

ESA-LISTED PLANTS

(May 12, 2008)

1.0 Project Nexus

Continued operation and maintenance (O&M) of the Yuba-Bear Hydroelectric Project, Drum-Spaulding Project and Rollins Transmission Line Project (projects) and recreation may have an affect on plants listed under the federal Endangered Species Act (ESA) as endangered (FE) or threatened (FT). These effects may be direct (i.e., result of ground disturbing activities such as mechanical or chemical clearing of vegetation or trampling of plants), indirect (i.e., due to activities such as soil compaction which limits plant growth) or cumulative (i.e., caused by a project activity in association with a non-project activity such as loss of habitat due to the introduction of invasive plants from a non-Project vector). This study focuses on these potential project effects to ESA-listed plants.

Tables 1 and 2 located at the end of this study proposal provides for each of the target plant species: 1) status; 2) flowering period; 3) elevation range; 4) habitat requirements; and 5) recorded occurrence in the Project Vicinity.¹

Table 1. Target ESA-listed species for the Drum-Spaulding Project.

Scientific Name; Common Name	Status ¹	Flowering Period	Elevation Range (ft)	Habitat Requirements	Occurrence in Project Vicinity ²
<i>Calystegia stebbinsii</i> Stebbins' morning-glory	FE, CE	Apr-Jul	607-2394	Chaparral, cismontane woodland	Shingle Springs, Coloma, Pilot Hill, Grass Valley, Lake Combie
<i>Ceanothus roderickii</i> Pine Hill ceanothus	FE	Apr-Jun	853-2066	Chaparral, cismontane woodland	Shingle Springs, Clarksville, Pilot Hill Two records within the project vicinity listed on the CNDDDB
<i>Fremontodendron decumbens</i> Pine Hill flannelbush	FE, CE	Apr-Jun	1394-2493	Chaparral, cismontane woodland	Shingle Springs, Clarksville, Grass Valley
<i>Galium californicum</i> ssp. <i>sierrae</i> El Dorado bedstraw	FE	May-Jun	328-1919	Chaparral, cismontane woodland, lower montane coniferous forest	Shingle Springs, Clarksville, Pilot Hill Four records within the project vicinity listed on the CNDDDB.
<i>Orcuttia viscida</i> Sacramento Orcutt grass	FE	Apr-Jul	98-328	Vernal pools	Folsom
<i>Pseudobahia bahifolia</i> Hartweg's golden sunburst	FE	Mar-Apr	49-492	Cismontane woodland, valley and foothill grassland	Clarksville

¹ The Project Vicinity is defined as the area around the Project generally in the order of a county or Tahoe National Forest in size.

Table 1. (continued)

Scientific Name; Common Name	Status ¹	Flowering Period	Elevation Range (ft)	Habitat Requirements	Occurrence in Project Vicinity ²
<i>Senecio layneae</i> Layne's ragwort	FT	Apr-Aug	656-3280	Chaparral, cismontane woodland	Shingle Springs, Clarksville, Coloma, Pilot Hill Five records within the project vicinity listed on the CNDDDB.

¹ Special-status:

FE = Endangered on the Federal ESA
 FT = Threatened on the Federal ESA

² Occurrence in Project Vicinity: Results based on CNPS Nine-quad search.

Table 2. Target ESA-listed species for the Yuba-Bear Hydroelectric Project and Rollins Transmission Line Project.

Scientific Name; Common Name	Status ¹	Flowering Period	Elevation Range (ft)	Habitat Requirements	Occurrence in Project Vicinity ²
<i>Calystegia stebbinsii</i> Stebbins' morning- glory	FE, CE	Apr-Jul	607-2394	Chaparral, cismontane woodland	Shingle Springs, Coloma, Pilot Hill, Grass Valley, Lake Combie
<i>Fremontodendron decumbens</i> Pine Hill flannelbush	FE, CE	Apr-Jun	1394-2493	Chaparral, cismontane woodland	Shingle Springs, Clarksville, Grass Valley

¹ Special-status:

FE = Endangered on the Federal ESA
 FT = Threatened on the Federal ESA

² Occurrence in Project Vicinity: Results based on CNPS Nine-quad search.

Stebbin's morning-glory and Pine Hill flannelbush are also listed as endangered under the California Endangered Species Act (CESA).

2.0 Resource Agency Management Goals

Licensees have conferred with resource agencies that participated in development of this study proposal, and those resource agencies have not yet identified specific management goals relevant to this study proposal.

3.0 Potential License Conditions

The study results may be used in the development of protection, mitigation, and enhancement (PM&E) measures relating to the effects of the projects O&M activities have on ESA-listed plants, and may include

- Avoid locations of populations of ESA-listed plants or, if avoidance is not possible, consult with appropriate agency to develop site/work-specific PM&E measures.

- If a plant becomes ESA-listed after the new license is issued and it has a possibility of occurring in the Project Area and being affected by the project, Licensees develop and implement a study similar to this one to assess potential effects.

4.0 Study Goals and Objectives

The goal of this study is to determine what existing protected plants occur and if continued Project O&M and recreation will have an effect on ESA-listed plants. The criteria that will be used to determine a project effect is if both of the following are found:

- an ESA-listed plant is found to occur within the FERC Project Boundary and
- a specific Project activity, including all project O&M and recreational use within the FERC Project Boundaries has a reasonable possibility of having an effect on an ESA plant species that is found.

The objective of this study is to gather information in support of this, and additionally, to perform the analysis.

5.0 Existing Information and Need for Additional Information

Existing and relevant information regarding known and potentially occurring ESA-listed plants in the vicinity of the projects is available from the California Natural Diversity Database (CNDDDB), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants database (CNPS 2007), United States Department of Agriculture, Forest Service and United States Department of Interior, Bureau of Land Management (BLM) Geographic Information System (GIS) IS databases. Forest Service and BLM data also include various biological evaluations and plant survey reports addressing ESA-listed plants. This information is useful in developing a target list of ESA-listed plants and identifying their flowering periods and habitat. Some of these reports provide site specific information on ESA-listed plant occurrences. However, only a small portion of the study area has been surveyed for ESA-listed plants; in addition some of the surveys are not current. Information needed to address the study goal is the specific location of ESA-listed plants in relation to project facilities, normal project O&M activities, project-related recreation, and any other project-related activities that might affect these ESA-listed plant populations.

6.0 Study Methods and Analysis

6.1 Study Area

The study area for this study is the same as that described in Section 6.1 of the Special-Status Plants Study Proposal.

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. If, at a later time, Licensees propose Project activities that are outside of the study area that may affect sensitive plants, the study area will be expanded, if necessary, to include these areas and appropriate studies undertaken.

6.2 General Concepts

The following general concepts apply to the study:

- Personal safety is an important consideration of each fieldwork team. If Licensees determines the information cannot be collected in a safe manner, Licensees will notify FERC and Relicensing Participants as soon as possible via email to discuss alternative approaches to perform the study.
- Licensees shall make a good faith effort to obtain permission to access private property where needed well in advance of performance of the study. If access is not granted or river access is not feasible or safe, Licensees will notify FERC and Relicensing Participants as soon as possible via email to determine if Relicensing Participants can assist in gaining access or to discuss alternative approaches to perform the study.
- The schedule for each proposed study is reasonably flexible to accommodate unforeseen problems that may affect the schedule. If a schedule changes, Licensee will notify FERC and Relicensing Participants as soon as possible via email to discuss alternative approaches to perform the study.
- Field crews may make minor modifications to the study proposal in the field to accommodate actual field conditions and unforeseen problems. When modifications are made, Licensee's field crew will follow the protocols in this study proposal. If minor modifications are made, Licensee will provide a detailed description of the conditions that led to the decision to modify the study to FERC and Relicensing Participants as soon as possible via email to discuss alternative approaches to perform the study.
- Licensees' performance of the study does not presume Licensees are responsible in whole or in part for resource management measures that may arise from that study.
- The estimated level of effort and cost is not a firm commitment by Licensees to expend all the funds. If the study costs more, Licensees are committed to completing the study. If the study costs less, Licensees are not committed to expending the remaining funds on other Relicensing studies or resource management measures.

6.3 Study Methods

The study methods for the study will follow those described in Section 6.3 of the Special-Status Plants Study Proposal. In addition, Licensee's consultant will obtain all permits and approvals, if any, required to perform the study.

6.4 Study Proposal Consultation

The study proposal does not require study-specific consultation. However, since Licensees, as FERC's non-federal representative, intend to undertake this study as part of their informal consultation under Section 7 of the ESA, Licensees plan to consult with USFWS prior to, during and after study implementation.

Licensees will file with FERC and post on its Relicensing Website periodic reports as required by the FERC in the Study Plan Determination.

Licensees will coordinate with FERC and other Relicensing Participants as described in Section 6.2.

6.5 Schedule

The schedule for this study will follow the schedule described in Section 6.5 of the Special-Status Plants Study Proposal.

6.6 Consistency of Methodology with Generally Accepted Scientific Practices

This study is consistent with the goals, objectives, and methods outlined for most recent FERC hydroelectric relicensing efforts in California, and uses standard botanical survey methods as defined by the CDFG.

7.0 Products

The products for the study will be the same as those described in Section 7.0 of the Special-Status Plants Study Proposal.

In addition, as FERC's non-federal representative for informal consultation under Section 7 of the ESA, Licensees will include the results of the study and other appropriate information in a draft Biological Assessment that will be prepared in consultation with USFWS and included in the License Applications as appropriate.

8.0 Level of Effort and Cost

The preliminary cost estimate for the study in 2008 dollars is as follows:

Planning (Steps 1 & 2)	\$
Field Work (3).....	\$
Office Works (4, 5 & 6).....	\$
Study Proposal Consultation.....	\$
Report Preparation (7).....	\$
TOTAL	\$

9.0 References Cited

California Department of Fish and Game (CDFG). 2000. Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities. Online document: <http://www.dfg.ca.gov/biogeodata/cnddb/plants.asp>.

Hickman, J.C., editor. 1993. The Jepson Manual, 3rd Edition. University of California Press, Berkeley, California.