. Quat) for decontaminating their boots, waders, and other equipment between study sites. Major concerns are amphibian chytrid fungus, and invasive invertebrates (e.g. zebra mussel, *Dreissena polymorpha*). This is of primary importance when moving: 1) between tributaries and mainstem reaches; 2) between basins (e.g. Middle Yuba River, Yuba River, and North Yuba River); and 3) between isolated wetlands or ponds and river or stream environments.

---

<sup>2</sup> The Forest Service and CDFG each have requested that a copy of the GIS maps be provided to them when the maps are available.

## **5.3 Study Methods**

The study will be performed in three steps: 1) identify facilities to be evaluated; 2) information gathering and mapping; and 3) prepare report. Each of these steps is described below.

### **5.3.1 Step 1 – Identify Facilities to Evaluate**

In this step, Licensee will first document all existing Project facilities and features and in consultation with the Forest Service, finalize the list of facilities that will be evaluated in the study. The preliminary list of potential viewing opportunities is provided in Section 5.1.

### **5.3.2 Step 2 – Information Gathering and Mapping**

For the list of facilities identified in Step 1, YCWA will perform the following:

- In consultation with the Forest Service, identify and map all sensitivity level 1 and 2 viewsheds in the study area associated with the Project facilities identified in Step 1.
- Map and summarize the TNF and PNF Visual Quality Objectives (VQOs) in the study area.
- Identify and summarize the TNF and PNF Land and Resource Management Plan (LRMP) direction associated with the VMS inventories relative to the Project facilities identified in Step 1.
- Map the location of the Project facilities identified in Step 1 with respect to their associated viewsheds and VMS inventories including VQOs.
- Summarize variety classes, sensitivity levels, distance zones, and Recreation Opportunity Spectrum (ROS) in table format.
- Document the existing visual conditions (EVC) of Project facilities identified in Step 1.
- In consultation with the Forest Service, identify Key Observation Points (KOPs) where photographs will be taken based on the list of Project facilities identified in Step 1 using agreed upon photographic protocols. Map and describe the location of the KOPs. Also photograph the New Bullards Bar Reservoir from selected points at full pool and lowest expected pool during the study period to visually capture seasonal water fluctuations.

### **5.3.3 Step 3 – Prepare Report**

YCWA will prepare a report that includes the following sections: 1) Study Goals and Objectives; 2) Methods; 3) Results; 4) Discussion; and 5) Description of Variances from the FERC-approved study proposal, if any. The focus of this report will be to assess the existing visual condition and document whether that condition meets TNF and PNF LRMP visual direction.

## **6.0 Study-Specific Consultation**

The study includes the following specific consultation:

- YCWA will consult with the Forest Service regarding Project facilities to be evaluated.
- YCWA will consult with the Forest Service to identify and map all sensitivity level 1 and 2 viewsheds in the study area associated with Project facilities to be evaluated.
- YCWA will consult with the Forest Service regarding KOPs.

## **7.0 Schedule**

YCWA anticipates the schedule to complete the study as follows assuming FERC issues its Study Determination by September 16, 2011 and the study is not disputed by a mandatory conditioning agency:

Identify facilities to be evaluated (Step 1)..... October 2011 – November 2011  
Information Gathering and Mapping (Step2) ..... October 2011 – July 2012  
Report Preparation (Step 3).....July – September 2012

## **8.0 Consistency of Methodology with Generally Accepted Scientific Practices**

This study is consistent with the goals, objectives, and methods outlined for recent FERC hydroelectric relicensing efforts in California.

## **9.0 Level of Effort and Cost**

YCWA estimates the cost to complete this study in 2011 dollars is between \$30,000 and \$38,000.

## **10.0 References Cited**

- United States Department of Agriculture, Forest Service (USDA-FS). 1973. National Forest Landscape Management (Volume 1).
- \_\_\_\_\_. 1974. National Forest Landscape Management (Volume 2, Chapter 1): The Visual Management System (Agricultural Handbook 462).
- \_\_\_\_\_. 1988. Plumas National Forest Land and Resource Management Plan, USDA Forest Service, Pacific Southwest Region, San Francisco, CA.
- \_\_\_\_\_. 1990. Tahoe National Forest Land and Resource Management Plan. USDA Forest Service, Pacific Southwest Region, San Francisco, CA.

\_\_\_\_\_. 1995. Landscape Aesthetics. A Handbook for Scenery Management. (Agricultural Handbook 701).

Yuba County Water Agency (YCWA). 2010. Yuba River Development Project Relicensing Pre-Application Document. Yuba County Water Agency, Marysville, CA. <http://www.ycwa-relicensing.com>.