

1.5 Wetlands Study Plan

1.5.1 Pertinent Issue Questions

The Wetlands Study addresses Terrestrial Resource Issue Questions:

12. Are there wetlands in the Project area created by aboveground leaking facilities? Are they Project-created?
16. Are drawdown zones on high elevation reservoirs managed correctly to retain and support wetland/riparian plants (i.e., can the upper reservoir riparian zones look more like Secret Lake and less like Aloha Lake?)
18. What are the beneficial and adverse effects on native plants and plant communities affected by leakage from project water conveyance systems (e.g., emphasis on adits)?
28. What are the Project-related impacts on existing wetlands?

1.5.2 Background

The purpose of this study is to identify areas where wetland communities are either being created or possibly enhanced by leakage from project water conveyance systems (in particular adits) as well as where there are existing, natural wetland communities. The vegetation mapping conducted in 2000 identified several potential wetland types, such as willow alliance, wet areas (includes seeps, shoreline, riverside and riparian) and wet meadow (includes the grass/sedge/ rush alliance).

1.5.3 Study Objectives

The objectives of the Wetlands Study are to:

- Identify wetlands that have been created by Project operations and facilities and their effects on native plants and plant communities; and
- Identify Project-related impacts to wetland resources
- Review the drawdown zones of the high elevation reservoirs, specifically the three storage reservoirs, and determine if there are opportunities to enhance wetland and riparian areas at these reservoirs.

1.5.4 Study Area and Sampling Locations

The Wetland Study Area corresponds to the study area defined for the Riparian and Vegetation Mapping study plans. Additional study areas will be included as deemed appropriate (e.g., the developed and dispersed recreation areas being identified by the Recreation TWG, other areas as determined by the fire and fuels management plan, and Project roads that would be identified through the Project Sources of Sediment Study in coordination with the Recreation and Aquatic TWGs).

1.5.5 Information Needed From Other Studies

Information is available from the existing vegetation mapping that was conducted in 2000 and the recent aerial photography obtained by SMUD. Information will also be used from the Riparian and Vegetation Mapping studies, Operations Model, and other information gained from the Aquatics TWG.

Information will be obtained relative to historic conditions. Potential sources of this information could include historical photos, archived files, newspaper records, published scientific records, and records from the Forest Service and Licensee.

1.5.6 Study Methods And Schedule

Information will be used from the 2000 mapping study, the information presented in the UARP Initial Information Package (IIP) (SMUD 2001), and the 2002 Vegetation Mapping Study to identify wetland areas. The identification of wetlands will be based on the dominance of wetland plant species and will not be a formal delineation of wetlands used by the U.S. Army Corps of Engineers. Additional surveys may be required for wetlands created by

leakage as these areas were not specifically identified in the 2000 mapping study. Interviews will be conducted with UARP operations staff stationed at SMUD's Fresh Pond office to help in determining the location of any wetlands that may have been created by leakage from UARP facilities. Field surveys for wetland mapping (e.g., at adits) will be done concurrent with the Vegetation Mapping Study in the spring and summer of 2002.

Aerial photographs used in the Riparian and Vegetation Mapping studies will be used to identify potential wetland areas. Wetland areas include wet meadows, seeps, and emergent wetlands. Areas mapped as wetlands will be defined by the presence of wetland vegetation and field verified. These vegetation types have been defined in the UARP IIP (SMUD 2001). Soils and hydrology are also a factor in determining wetlands and these parameters will also be reviewed in defining the limits of the wetland areas. Potential for existing and future encroachment in these areas will be evaluated.

1.5.7 Analysis

The locations of all wetland areas observed will be recorded and these data used to prepare Geographic Information System maps. This information will be analyzed to determine whether Project operations have any beneficial or adverse affects on the created and existing wetlands. For example, the relationship between reservoir management (e.g., drawdowns) and extent/quality of emergent wetland and meadow wetland habitat will be analyzed to determine potential for enhancement of wetland conditions. This analysis will consider the influence of non-project factors (e.g., geomorphology) in limiting wetland distribution.

1.5.8 Study Output

Study results will be presented to the Terrestrial Resources Technical Working Group (TWG) and the Plenary Group toward the end of 2002. However, the ultimate study output will be a written report that includes the issues addressed, objectives, study area, methods, results, analysis, discussion, and conclusions. The report will be prepared in a format that will allow the information to be inserted directly into the Licensee-prepared Draft Environmental Assessment that will be submitted to FERC with the Licensee's application for a new license.

1.5.9 Preliminary Estimated Study Costs

A preliminary cost estimate was not included in the version of this study plan approved by the Plenary Group.

1.5.10 TWG Endorsement

The Terrestrial TWG approved this plan, as amended, on March 22, 2002. The participants at the meeting who said they could "live with" this study plan were USFS, CDFG, CNPS, and SMUD. None of the participants at the meeting said they could not "live with" this study plan. The Plenary Group approved this study plan on May 3, 2002. The participants at the meeting who said they could "live with" this study plan were Taxpayers of El Dorado County, Friends of El Dorado County, USFS, Camp Lotus American River Recreation Association, PG&E, SMUD, SWRCB, County of El County, El Dorado Citizens for Water, NPS, CalSPA, PCWA, FOR, City of Sacramento, CDFG, California Outdoors and USBLM. None of the participants at the meeting said they could not "live with" this study plan.

1.5.11 Literature Cited

SMUD (Sacramento Municipal Utility District). 2001. Initial Information Package, Upper American River Project, FERC Project No. 2101. Submitted July 2001.