5.7 Special Status Plants Study Plan

5.7.1 Pertinent Issue Questions

The Special Status Plant Study addresses Terrestrial Resource Issue Questions:

6. What special status plants are affected by Project operations, maintenance and recreation activities?
27. What is the distribution of special status plants affected by Project operations, maintenance and recreation activities?

5.7.2 Background

A number of special status plants are known to occur within the Project area (SMUD 2001). For the purpose of this study, special status plant species are defined as those plant species that are: 1) listed, proposed or under review as rare, threatened or endangered under the Federal Endangered Species Act (ESA) or California ESA; 2) considered rare or endangered by the California Native Plant Society (CNPS); or 3) designated as sensitive species or species of concern by the U.S. Department of Agriculture, Forest Service (USFS). Mapping of these populations will allow for a more complete analysis of how to protect these populations from any adverse impacts from Project operations and activities. FERC regulations require that an applicant for a new license address continuing Project impacts, including to ESA listed species, and provide mitigation for these impacts. This study will assist in meeting FERC regulations as well as ESA and USFS guidelines.

5.7.3 Study Objectives

The objectives of the Special Status Plants Study are to: 1) determine if the Project affects special status plant species and 2) determine how identified Project-related impacts can be mitigated through the protection and restoration of special status plant species habitat within environmental, economic, and engineering constraints.

5.7.4 Study Area and Sampling Locations

The study area will include: 1) all areas within the FERC Project Boundary; and 2) water fluctuation zones in Project reaches described in the Initial Information Package (IIP) (SMUD 2001). It is understood that additional study areas (e.g. the developed and dispersed recreation areas being identified by the Recreation TWG and the Project roads being identified through the Project Sources of Sediment Study in coordination with the Recreation and Aquatic TWGs) will be added to this study area where appropriate. However, field surveys will be restricted to areas where the Licensee has legal access (e.g., ownership/easement rights, public lands) and within reasonable safety limits. Some of this area was surveyed for SMUD by KEA Environmental, Inc. as reported in *Botanical Resources Inventory Upper American River Project*. Areas that were not surveyed by KEA will be surveyed in the 2002 flowering season beginning in April or May 2002. The results of the Vegetation Mapping Study will also be used to determine where suitable habitat for special status plant species within the Study Area may be present. Note: river reaches will be sampled based on potential habitat, accessibility and potential for disturbance.

5.7.5 Information Needed From Other Studies

The only information required from other studies is the vegetation map that will be generated as part of the Vegetation Mapping Study. Information from previous special status plant surveys conducted in the Study Area will be used to supplement the results of this effort.

5.7.6 Study Methods and Schedule

As discussed above, SMUD's IIP includes a comprehensive list of special status plant species that have some likelihood of occurring in the study area. In addition, much of the area within the Project boundary has already been surveyed and the results reported in the report entitled *Botanical Resources Inventory Upper American River Project*. Areas that were not included in this study will be surveyed in the 2002 flowering season beginning in April or May 2002.

Survey protocol will follow CNPS "Guidelines for Assessing Effects of Proposed Developments on Rare Plants and Plant Communities." The guidelines require that botanical surveys that are conducted to determine the environmental effects of a proposed development project should be directed to all rare, threatened, and endangered plants and rare plant communities and will be floristic in nature; that they be conducted during the time of year when these species are identifiable (usually during the flowering stage of the species); that the field searches be conducted in a manner that will locate any rare or endangered species that may be present; and that the field investigator be familiar with the flora of the region (CNPS 2001). For the species within the UARP study area, the flowering period for all of the plants that could potentially occur within the study area is primarily from May to June, with some in July, depending on elevation and climatic conditions.

5.7.7 Analysis

The locations of all special status plant species observed will be recorded and plotted on Geographic Information System (GIS) maps. Photographs showing diagnostic floral characteristics, growth forms, and habitat characteristics will be taken of any special status plant species observed within the Study Area. Voucher specimens for verification will be collected in accordance with government collecting regulations.

5.7.8 Study Output

Study results will be presented to the Terrestrial Resources Technical Working Group (TWG) and 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, conclusions and, where appropriate, a discussion of a range of options to protect and/or enhance sensitive plant communities including the feasibility of each. The reports will also include: 1) narrative descriptions of special status plant species occurrence, current status and threats, phenology, and habitat requirements; and 2) GIS-generated maps that identify the location of the special status plants within the study area. The report will be prepared in a format that allows 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.

5.7.9 Preliminary Estimated Study Cost

SMUD's consultant estimates that this study will cost $60,400 ± 20 percent.

5.7.10 Plenary Group Endorsement

The Plenary Group approved this study plan on February 6, 2002. The participants at the meeting who said they could "live with" the study plan were California Department of Fish and Game, California Native Plant Society, California Outdoors, California Sportsfishing Protection Alliance, El Dorado County, El Dorado County Citizens for Water, Friends of El Dorado County, National Parks Service, Placer County Water Agency, Sacramento Municipal Utility District, State Water Resources Control Board, Taxpayers or El Dorado County, U.S Bureau of Land Management and Eldorado National Forest. None of the participants at the meeting said they could not "live with" the study plan though PG&E abstained since this study plan does not apply to the Chili Bar Project.

5.7.11 Literature Cited

CNPS (California Native Plant Society). 2001. California Native Plant Society's inventory of rare and endangered plants of California. California Native Plant Society, Special Publication #1, Sixth Edition.

Sacramento Municipal Utility District. 2001. Initial Information Package for Relicensing of the Upper American River Project (FERC Project No. 2101). Sacramento, CA.