

### **11.13 Iowa Hill Vegetation Mapping Study Plan**

#### **11.13.1 Pertinent issue questions**

This study addresses the following terrestrial resource question for the proposed Iowa Hill Pumped Storage Development Project, as identified by the Upper American River Project (UARP) Relicensing Terrestrial Resources Technical Working Group (TWG) and as adapted from previously approved UARP studies:

- What is the extent and distribution of vegetation types in the Project area?

#### **11.13.2 Background**

Mapping the distribution of vegetation types within the Iowa Hill Project Area provides a baseline of information for a variety of studies required as part of the license application. Aerial photography conducted in 2003 along the Upper American River Project (UARP) transmission line corridor also overlapped the Iowa Hill project area. This aerial photography will be used in conjunction with any available existing vegetation maps and ground-truthing to delineate vegetation types for the Project area.

#### **11.13.3 Study Objectives**

The objective of the vegetation mapping study is to identify and map vegetation types in the Iowa Hill Project Area at a 1:24000 scale for the purposes of typing the study area; actual scales used in developing the map may be less, depending on source map (e.g., aerial photo) scales, which may be as large as 1:6,000 scale. Detailed studies of special habitat types, specifically for riparian and wetland types, are not part of this study effort. A separate study plan has been developed for wetland habitats because these areas are likely to be small or non-existent, requiring a different scale than used for general vegetation mapping. The Vegetation Mapping Study will provide useful information to support the Iowa Hill Wildlife Habitat Characterization Study.

#### **11.13.4 Study area**

The study area will include the preliminary project boundary as described in Figures 2 and 14 of the Iowa Hill IIP (SMUD 2003), including the area surrounding the proposed reservoir (Figure 2 in IIP), intake structure, and the preferred alternative transmission line route proposed by the Licensee (Figure 14 in IIP).

#### **11.13.5 Information Needed From Other Studies**

This study will rely on aerial photography conducted for the UARP transmission line in 2003. Information from this study will support various studies for special status plants and animals, as well as for locating invasive weeds and riparian/wetland areas.

#### **11.13.6 Study Methods and Schedule**

This study will be conducted during the first quarter of 2004. The 2003 aerial photography will be reviewed and vegetation types will be mapped at a 1:24000 scale. GIS mapping from the aerial photographs will be done using a minimum 1.0-acre polygon, with special elements (e.g., riparian areas, seeps, wet meadows) less than 1.0-acre in size identified by a separate symbol. Vegetation designations will be based on the descriptions of terrestrial plant types used in the USFS CalVeg classification scheme. Additional descriptive modifiers will be added for wetland and riparian types as necessary. Areas of small size that are not well represented on the map will be described in the narration and in the specific study plan for riparian/wetland types. Vegetation types will be ground-truthed within reasonable safety limits. This will involve going to the various vegetation types within the study area and reviewing how these types show up on the aerial photographs. The photos and on-the-ground site visits will be correlated to insure accuracy of the mapping effort and description of vegetation types.

11.13.7            Analysis

The vegetation mapping will delineate the distribution and extent of major vegetation types within the study area. The results will support analyses for other resource studies including the Wetland, Special Status Plants, Invasive/Noxious Weeds, and the various wildlife resources studies.

11.13.8            Study Output

Study results will be presented to the Terrestrial Resources TWG in early spring of 2004. Ultimately, the results of the study will be incorporated into Exhibit E of the Licensee's application to FERC for a new license for the UARP. The final study output will likely include the issues addressed, objectives, study area, methods, results (i.e., narrative descriptions of vegetation mapping units and GIS-maps prepared at a minimum scale of 1:24000 that delineate each plant community in the study area), analysis, discussion, and conclusions.

11.13.9            Technical Working Group Endorsement

This study plan was approved by the Terrestrial TWG via emails and faxes from the following entities: USFS (03/19/04), USFWS (03/19/04), CDFG (03/15/04) and SMUD. There have been no comments received from any Participant that they could not "live with" the study plan.

The study plan was approved by the Plenary Group on April 7, 2004 without modification. There was no one present at the meeting who objected to the study plan going forward for implementation.

11.13.10          Literature Cited

SMUD (Sacramento Municipal Utility District). 2003. Iowa Hill Pumped Storage Development Project Initial Information Package, revision 1. Sacramento, CA.