

**Forest Service Handbook
National Headquarters - Washington Office
Washington, DC**

**Forest Service Handbook 2709.15 – Hydroelectric Handbook
Chapter 50 - Section 4(E) and Other Reports**

Amendment: 2709.15-Amendment 1

Effective date: February 01, 1987

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SEC. 52.6-Exhibit 1

EXAMPLE OF A 4(E) REPORT

United States Forest Service	Department of Agriculture	Southwest Pacific Region	630 Sansome Street San Francisco, CA 94111 (415) 556-0122
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Reply To: 2770

Date:

Mr. Kenneth F. Plumb, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, D.C. 20426

Dear Mr. Plumb:

Your October 10, 1984, letter requested our comments on the application for license on the Canyon Creek Water Power Project (OEPR-HL Project No. 9999-000 California) filed by Hydroelectric Incorporated. The following comments and conditions comprise the report of the Secretary of Agriculture in accordance with section 4(e) of the Federal Power Act.

This project does not conflict with any project of which we are aware that should be or has been constructed by the United States. It neither interferes with nor is inconsistent with the purposes for which the Eldorado National Forest was created or acquired. We have no objection to a license being issued, subject to certain conditions necessary for the protection and utilization of National Forest System lands and resources affected by the project, and we will issue a special-use authorization to the project if it is licensed by FERC.

Enclosure I contains comments on the application.

Enclosure II contains conditions, in the form of articles to be included in the license, necessary for protection and utilization of affected National Forest System lands. The conditions are based on the Forest Service review of the application,

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coordination with other Federal and State agencies, and consultation with the applicant. The Secretary of Agriculture considers these conditions necessary to avoid or mitigate resource and environmental impacts caused by proposed project operations.

Enclosure III contains information for your use, regarding our environmental analysis and decision.

Enclosure IV contains a copy of the special-use authorization we would anticipate issuing, should the Commission license the project.

Sincerely,

ZANE G. SMITH, JR.
Regional Forester

Enclosures

cc:
Eldorado National Forest
Applicant

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ENCLOSURE I

COMMENTS ON APPLICATION FOR LICENSE FOR
FERC PROJECT NO. 9999, CANYON PROJECT
HYDROELECTRIC CORP

EXHIBIT E

The Forest Service has reviewed the environmental report contained in the license application and appendixes. The environmental report, as supplemented with the specific comments that follow, constitutes the environmental assessment for the subject project.

1. Section 2.1, "Instream Water Uses," Page E-1 and E-2, and section 3.1, "Fish," Page E-4.

In order to verify adequate streamflow releases, a guaranteed priority stream maintenance flow device should be incorporated into the diversion/intake structure. It could consist of a slide gate or stop logs that would be adjusted and locked to release the required stream maintenance flow. It would be reset three times each year to release the specified flow. This bypass gate would be located such that the required flows were released automatically before any flows could divert into the penstock. Downstream of the release gate there should be a control section, preferably a weir, which will accurately measure the bypass flow. This metered section should include a continuously recording streamgage for verifying actual flows. If the measured control section (the weir) is a part of the diversion/intake structure, any seepage not measured by the control structure will need to be measured by the licensee and approved by the Forest Service before credit of seepage flow is counted as part of the stream maintenance flow.

2. Section 3.2, "Wildlife", Page E-4.

The Forest Service presently recommends leaving 1,000 acres, not 300, of contiguous suitable habitat for spotted owls. Timber harvesting is not permitted in spotted owl habitat. Activities within or adjacent to the habitat are restricted during the breeding season: March 1 through August 31; not April to June.

The spotted owl pair, designated PC-11, is now included as a minimum viable pair on the Eldorado National Forest.

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The goshawk pair requires 50 acres for its habitat, not 30 acres as stated in the applicant's report. The breeding season restriction is the same as for spotted owl. Timber harvesting is not allowed within that 50 acres.

The key wildlife species that need to be addressed in the wildlife habitat plan are spotted owl, goshawk, and deer (migration).

3. Section 3.3, "Vegetation," Page E-5, section 3.4, "Impacts and Mitigation," page E-6 (last paragraph), all of Appendix I "A Botanical Survey and Rare Plant Inventory of the Proposed Wallace Canyon Creek Small Hydroelectric Project."

The applicant's botanist reports the discovery of one population of Lewisia serrata, Heckard & Stebbins, on Long Canyon Creek between the confluence of Wallace Canyon Creek and the proposed powerhouse channel and the discovery of a population of Phacelia stebbinsii, Const. & Heckard, along the riparian corridor. Another P. stebbinsii population has been reported in the proposed penstock corridor.

4. Section 3.4, "Impacts and Mitigation," Page E-5.

Dredging the diversion pool could create severe environmental impacts. The licensee would have to obtain Forest Service approval of the timing of the dredging operation and the location of any disposal area. The applicant may want to investigate a sluice-gate as an option.

5. Section 3.4, "Impacts and Mitigation," pages E-5 and E-6.

The width of the clearance or removal of vegetation should be minimized to mitigate effect on the spotted owl habitat. Burial of the powerline is an alternative that will be required where feasible, since this would reduce the amount of disturbance to the habitat as opposed to an aerial powerline.

6. Section 4, "Historic and Archaeological Resources," page E-7, and Appendix G, "Archaeological Reconnaissance of Long Canyon, Wallace Canyon, and Big Grizzley Canyon Creeks Water Power Projects."

No cultural resource sites that will require protection have been located by the surveys conducted for the project. However, some minor inaccuracies in the Appendix G report of October 1984 must be corrected as pointed out in the October 24, 1984, letter from Jerald N. Hutchins of the Eldorado National Forest.

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7. Section 7, "Recreational Resources," page E-10, section 8, "Aesthetic Resources," page E-10.

Both the semi-primitive non-motorized recreation designation and the Partial Retention Visual Quality Objective for the powerhouse site are very restrictive categories for hydroelectric development. The project must be developed in a manner compatible with those restrictions which basically limit the facilities to being very subdued and well blended in to the background. Forest Service requirements will have to be met not just considered as recommendations, and the design should consider alternate locations and coloring as well as those mitigations listed. A Visual Management Plan will be required.

8. Section 9, "Land Use," pages E-10 and E-11.

The Long Canyon Timber Sale will be under contract until December 31, 1986. That timber sale will be using the same roads as the Wallace Canyon Hydroelectric project. The roads need to remain open for the timber purchaser's operations. The licensee will be responsible for negotiating a road scheduling agreement with the timber purchaser if the licensee needs to block the roads needed by the timber purchaser before the close of the purchaser's contract. We do not want the timber sale contract compromised.

Any roads needed for year around access would have to be hard-surfaced. Any road use and construction will have to have unilateral coordination with Bendix Forest Products Corporation, i.e., the Stockton Box Road Agreement.

Access roads and transmission lines cross private lands. The Forest Service has timber harvesting planned and the project should be coordinated with these activities. Timber volumes could be affected by the project.

The conduit should be buried at a depth to allow heavy equipment to haul over the conduit and possibly to allow removal of timber by aerial or ground methods.

Any road construction on slopes greater than 55% would require full bench construction with end-haul of cut material required. All spoil areas will require Forest Service approval prior to construction. The roads leading to the diversion facilities should be blocked to prevent public access; use of these roads should be very limited since they transect spotted owl habitats and steep canyons. Road obliteration or alternate means of accessing the diversion facilities should be considered.

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The road to the powerhouse would create a more accessible route for cattle to move into Long Canyon, resulting in cattle drifting between two allotments. Cattleguards and drift fences may be needed.

Other Comments

The report mentioned a buried penstock. This would be impractical on the steep slopes greater than 55% because the backfill over the penstock would not remain in place, nor could the steep area withstand the construction impacts.

The transmission line will probably have to be placed underground in many areas for visual resource protection, wildlife habitat protection, fire protection, and timber resource land base maintenance.

Increased fire risk was not discussed. The Licensee must develop a fire plan, to be approved by the Forest Service; such plan will specify measures to be taken to protect the Forest from a fire caused by construction of the project.

The Licensee will be required to prepare the following plans prior to beginning on-the-ground construction. It should be noted that the Forest Service must be able to review specific design plans before they are implemented on-the-ground.

- a. Vegetation Clearing and Disposal Plan.
- b. Construction Spoil Disposal Plan.
- c. Impoundment and Conveyances Operation and Maintenance Plan (dredging and spoil disposal, pipe stability, etc.).
- d. Transportation Plan.
- e. Road Maintenance Plan.
- f. Erosion Control Plan.
- g. Land Stability Management Plan.

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- h. Visual Quality Management Plan.
- i. Revegetation and/or Rehabilitation Plan.
- j. Streamcourse Protection Plan (diversion, powerhouse, pipeline, and access construction).
- k. Fire Protection Plan.
- l. Sensitive Plant Mitigation Plan.
- m. Toxic and Hazardous Material Spill Prevention, Control, and Countermeasures Plan.
- n. Public Safety Plan.
- o. Cultural Resources Mitigation Plan.
- p. Fish and Wildlife Protection Plan.
- q. Pesticide and Herbicide Use Plan.
- r. Site Plans (detailing cuts, fills, and facilities at the diversion and powerhouse site).

EXHIBIT F (PROJECT DRAWINGS)

Exhibit F-3

This exhibit shows the buried pipeline in the road cross-section as not being under the travel surface, thus increasing the disturbed width 8 feet, that would be unacceptable in most places. The design should be adjusted so that the pipe can be under the travel surface of the road and the road-way reduced 8 feet.

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NEED FOR LICENSE CONDITIONS

Clauses 1 through 4 are standard clauses that the Forest Service requires in all licenses.

Conditions 5 and 6 are required to protect the fisheries resource on National Forest System lands downstream from the diversion. The bypass flow volumes vary by time of year to account for different life-cycle needs of the fish. The flow measurement provisions are necessary to guarantee and verify the protection.

Condition 7 is required to refine the on-the-ground mitigation of impacts the deer migration routes.

Conditions 8-10 are required to protect the watershed values, during the major construction activities proposed on National Forest land.

Condition 11 is required to protect the visual quality of the area as seen from the frequently used hiking trails, from which the project could be viewed.

Condition 12 is required because the area proposed for the project is also in an area proposed for a Forest Service timber sale.

Condition 13 is required to refine the on-the-ground mitigation measures necessary to protect the sensitive plant and animal species previously listed.

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Enclosure II

LICENSE CONDITIONS NECESSARY FOR PROTECTION AND UTILIZATION OF THE
ELDORADO NATIONAL FOREST IN CONNECTION WITH THE APPLICATION FOR
LICENSE PROJECT NO. 99999

I. GENERAL

License articles contained in the Commission's Standard Form L-2 (revised October 1975) issued by Order No. 540, dated October 31, 1975, cover general requirements that the Secretary of Agriculture, acting by and through the Forest Service, considers necessary for adequate protection and utilization of the land and resources of the Eldorado National Forest. For the purposes of section 4(e) of the Federal Power Act (16 U.S.C. 797(e)), the purposes for which National Forest System lands were created or acquired shall be the protection and utilization of those resources enumerated in the Organic Administration Act of 1897 (30 Stat. 11), the Multiple-Use Sustained Yield Act of 1960 (74 Stat. 215), the National Forest Management Act of 1976 (90 Stat. 2949), and any other law specifically establishing a unit of the National Forest System or prescribing the management thereof (such as the Wilderness Act or Wild and Scenic Rivers Act), as such laws may be amended from time to time, and as implemented by regulations and approved Forest Plans prepared in accordance with the National Forest Management Act. Therefore, pursuant to said section 4(e) of the Federal Power Act, the following conditions covering specific requirements for protection and utilization of National Forest System lands shall also be included in any license issued.

II. STANDARD FOREST SERVICE PROVISIONS

Condition No. 1 - Requirement to Obtain a Forest Service Special-Use Authorization.

Within 6 months following the date of issuance of this license and before starting any activities the Forest Service determines to be of a land-disturbing nature, the Licensee shall obtain from the Forest Service a special-use authorization for the occupancy and use of National Forest System lands, and that authorization shall be filed with the Director, Office of Hydropower Licensing.

The Licensee may commence land-disturbing activities authorized by the license and special-use authorization 60 days following the filing date of such authorization, unless the Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

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Notwithstanding the authorizations granted under the Federal Power Act, National Forest System lands within the project boundaries shall be managed by the Forest Service under the laws, rules, and regulations applicable to the National Forest System. The terms and conditions of the Forest Service special-use authorization are enforceable by the Forest Service under the laws, rules, and regulations applicable to the National Forest System. The violation of such terms and conditions also shall be subject to applicable sanctions and enforcement procedures of the Commission at the request of the Forest Service. In the event there is a conflict between any provisions of the license and Forest Service special-use authorization, the special-use authorization shall prevail on matters which the Forest Service deems to affect National Forest System resources.

Condition No. 2 - Forest Service Approval of Final Design

Before any construction of the project occurs on National Forest System land, the Licensee shall obtain the prior written approval of the Forest Service for all final design plans for project components which the Forest Service deems as affecting or potentially affecting National Forest System resources. The Licensee shall follow the schedules and procedures for design review and approval specified in the Forest Service special-use authorization. As part of such prior written approval, the Forest Service may require adjustments in final plans and facility locations to preclude or mitigate impacts and to assure that the project is compatible with on-the-ground conditions. Should such necessary adjustments be deemed by the Forest Service, the Commission, or the Licensee to be a substantial change, the licensee shall follow the procedures of Article 2 of the license. Any changes to the license made for any reason pursuant to Article 2 or Article 3 shall be made subject to any new terms and conditions of the Secretary of Agriculture made pursuant to section 4(e) of the Federal Power Act.

Condition No. 3 - Approval of Changes After Initial Construction

Notwithstanding any license authorization to make changes to the project, the licensee shall get written approval from the Forest Service prior to making any changes in the location of any constructed project features or facilities, or in the uses of project lands and waters, or any departure from the requirements of any approved exhibits filed with the Commission. Following receipt of such approval from the Forest Service, and at least 60 days prior to initiating any such changes or departure, the Licensee shall file a report with the Commission describing the changes, the reasons for the changes, and showing the approval of the Forest Service for such changes. The licensee shall file an exact copy of this report with the Forest Service at the same time it is filed with the Commission. This article does not relieve the Licensee from the amendment or other requirements of Article 2 or Article 3 of this License.

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Condition No. 4 - Consultation

Each year during the 60 days preceding the anniversary date of the license, the Licensee shall consult with the Forest Service with regard to measures needed to ensure protection and development of the natural resource values of the project area. Within 60 days following such consultation, the Licensee shall file with the Commission evidence of the consultation with any recommendations made by the Forest Service. The Commission reserves the right, after notice and opportunity for hearing, to require changes in the project and its operation that may be necessary to accomplish natural resource protection.