



# Upper American River Project Technical Working Group Relicensing Meeting

**Title:**

**Group:**

**Date:**

**Time:**

**Location:**

**Directions**

**Distribution List**

**Agenda**

**Attendees and Affiliations**

**Summary**

**Handouts, Attachments & Presentations**

## Directions to Forest Service Supervisor's Office

Take Highway 50 east to Placerville approximately 40 miles. Exit at Forni Road. Immediately after the exit take a left (east) at the stop sign; go about 300 yards and take a right (south) on Briw Road. Go about 200 yards. The FS Supervisor's Office is on the right.

**Sacramento Municipal Utility District (SMUD)  
Upper American River Project (UARP) Hydro Relicensing Project**

**Terrestrial Technical Work Group (TWG) Meeting**

**USFS Supervisor's Office – Large Conference Room  
100 Forni Road – Placerville, California**

**January 11, 2002  
9:00 a.m. – 1:30 p.m.**

**Proposed Agenda**

<b>Time</b>	<b>Topic</b>
<b>9:00 a.m.</b>	<b>Introductions</b>
<b>9:05</b>	<b>Review meeting agenda</b>
<b>9:10</b>	<b>Review previous meeting summary and notes</b>
<b>9:30</b>	<b>Review of botanical maps from 2000 surveys</b>
<b>10:00</b>	<b>Botanical draft study plan review and approval of 3 plans</b> <ul style="list-style-type: none"><li>• <b>vegetation mapping</b></li><li>• <b>special status plants</b></li><li>• <b>invasive/noxious weeds</b></li></ul> <b>(Includes discussion of study boundary)</b>
<b>1:00 p.m.</b>	<b>Discussion of forthcoming botanical plans</b>
<b>1:30</b>	<b>Next meeting agenda/dates</b>

**Breaks - as needed**

**UARP Hydro Relicensing ALP Process  
Terrestrial Technical Working Group**

*1/11/02*

(date/time)

*USFS SD Lake Con F Rd*

(location)

Name (please print)	Affiliation	E-mail	Initial if attending
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Steve Barber	Self	<a href="mailto:prdymplgrm@earthlink.net">prdymplgrm@earthlink.net</a>	
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**Terrestrial Resources Technical  
Working Group (TWG) Meeting Summary  
US Forest Service Supervisor's Office – Large Conference Room  
100 Forni Road Placerville, California  
January 11, 2002 – 9:00 a.m. to 4:00 p.m.**

**Summary**

The Terrestrial Resources Technical Working Group (TWG) met on January 11, 2002 at the US Forest Service Supervisor's Office located in Placerville, California. Participants included:

- Michael Meinz, California Department of Fish and Game (DFG)
- Lonn Maier, SMUD (facilitator)
- Jane Valerius, Consultant to DE&S
- Marie Davis, Placer County Water Agency (PCWA)
- Matt Johnson, USFS
- Sue Britting, California Native Plant Society (CNPS)
- Mike Taylor, USFS

The Terrestrial TWG met to accomplish the following tasks:

1. Review and finalize the meeting agenda
2. Review and finalize the previous meeting summary
3. Review and finalize three botanical study plans
4. Set next meeting dates and agenda

All items were completed, pending agreement on meeting dates.

**Discussion topics/questions**

The primary purpose of the meeting was to discuss and finalize three botanical studies:

- Vegetation Mapping Study Plan
- Special Status Plant Study Plan
- Invasive/Noxious Weeds Study Plan

**Draft Vegetation Mapping Study.** The Vegetation Mapping Study was presented. This plan is being developed to answer the following Issue Question: "What is the distribution of vegetation types in the Project area?"

Several comments were noted in the plan. A sentence was added in the study plan to reference the survey work performed by KEA, Inc. in 2000, which is identified in the Initial Information Package (IIP). This survey work was performed to provide a baseline of vegetative mapping information that will be supplemented by work done in 2002.

Vegetative mapping will include reviewing a number of existing information sources, including SMUD video, USFS Remote Sensing Lab data, existing aerial photos (1996

and 2000 from USDA), PG&E or Sierra Pacific Industries (SPI) photo catalogues, and new flyovers as determined necessary.

SMUD agreed that mapping should occur in the bypass reaches and to the extent possible that mapping could be done on inflowing streams to reservoirs within the Project boundary.

USFS noted that at least two species mosses are being considered for being placed on a "watch" status, and that they may need to be mapped. CNPS also noted that indirect effects needed to be considered in any impact assessment. A request was also made by CNPS that some of the available photographic information (e.g. video footage) be shown at a future TWG meeting.

**Draft Special Status Plants Study.** This plan is being developed to answer the Issue Questions 1) "What special status plants are affected by Project operations, maintenance and recreation activities?" and 2) "What is the distribution of special status plants affected by Project operations, maintenance and recreation activities?"

This study plan was approved by the TWG with minor wording clarifications.

**Draft Invasive/Noxious Weeds Study.** This plan is being developed to answer the Issue Questions 1) "Where and to what extent do Project operations contribute to the establishment, maintenance and expansion of invasive/noxious weeds within the Project area?" and 2) "What is the distribution of invasive/noxious weeds within the Project area?"

This study plan was approved by the TWG with minor wording clarifications.

**Next meeting agenda.** The next meeting will be held January 11, 2002. At that time, additional study plans will be provided for comment and revision, if needed. An agenda will be sent in advance of the meeting.

#### **Action Items**

- SMUD will provide viewing of video footage at an upcoming TWG Meeting.
- SMUD will contact Sierra Pacific Industries to determine what available information they may have to supplement the Vegetation Mapping Study.
- Stafford Lehr (CDFG) will forward the Mokelumne botanical study plans to Jane Valerius.
- Jane Valerius will contact the El Dorado County Noxious Weed Committee for information as to noxious weed eradication efforts presently underway.

#### **Completed Action Items (from previous list of Action Items)**

- ✓ SMUD/DE&S will contact the Mule Deer Foundation regarding information relative to the Mule Deer Study Plan.
- ✓ Mike Meinz (CDFG) will provide SMUD with information relative to helicopter flyovers and how SMUD might be able to coordinate efforts for vegetation mapping.

- ✓ SMUD/DE&S will contact Peter Epanchin at the US Fish and Wildlife Service regarding the TWG and participation.

### **Ongoing commitments**

- ⇒ SMUD will advise participants of any particular focus that an upcoming meeting may have, and develop an agenda for the meeting.
- ⇒ SMUD staff and consultants, in conjunction with agency requirements, will make an initial effort in developing the study plans for the TWG participants' review. The plans will be discussed and revised as needed in upcoming meetings.
- ⇒ SMUD will commit to sending out draft study plans at least five working days before meeting to discuss the plans.

### **Attachments with this Summary**

1. Vegetation Mapping Study Plan
2. Special Status Plant Study Plan
3. Invasive/Noxious Weeds Study Plan

### **Other Items**

Meeting dates and locations may also be found on SMUD's web page at <http://www.smud.org/relicensing/index.html>

These summaries are not intended to be a transcript of the meeting, but only to serve as a brief synopsis. Please provide any comments you may have regarding these summaries to [lmaier@smud.org](mailto:lmaier@smud.org).

**1.0 Botanical Resources**

**1.1 *DRAFT* Vegetation Mapping Study**

1.1.1 Pertinent Issue Questions

The vegetation mapping study element addresses Terrestrial Resource Issue Question:

25. "What is the distribution of vegetation types in the Project area?"

1.1.2 Background

Mapping the distribution of vegetation types within the UARP provides a baseline of information for a variety of studies required as part of the license application. An initial mapping effort was conducted in 2000 by KEA Environmental, Inc. (KEA 2000), and is summarized in the Initial Information Package (IIP) (SMUD 2001). This effort produced Geographic Information Systems (GIS) vegetation maps at a scale of 1:24000 that show the vegetation types, special status plants, and noxious weeds within the FERC Project Boundary. Riparian areas along the stream courses were not mapped, but areas around the reservoirs and Project facilities were mapped. SMUD also has recent aerial photography that will allow additional mapping. Additional information regarding vegetative alliances, special status plants and invasive-noxious weeds found may be found in the IIP. The 2000 inventory conducted by KEA, Inc. provides a full description of plant types found in the UARP in the inventory. That report is available from SMUD for review.

1.1.3 Study Objectives

The objective of the vegetation mapping study is to identify the vegetation types within the study area that were not mapped in the 2000 vegetation mapping exercise. The purpose of the vegetation type mapping is to map the area at a 1:24000 scale for the purposes of typing the study area. Detailed studies of special habitat types, specifically for riparian, wetland, and special aquatic types, are not part of this study effort. Separate study plans have been developed that cover the aforementioned types. Because these types are likely to be small in area, a mapping scale appropriate to the type will be used and is defined in those specific studies.

1.1.4 Study Area and Sampling Locations

The study area is intended to cover vegetation that may be affected by Project operation and maintenance activities (i.e., primarily within the FERC Project boundary including bypass reaches and tributaries streams within the Project boundary) and to generate habitat information needed to support various wildlife studies. These dual purposes allow the study area to be defined based on an elevation demarcation as follows:

- **Below approximately 3,000 feet elevation:** The study (mapping) area will be the area within approximately 500 feet of the FERC Project boundary surrounding all above-ground Project facilities/features and bypass reaches.
- **Above approximately 3,000 feet elevation:** The study (mapping) area will be the area within approximately 0.5-mile of the FERC Project boundary surrounding all above-ground Project facilities/features and bypass reaches.

1.1.5 Information Needed From Other Studies

No specific information is needed from other UARP relicensing studies. Information is available from the existing vegetation mapping that was conducted in 2000 and the Botanical Resources Inventory Upper American River Project studies conducted by KEA Environmental, Inc. also conducted in 2000. Mapping efforts for wildlife habitat assessment and for aquatic communities will also be incorporated into the overall vegetation mapping effort. Information from this study will support the studies for special status plants and animals, as well as for locating invasive weeds and riparian areas.

#### 1.1.6 Study Methods and Schedule

The 2000 vegetation mapping effort will be reviewed to identify any areas within the study area not mapped in 2000. Then, any recent aerial photography of the area or additional mapping done by the Eldorado National Forest (ENF), as well as information on special status plant populations from the California Natural Diversity Data Base (CNDDDB) will be reviewed. Existing aerial photography, where available, will be used for the vegetation mapping in 2002. Portions of the Study Area not covered by existing photography will be evaluated to determine if new aerial photos are required to complete the mapping effort; as necessary, this supplemental photography will be taken in spring 2002.

Vegetation types will be mapped at a 1:24000 scale consistent with the 2000 mapping effort. A separate study plan will address riparian and wetland areas using a more detailed scale as discussed in these respective study plans. GIS mapping from the aerial photographs will be done using a minimum 1.0-acre polygon, with special elements (e.g., riparian areas, seeps, wet meadows) less than 1.0-acre in size identified by a separate symbol. Vegetation designations will be based on the descriptions of terrestrial plant types used in *CalVeg GeoBook* (USDA 2000) classification scheme, which provides vegetation mapping for the northern Sierra Nevada mountains and foothills. Additional descriptive modifiers will be added for wetland and riparian types as necessary. Areas of small size that are not well-represented on the map will be described in the narration and in the specific study plans designed to address riparian and wetland types. The CalVeg GeoBook scheme provides vegetation mapping for the northern Sierra Nevada mountains and foothills. Vegetation types will be ground-truthed where the Licensee has legal access (e.g., ownership/easement rights, public lands) and within reasonable safety limits. This will involve going to the various vegetation types within the study area and reviewing how these types show up on the aerial photographs. The photos and on-the-ground site visits will be correlated to insure accuracy of the mapping effort and description of vegetation types.

The results of this study will be presented to the Terrestrial Resources Technical Working Group (TWG) in late 2002. Should the data indicate that additional investigation is warranted, this study plan will be amended, in consultation with the Terrestrial Resources TWG, to include data gathering and analysis in the specific problem areas in 2003.

#### 1.1.7 Analysis

The vegetation mapping will delineate the distribution and extent of major vegetation types within the study area. The results will support analyses for other resource studies including the Riparian, Wetland, Special Status Plants, Invasive/Noxious Weeds, and the various Aquatic Resources and Wildlife Resources studies. A "cross-walk" may also be developed to facilitate comparisons between the vegetation types specified in the CalVeg Geo Book (USDA 2000) (with modifiers for wetland and riparian types, which will be included in the Riparian and Wetland study plan reports) and the designations of the California Wildlife Habitat Relationships System (CWHR).

#### 1.1.8 Study Output

Study results will be presented to the Terrestrial Resources 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 (i.e., narrative descriptions of vegetation mapping units and GIS-maps prepared at a minimum scale of 1:24000 that delineate each plant community in the study area), 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.

#### 1.1.9 Preliminary Estimated Study Cost

***[A preliminary estimated study cost will be prepared after the Terrestrial Resources TWG approves the plan and prior to presentation of the plan to the Plenary Group for consideration.]***

#### 1.1.10 TWG Endorsement

This study plan, as amended by the TTWG, was approved by the TTWG on January 11, 2002.

1.1.11 Literature Cited

KEA Environmental, Inc. 2000. Botanical inventory for the Upper American River Project. Prepared for SMUD, Sacramento, California

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). 2000. Remote sensing lab CalVeg Geobook: Existing vegetation, Version 1. Pacific Southwest Experiment Station, Sacramento, CA. CD=ROM volume 2.

## 1.2 DRAFT Special Status Plants Study Plan

### 1.2.1 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?"

### 1.2.2 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.

### 1.2.3 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.

### 1.2.4 Study Area and Sampling Locations

The study area will include: 1) all areas within the FERC Project Boundary; 2) areas on and immediately adjacent (i.e., within 10 feet to Project roads maintained by the Licensee) and 3) water fluctuation zones in Project reaches described in the Initial Information Package (IIP) (SMUD 2001). 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.

### 1.2.5 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.

### 1.2.6 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.

#### 1.2.7 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.

#### 1.2.8 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.

#### 1.2.9 Preliminary Estimated Study Cost

***[A preliminary estimated study cost will be prepared after the Terrestrial Resources TWG approves the plan and prior to presentation of the plan to the Plenary Group for consideration.]***

#### 1.2.10 TWG Endorsement

This study plan was approved by the TTWG on January 11, 2002 with the changes as noted.

#### 1.2.11 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.

### **1.3 DRAFT Invasive/Noxious Weeds Study**

#### **1.3.1 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?"

#### **1.3.2 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.

#### **1.3.3 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.

#### **1.3.4 Study Area and Sampling Locations**

The Invasive (Noxious) Weeds Study Area includes: 1) all areas within FERC Project boundary, 2) areas on and immediately adjacent (i.e., within 10 feet) to Project roads maintained by the Licensee; and 3) water fluctuation zones within river reaches below Project facilities. 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.

#### **1.3.5 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.

#### **1.3.6 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.

1.3.7 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.

1.3.8 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.

1.3.9 Preliminary Estimated Study Cost

*[A preliminary estimated study cost will be prepared after the Terrestrial Resources TWG approves the plan and prior to presentation of the plan to the Plenary Group for consideration.]*

1.3.10 TWG Endorsement

[This study plan was approved by the TTWG on January 11, 2002. No changes to the text were proposed.](#)

1.3.11 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.

**Deleted:** *[This section will be prepared before this study plan is presented to the Plenary Group for consideration and will include a list of Terrestrial Resources TWG participants who "can live with" the plan, and those who can not live with it. For each participant who can not live with the plan, this section will describe how the plan would have to be modified so that the participant "can live with it".]*

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