

## **5.5 Invasive/Noxious Weeds Study Plan**

### **5.5.1 Pertinent Issue Questions**

The invasive/noxious weeds study addresses Terrestrial Resource Issue Questions:

5. Where and to what extent do Project operations contribute to the establishment, maintenance and expansion of invasive/noxious weeds within the Project area?
26. What is the distribution of invasive/noxious weeds within the Project area?

### **5.5.2 Background**

In general, vehicles and public access can contribute to the spread of invasive weeds. In addition, construction and maintenance activities can disturb native vegetation and increase the potential for colonization by invasive weeds. Maintenance activities under power lines where vegetation is cleared can also open up areas for colonization by invasive weeds. This study will determine to what extent project operations such as the use of project roads and the creation of disturbed areas that are open to colonization by weeds (e.g., clearing of transmission line rights-of-way) contribute to the distribution and establishment of invasive (noxious) weeds. A preliminary vegetation map has been prepared for the project area that also shows the locations of noxious weeds that were identified by the Eldorado National Forest (ENF) as being of concern (KEA Environmental, Inc. 2000). A discussion of invasive species is also included in the Initial Information Package (IIP) submitted in July 2001 (SMUD 2001). Nine populations of four noxious weed species were found and documented during the 2000 botanical inventory. However, this study did not cover stream reaches and transmission line corridors in detail and the IIP did not provide a discussion of how project operations contribute to the establishment, maintenance, and expansion of invasive weed populations within the study area.

### **5.5.3 Study Objectives**

The objectives of the Invasive (Noxious) Weeds Study are to: 1) determine if and where the project contributes to the spread of invasive (noxious) weeds; and 2) determine how identified project-related impacts can be mitigated within environmental, economic, and engineering constraints.

### **5.5.4 Study Area and Sampling Locations**

The Invasive (Noxious) Weeds Study Area includes: 1) all areas within FERC Project boundary, and 2) water fluctuation zones within river reaches below Project facilities. 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. Field surveys will be restricted to those areas where the Licensee has legal access (e.g., ownership/easement rights, public lands) and where access is within reasonable safety limits.

### **5.5.5 Information Needed From Other Studies**

Information is available from the vegetation mapping that was conducted in 2000, recent aerial photography obtained by SMUD, and additional mapping done by the ENF. Information obtained from the vegetation mapping for 2002 will be included in the final report for invasive weeds. A list of targeted invasive weed species will be established based on ENF and other agency input.

### **5.5.6 Study Methods And Schedule**

Populations of invasive weeds will be mapped concurrently with field surveys to be conducted for the Vegetation Mapping and Special Status Plant Species studies during the spring and summer of 2002. For the purpose of this study, invasive weed species are defined as those plant species currently listed as noxious weeds by the ENF, and El Dorado and Sacramento counties. Survey protocol will follow California Native Plant Society (CNPS) "Guidelines for Assessing Effects of Proposed Developments on Rare Plants and Plant Communities." Identified populations

will be recorded with Global Positioning System (GPS) instruments as practicable. These data will be used to construct Geographic Information System (GIS) maps of observed invasive/non-native plant infestations.

#### 5.5.7 Analysis

Identified populations of noxious weeds will be evaluated with respect to likely sources of introductions (e.g., vehicles, recreationists) and opportunities for control or eradication. Protocols will follow the Noxious Weeds Management Strategy implemented for the *Sierra Nevada Forest Plan Amendment, Final Environmental Impact Statement* (USDA 2001). This requires that a project-level noxious weed risk assessment be conducted. The weed risk assessment serves as the primary mechanism for prescribing weed prevention measures. There are 3 priorities for weed management: Priority 1 is to prevent the introduction of new invaders; Priority 2 is to conduct early treatment of new infestations; and Priority 3 is to contain and control established infestations. The invasive/noxious weed study will use the management strategies and weed control guidelines developed by the Forest Service for the Sierra Nevada region.

#### 5.5.8 Study Output

Study results will be presented to the Terrestrial Resources Technical Working Group (TWG) and the Plenary Group at 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. Where appropriate, the discussion will explore the range of options available for the control or eradication of these infestations, including the feasibility of each option. 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.

#### 5.5.9 Preliminary Estimated Study Cost

SMUD's consultant estimates that this study will cost \$44,000 ± 20 percent.

#### 5.5.10 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 of 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.

#### 5.5.11 Literature Cited

KEA Environmental, Inc. 2000. Botanical resources inventory Upper American River Project, Sacramento Municipal Utilities District, Pacific Ranger District, Eldorado National Forest. Prepared for Sacramento Municipal Utilities District. Submitted to Tetra Tech, Inc., submitted by KEA Environmental, Inc. October 2000.

SMUD (Sacramento Municipal Utility District). 2001. Initial information package for relicensing of the Upper American River Project (FERC Project No. 2101). Sacramento, CA.

USDA (U.S. Department of Agriculture, Forest Service). 2001. Sierra Nevada forest plan amendment, final environmental impact statement, record of decision. USDA Forest Service, Pacific Southwest Region.