

**SACRAMENTO MUNICIPAL UTILITY DISTRICT'S  
UPPER AMERICAN RIVER PROJECT  
(FERC NO. 2101)**

**SUPPLEMENTAL  
PRELIMINARY DRAFT  
ENVIRONMENTAL ASSESSMENT**

**SECTION 5.3.4 – BOTANICAL RESOURCES**

Sacramento Municipal Utility District  
Sacramento, California

**JULY 2006**



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#### 5.3.4 Environmental Effects of the Agency Alternative on Botanical Resources

The Agency Alternative includes the following measures pertaining to botanical resources:

- “Pulse Flows” (Agency Alternative, p. 28-30);
- “Riparian Vegetation Monitoring” (Agency Alternative, p. 36);
- “Wildlife and Plant Protection Measures” (Biological Evaluations for New as Well as Ongoing Construction and O&M) (Agency Alternative, p. 49);
- “Wildlife and Plant Protection Measures” (Maintenance in the Pine Hill Rare Plant Preserve) (Agency Alternative, p. 49);
- “Noxious Weeds” (Agency Alternative, p. 49);
- “Annual Review of Ecological Conditions” (Agency Alternative, p. 51);
- “Vegetation Management Plan” (Agency Alternative, p. 105);
- “Recreation Streamflows” (Agency Alternative, p. 89-96);
- “Specific Recreation Measures” (Agency Alternative, p. 120 to 123).

The Agency Alternative’s cumulative effects are evaluated in Chapter 7. This SPDEA does not evaluate the environmental effects of Agency Alternative measures specific to the botanical resources of the Chili Bar Project (Agency Alternative, Appendix B).

To determine the environmental effects of the Agency Alternative on botanical resources, SMUD compared the Agency Alternative’s effects on botanical resources within the FERC Project Boundary against baseline conditions and the Proposed Action. We considered the Agency Alternative to have a significant effect if it: 1) results in significant losses of important botanical resources; or 2) contributes to the spread of noxious and invasive weeds.

However, most of the pertinent Agency Alternative measures include insufficient detail to conclude whether the Agency Alternative results in beneficial or adverse effects, if any, compared to the baseline conditions and the Proposed Action. In comparison, the Proposed Action provides concrete and specific commitments that adequately protect botanical resources.

In regard to those Agency Alternative measures that do include sufficient detail to evaluate their effects, site-specific analysis indicates the measures are unwarranted given baseline conditions, or, as in the case of recreation streamflows, may adversely affect botanical resources.

##### 5.3.4.1 Recommended Measure – Pulse Flows

#### Pulse Flows Are Unnecessary for the Proper Functioning of the Riparian Community

The Agency Alternative requires specified annual pulse flow releases from Loon Lake Dam (p. 28). According to the Agency Alternative Rationale, page 42, “Pulse flows in this stretch will help reduce riparian vegetation that is encroaching in the channel.”

These statements mischaracterize existing riparian vegetation conditions in the Loon Lake Dam Reach. “The riparian vegetation in this reach appears to meet vegetative criteria for PFC [Proper Functioning Condition]” (DTA, 2004t, p. 120). Riparian communities along the stream reaches correspond to those found on similar sized streams at similar elevations elsewhere on the western slope of the Sierra Nevada, and typically include diverse age ranges of woody vegetation. Riparian encroachment is rare and localized (DTA 2004t). Of nine transects at three study sites in this reach, only one transect suggests the potential for encroachment by woody riparian vegetation into the channel (site 2, transect 2). However, field observations at this site detected substantial evidence of recent flooding. Woody riparian vegetation also exhibited a diverse age structure, suggesting existing high flows cause frequent scour mortality of vegetation followed by subsequent recruitment (DTA, 2004t, p. 26, 28).

Moreover, no evidence suggests the required pulse flows will reduce riparian encroachment into the Loon Lake Dam Reach in the few places it does occur. The pulse flows were designed to provide trout habitat and mimic the natural hydrograph, not to remove riparian vegetation from the channel (Agency Alternative, p. 35–38).

We conclude the Agency Alternative pulse flows will provide no benefit compared with baseline conditions or the Proposed Action. Under both baseline conditions and the Proposed Action, existing high flows scour vegetation throughout the Loon Lake Dam Reach, and vegetative conditions as a whole are functioning properly.

#### 5.3.4.2 Recommended Measure—Riparian Vegetation Monitoring

##### Riparian Vegetation Monitoring Is Not Warranted Given Data Indicate Riparian Vegetation Is in Good Proper Functioning Condition

The Agency Alternative requires monitoring riparian vegetation every five years to “document species composition, percent cover, and quantification of length and width of riparian community” (p. 36). The Agency Alternative Rationale provides no rationale for this specific measure (p. 81–85) and no related adaptive management measures are proposed.

As confirmed by the Terrestrial Resources TWG, sufficient information from the relicensing studies already exists to adequately characterize the health of the riparian community and the effect of the UARP on riparian vegetation (DTA, 2004t, p. 3, 6). In addition, the studies indicate riparian vegetation throughout the UARP stream reaches meets the vegetative criteria for PFC (DTA, 2004t, p. 120–21) and the plant communities around the reservoirs consist predominantly of upland, not riparian, vegetation (DTA, 2004t, p. 79). Given that the riparian vegetation is in proper functioning condition under baseline conditions, and that increases in stream flows under both the Proposed Action and the Agency Alternative will only improve conditions, monitoring will provide no environmental benefit and is unwarranted.

### 5.3.4.3 Recommended Measure—Wildlife and Plant Protection Measures (Biological Evaluations for New as Well as Ongoing Construction and O&M)

#### Biological Evaluations for New or Ongoing Construction and O&M Are Unnecessary and Lack the Detail Necessary to Demonstrate the Agency Alternative Reduces Effects on Botanical Resources

The Agency Alternative requires a biological evaluation of the potential effects of any new construction or maintenance authorized by the new license on National Forest System lands if the new construction or maintenance could affect a USFS sensitive plant or its habitat. In consultation with FERC, the USFS may require mitigation measures (Agency Alternative, p. 49). The Agency Alternative also requires preparation of a Biological Assessment (BA) prior to SMUD's commencing any UARP construction, operation, or maintenance activities that may affect an ESA listed species (or species proposed for listing) or its critical habitat. The BA must be reviewed by the USFS prior to submittal to USFWS or NMFS for consultation or conference (Agency Alternative, p. 49).

The Agency Alternative also requires notifying the USFS if a USFS sensitive plant or wildlife species is detected prior to or during ongoing construction, operations, or maintenance. "USFS sensitive plant or wildlife species" is a category including but not limited to species listed under the ESA. If the USFS determines UARP-related activities are adversely affecting the sensitive species, SMUD must develop and implement appropriate protection measures in consultation with the USFS and the USFWS (Agency Alternative, p. 49).

The results of an evaluation/assessment could support one or more undefined actions that might affect botanical resources. However, the Agency Alternative's lack of detail precludes any determination of the likelihood such effects might occur, and if they do occur, whether they will be beneficial or adverse.

By comparison, the Proposed Action provides specific commitments that provide adequate protection for botanical resources. Both the PDEA and the Licensee-prepared Biological Assessment (Appendix D) address effects of proposed new construction and continuing O&M. SMUD will implement an Annual Employee Environmental Awareness Program to ensure compliance with area restrictions and with procedures for protecting plants in sensitive areas (License Application, PDEA, p. 3-15 to 3-16). In addition, SMUD and ENF will conduct an annual review of species that are listed or formally proposed for listing under the ESA, CESA, and that are listed by the ENF as a USFS Sensitive Species or a Watch List species. SMUD will prepare a study plan for each of these species that has a reasonable potential to occur within the UARP boundary. The Proposed Action also requires development of a Vegetation Management Plan to specifically address special-status plants within the UARP boundary. Thus, unlike the Agency Alternative measure, which is too vague to support a determination regarding its effect on botanical resources, the Proposed Action provides beneficial effects compared to baseline conditions by including specific commitments that provide adequate protection for these species.

This measure is also unnecessary measure because it concerns activities “authorized by the license” (Agency Alternative, p. 49). These effects will be fully analyzed in FERC’s NEPA document and addressed, as appropriate, in ESA consultation, before FERC issues the license. This measure implies that after FERC completes its NEPA review and any ESA consultation, SMUD would be required to begin yet another cycle of environmental analysis. Such additional environmental review is excessive.

It should be noted that FERC as the lead federal agency has ultimate responsibility for compliance with Section 7 consultation requirements of the ESA, including preparation of a Biological Assessment. SMUD, as FERC’s designated non-federal representative, may prepare a draft Biological Assessment for submittal to FERC but responsibility for distribution of the assessment resides with FERC.

#### 5.3.4.4 Recommended Plant Protection Measures (Maintenance Activities in the Pine Hill Rare Plant Preserve)

##### The Agency Alternative’s Consultation Process Is Unnecessary and Lacks the Detail Necessary to Demonstrate the Agency Alternative Reduces the Effects on Botanical Resources

Before undertaking maintenance under transmission lines within the Pine Hill Rare Plant Preserve, the Agency Alternative requires SMUD to consult with BLM, USFWS, and CDFG to “develop and implement appropriate protection measures.” (Agency Alternative, p. 49). This measure lacks sufficient detail to determine whether it has any effect on botanical resources, and if it does have an effect, whether that effect is beneficial or adverse.

By comparison, the Proposed Action provides specific commitments to protect botanical resources within the greater Pine Hill area (including but not limited to the Pine Hill Rare Plant Preserve). The Proposed Action requires SMUD to undertake PM&E measures including a vegetation management plan, an invasive weeds management plan, annual employee awareness training, an annual review of special-status plant lists (with preparation of study plans as necessary), and implementation of the existing Pine Hill cooperative management agreement (License Application, PDEA, p. 5-236, 5-291). These measures will adequately protect botanical resources throughout the Pine Hill Rare Plant Preserve and beyond. Thus, unlike the Agency Alternative consultation measure, which is too vague to support a determination regarding its effect on botanical resources, the Proposed Action provides specific commitments that provide a beneficial effect compared to baseline conditions by including adequate protection for these species.

#### 5.3.4.5 Recommended Measure—Noxious Weed Management Plan

##### The Agency Alternative’s Noxious Weed Management Plan May Result in an Environmental Benefit Compared to Baseline Conditions, but Not Compared with the Proposed Action

The Agency Alternative requires SMUD, within six months of license issuance, to file with FERC a USFS-approved plan to prevent and control “Project-related” noxious weeds. The

Proposed Action requires SMUD to develop and implement an Invasive Weeds Management Plan to limit the spread of noxious and invasive weeds (License Application, PDEA, p. 5-238 to 5-239). The two plans include similar management goals and methods and will therefore yield similar benefits. Thus, although the Agency Alternative's measure may result in an environmental benefit compared to the baseline condition, it will not result in any beneficial effect compared with the Proposed Action.

#### 5.3.4.6 Recommended Measure—Annual Review of Ecological Conditions

##### The Annual Review of Ecological Conditions Is Unnecessary and Lacks the Detail Necessary to Demonstrate the Agency Alternative Reduces Effects on Botanical Resources

The Agency Alternative requires an annual review of ecological conditions. However, the measure lacks sufficient detail to determine whether it has any effect on botanical resources, and if it does have an effect, whether that effect is beneficial or adverse. For example, the measure states that the consultation is “to review and discuss the results of implementing these conditions, as well as to discuss other issues related to preserving and protecting ecological values affected by the Project”(Agency Alternative, p. 51). The measure provides no further detail regarding the substance of the consultation.

By comparison, the Proposed Action provides specific commitments to protect botanical resources. The Proposed Action includes comprehensive measures to protect botanical resources during the term of the new license (License Application, PDEA, p. 3-15 to 3-16). SMUD will implement an Annual Employee Environmental Awareness Program to ensure compliance with area restrictions and with procedures for protecting plants in sensitive areas. SMUD and ENF will conduct an annual review of species that are listed or formally proposed for listing under the ESA, CESA, or the California Native Plant Protection Act, as well as species listed by the ENF as USFS Sensitive Species or Watch List species. SMUD will prepare a study plan for each of these species having a reasonable potential to occur with the FERC Project Boundary. In addition, the Proposed Action requires development of a Vegetation Management Plan to specifically address special-status plants within the FERC Project Boundary. These Proposed Action measures adequately protect botanical resources. Thus, unlike the Agency Alternative annual review, which is too vague to support a determination regarding its effect on botanical resources, the Proposed Action provides a beneficial effect compared to baseline conditions by including specific commitments that provide adequate protection for these species.

#### 5.3.4.7 Recommended Measure—Vegetation Management Plan

##### The Vegetation Management Plan Is Unnecessary and Lacks the Detail Necessary to Demonstrate the Agency Alternative Reduces Effects on Botanical Resources

The Agency Alternative requires SMUD to file, within two years of license issuance or prior to any ground-disturbing activities, a USFS-approved vegetation management plan. At a minimum, the plan must: 1) identify and prioritize all inadequately vegetated areas to be re-vegetated or rehabilitated, along with an implementation schedule; 2) list the species to be re-vegetated along

with planting locations, methods, and densities, emphasizing the use of seed from certified weed-free and local sources; and 3) address “vegetation management under existing UARP-associated distribution and transmission lines on” ENF lands (Agency Alternative, p. 105).

The measure is unnecessary as it focuses primarily on re-vegetation or rehabilitation of “inadequately vegetated” areas, and the extensive relicensing studies identified no such areas.

In addition, the measure’s requirement to address “vegetation management under existing UARP-associated distribution and transmission lines” lacks sufficient detail to determine whether it has any effect on botanical resources, and if it does have an effect, whether that effect is beneficial or adverse.

By comparison, the Proposed Action provides specific commitments to protect botanical resources. The Proposed Action includes comprehensive measures to protect botanical resources during the term of the new license (License Application, PDEA, p. 3-15 to 3-16). SMUD will implement an Annual Employee Environmental Awareness Program to ensure compliance with area restrictions and with procedures for protecting plants in sensitive areas. SMUD and ENF will conduct an annual review of species that are listed or formally proposed for listing under the ESA, CESA, or the California Native Plant Protection Act, as well as species listed by the ENF as USFS Sensitive Species or Watch List species. SMUD will prepare a study plan for each of these species having a reasonable potential to occur within the FERC Project Boundary. In addition, the Proposed Action requires development of a Vegetation Management Plan to specifically address special-status plants within the FERC Project Boundary. These Proposed Action measures adequately protect botanical resources. Thus, unlike the Agency Alternative Vegetation Management Plan, which is too vague to support a determination regarding its effect on botanical resources, the Proposed Action provides a beneficial effect compared to baseline conditions by including specific commitments that provide adequate protection for these species.

#### 5.3.4.8 Recommended Measure—Recreation Streamflows

##### To the Extent Recreational Flows May Affect Vegetation, the Effect Will Be Adverse

Recreation flows will have an adverse effect, if any, on botanical resources compared to baseline conditions and to the Proposed Action. In particular, recreation flows at Silver Creek below Ice House mandate high flows much later in the riparian recruitment season after the typical window of riparian seed dispersal, germination, and establishment than occur under unimpaired conditions, baseline conditions, or the Proposed Action. The Agency Alternative requires release of up to 20 days of scouring flows of up to 600 cfs during the recruitment and establishment window for riparian vegetation. These flows are likely to interfere with the Agency Alternative’s stated goal of maintaining and restoring riparian resources. In areas of this reach affected by the 1992 Cleveland Fire, riparian vegetation represents the only vegetation present near the creek.

#### 5.3.4.9 Recommended Measure—Specific Recreation Measures

##### Development, Expansion, and Improvement of Recreation Facilities Will Have an Adverse Effect on Botanical Resources

The Agency Alternative requires development, expansion, improvement, relocation, or other modification of recreation facilities at over 60 sites. To the extent these measures increase or redistribute recreation use more than the Proposed Action, the Agency Alternative may result in a greater disturbance to botanical resources.

In contrast to the Agency Alternative's lack of specific measures to address the effect of increased recreation on botanical resources, the Proposed Action includes comprehensive measures to protect botanical resources during the term of the new license (License Application, PDEA, p. 3-15 to 3-16). SMUD will implement an Annual Employee Environmental Awareness Program to ensure compliance with area restrictions and with procedures for protecting plants in sensitive areas. SMUD and ENF will conduct an annual review of species that are listed or formally proposed for listing under the ESA, CESA, or the California Native Plant Protection Act, as well as species listed by the ENF as USFS Sensitive Species or Watch List species. SMUD will prepare a study plan for each of these species having a reasonable potential to occur with the FERC Project Boundary. In addition, the Proposed Action requires development of a Vegetation Management Plan to specifically address special-status plants within the FERC Project Boundary. These measures ensure the Proposed Action's effects on botanical resources will be less than significant. To the extent the Agency Alternative increases recreation traffic compared to the Proposed Action, the Agency Alternative may adversely affect special status plant habitats.