Joint National Marine Fisheries Service and U.S. Fish and Wildlife Service Presentation on Scope of Environmental Analysis for the Oroville Hydroelectric Project Relicensing. (FERC No. 2100)

SCOPE OF OROVILLE RELICENSING

The scope of the proposed action is FERC's issuance of a new license to the State of California Department of Water Resources (DWR) to operate the Oroville Hydroelectric Project (FERC No. 2100) and appurtenant facilities. When FERC considers whether to re-license a hydropower project, it must review the project to ensure it is best adapted to a comprehensive plan for, among other things, the adequate protection, mitigation and enhancement of fish and wildlife, including related spawning grounds and habitat.

Project Purpose

According to the Initial Information Package (IIP) for the Oroville Project relicensing, the Project purposes are described as: "*a multipupose water supply, flood control, power generation, recreation, fish and wildlife, and salinity control project.*". Further, Project operations are specifically managed as follows: "*On a weekly basis,* [Project] *releases are scheduled to accommodate water supply requirements, water quality and quantity requirements in the Sacramento-San Joaquin Delta, instream flow requirements in the Feather River, power requirements, and minimum flood control space.*"[1]

Scope of Consultation Under section 7 Endangered Species Act.

Contents of Initiation Package

Formal consultation is necessary if the federal action "may affect" listed species. Although there is no specific time frame for submitting an initiation package, agencies must review their actions "at the earliest possible time" to determine whether formal consultation is required. If a "may affect" situation exists, formal consultation must be initiated promptly. The joint NMFS and U.S. Fish and Wildlife Service, Endangered Species Act Handbook at page 4-4 (1997) states that:

> *To comply with the section 7 regulations (50 CFR §402.14(c)), the initiation package is submitted with the request for formal consultation and must include, all of the following:*
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> - *a description of the action being considered;*
> - *a description of the specific area that may be affected by the action;*
> - *a description of any listed species or critical habitat that may be affected by the action;*
> - *a description of the manner in which the action may affect any listed species or critical habitat, and an analysis of any cumulative effects;*
> - *relevant reports, including any environmental impact statements, environmental assessments, biological assessment or other analyses prepared on the proposal; and*
> - *any other relevant studies or other information available on the action, the affected listed species, or critical habitat.*

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[1] State of California, The Resources Agency, Department of Water Resources. *Federal Energy Regulatory Commission License Project No. 2100. Initial Information Package; Relicensing of the Oroville Facilities.* January, 2001.

The joint Handbook in the section "Determining the effect of ongoing water projects" (at 4-28) states that when analyzing the effects of ongoing federal discretionary operations of water projects and water contracts, the Services' are to approach their analysis in the same way that they would analyze a new license or contract, thus considering:

- *The total effects of all past activities, including effects of the past operation of the project, current non-federal activities, and Federal projects with completed section 7 consultations, form the environmental baseline;[emphasis in original]*

- *To this baseline, future direct and indirect impacts of the operation over the new license or contract period, including effects of any interrelated and interdependent activities, and any reasonably certain future non-Federal activities (cumulative effects), are added to determine the total effect on listed species and their habitat.*[2]

Action Area

The "action area" is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50 CFR 402.2).

Cumulative Impacts

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Critical Habitat

The FERC described its responsibilities to analyze and document project impacts on listed species and critical habitat in its February 1993 document titled: *HYDROPOWER LICENSING AND ENDANGERED SPECIES - Procedures for Complying with the Endangered Species Act.*[3] Under the heading, *Critical Habitat,* FERC details its responsibilities as follows:

Our findings dealing with critical habitat are made independent of the effect on known

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[2]As defined in 50CFR402:

Indirect effects

Indirect effects are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur.

Interrelated actions

Interrelated actions are those that are part of a larger action and depend on the larger action for their justification.

Interdependent actions

Interdependent actions are those that have no independent utility apart from the action under consideration.

[3] FERC Paper No. DPR-7

individuals. Whether or not the critical habitat is occupied by the species is not a factor in determining effect.

Our analysis should consider the effects of the action on the principal biological or physical constituent elements within the defined area that are essential to the conservation of the species ("primary constituent elements"). These primary elements may include roost sites, nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality, host species or plant pollinator, geological formation, vegetation type, tide, and specific soil types (50CFR § 424.12). We also must look at the indirect effects of the proposed action on critical habitat located adjacent to the project area.

Interagency Task Force (ITF) Report on Improving Coordination of ESA Section 7 Consultation with the FERC Licensing Process[4]

The ITF developed the following guidelines for determining the scope of a licensing action:

"Scope of Effects" of Proposed Action

Issues: The regulations on Section 7 consultation list examples of "action" as actions directly or indirectly causing modifications to the land, water, or air. Indirect effects are delayed effects caused by the proposed action which are reasonably certain to occur. The Service and FERC sometimes differ on the "scope of effects" of a proposed action. These differences concern whether the effects in question are reasonably related to the proposed action, and whether there is a "reasonable" likelihood that indirect effects may result from the proposed action.

Proposed Solutions:

1. Participants are encouraged to identify the scope of effects early in the FPA process thereby allowing sufficient time to adequately resolve concerns while avoiding delays that may otherwise result.

2. In its cover letter transmitting its NEPA document or Biological Assessment, FERC will explain how it considered direct and indirect effects of the proposed action, any cumulative effects, and the effects of any interrelated or interdependent actions, as well as the basis for its findings.

3. In assessing the adequacy of information provided, the Service will be as specific as possible about what effects or actions it believes FERC should have considered, or did not consider in sufficient detail.

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4 Prepared by the Work Group on the Coordination of Federal Mandates:
Federal Energy Regulatory Commission
U.S. Department of the Interior
U.S. Department of Commerce
U.S. Department of Agriculture
Environmental Protection Agency
Advisory Council on Historic Preservation

National Environmental Policy Act

The National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.) is the foundation of modern American environmental protection in the United States and its commonwealths, territories, and possessions. The implementing regulations for NEPA require that Federal action agencies must analyze the direct and indirect environmental effects and cumulative impacts of project alternatives and connected actions.

The regulations emphasize agency cooperation early in the NEPA process. Section 1501.6. Section 1501.7 on "scoping" also provides that all affected Federal agencies are to be invited to participate in scoping the environmental issues and to identify the various environmental review and consultation requirements that may apply to the proposed action. Further, Section 1502.25(b) requires that the draft EIS list all the federal permits, licenses and other entitlements that are needed to implement the proposal.

Indirect Effects

The Council on Environmental Quality (CEQ) regulations under 40 CFR 1508.8 (b) defines indirect effects as effects "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include human population growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosysytems".

Cumulative Impacts

Cumulative impacts are those combined effects on quality of the human environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what Federal or non-Federal agency or person undertakes such other actions (40 CFR 1508.7, 1508.25(a), and 1508.25(c)). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Connected Actions

The CEQ regulations require "connected actions" to be considered together in a single EIS. See 40 CFR §1508.25 (a)(1). "Connected Actions" are defined, as actions that: (i) automatically trigger other actions which may require environmental impact statements; (ii) cannot or will not proceed unless other actions are taken previously or simultaneously; (iii) are independent parts of a larger action and depend upon the larger action for their justification."

DWR's operation and maintenance of its Oroville Project and resulting irrigation and other land use practices meet the above criteria for "Indirect Effects" "Cumulative Impacts" and "Connected Actions" . For instance, DWR's facilities and operations are inextricably intertwined concerning the impoundment, release from storage, conveyance, and use of the waters of the Feather River.

Because of the potentially significant impact of relicensing on ESA listed species, and the significant controversy concerning water supply issues in California, the Service's believe that

FERC should prepare an Environmental Impact Statement (EIS) for the federal action of relicensing the Project.

Under § 102 (2) (c) of NEPA, a "detailed statement" of "alternatives to the proposed action" is central to the EIS and forms the basis for any subsequent Record of Decision. The EIS's analysis should be sufficiently detailed to reveal the agency's comparative evaluation of the environmental benefits, costs and risks of the proposed action and each reasonable alternative. NEPA's alternatives requirement is subject to a "rule of reason" and that necessarily governs which alternatives the agency must discuss, and the extent to which it must discuss them.[5]

Regarding the scope of specific studies, all studies must be sufficient to fully describe impacts of the proposed hydroelectric project license and alternatives. Studies designed to describe water quality, hydrology and other temporally and spatially broad parameters must include an analysis of project impacts extending downstream to the confluence with the ocean unless specific threshold analyses indicate otherwise. These studies must include direct, indirect and cumulative impacts. Similarly, records indicate that anadromous salmonids historically accessed stream habitats upstream of Lake Oroville. Therefore, absent information indicating that fish passage is technologically infeasible, would result in comparably greater negative impacts, or would provide lesser benefits to anadromous salmonids than other alternative enhancement measures, we must assume that access to historic habitats is necessary to meet our resource management goals and objectives for anadromous fish. The licensee must conduct adequate studies to fully develop a range of alternatives for providing fish passage including plans for restoring access to historic habitats.

CEQ Guidance on Determining Scope

In its report *Considering Cumulative Effects Under the National Environmental Policy Act* The CEQ developed the following guidelines for determining the scope of a licensing action:

> **Identifying Geographic Boundaries**
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> For a project-specific analysis, it is often sufficient to analyze effects within the immediate area of the proposed action. When analyzing the contribution of this proposed action to cumulative effects, however, the geographic boundaries of the analysis almost always should be expanded. These expanded boundaries can be thought of as differences in hierarchy or scale. Project-specific analyses are usually conducted on the scale of counties, forest management units, or installation boundaries, whereas cumulative effects analysis should be conducted on the scale of

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[5] In its document, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations" the CEQ states: "The degree of analysis devoted to each alternative in the EIS is to be substantially similar to that devoted to the "proposed action." Section 1502.14 is titled "Alternatives including the proposed action" to reflect such comparable treatment. Section 1502.14(b) specifically requires "substantial treatment" in the EIS of each alternative including the proposed action. This regulation does not dictate an amount of information to be provided, but rather, prescribes a level of treatment, which may in turn require varying amounts of information, to enable a reviewer to evaluate and compare alternatives." Id.

human communities, landscapes, watersheds, or airsheds, Choosing the appropriate scale to use is critical and will depend on the resource or system.....

A useful concept in determining appropriate geographic boundaries for a cumulative effects analysis is the **project impact zone**..... For a proposed action or reasonable alternative, the analysts should

- Determine the area that will be affected by that action. That area is the project impact zone.
- Make a list of the resources within that zone that could be affected by the proposed action.
- Determine the geographic areas occupied by those resources outside of the project impact zone. In most cases, the largest of these areas will be the appropriate area for the analysis of cumulative effects.
- Determine the affected institutional jurisdictions, both for the proposing agency and other groups.

Project impact zones for a proposed action are likely to vary for different resources and environmental media. For water, the project imapact zone would be limited to the hydrologic system that would be affected by the proposed action.

Federal Power Act

The Federal Power Act (FPA) under 16 U.S.C. s 797(e) states:

> *In deciding whether to issue any license, the Commission, in addition to the power and development purposes for which licenses are issued, shall give equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality.*

It is implicit that in order to provide for "protection, mitigate of damage to, and enhancement of fish and wildlife....." FERC must first evaluate environmental impacts. The FPA clearly distinguishes between the project boundaries and the environment affected by the project (action area). For instance, FERC's relicensing regulations at 18 CFR 16.8(b)(i) require that the applicant provide detailed maps of the project boundaries and at 16.8(b)(iv) the applicant must additionally provide an identification of the environment affected, or to be affected, and proposed mitigation. FERC wouldn't make these separate requirements of a description of the affected environment if it was the same as the project boundaries.

Further, in FERC's regulations stipulating what must be included in a license application, at 18 CFR 4.41(f)(3), FERC requires information on fish and wildlife "in the vicinity of the proposed project", not just the project boundaries. In 18 CFR 4.41(f)(3)(i), FERC requires a description of resources in the "proposed project area and its vicinity" and requires mitigation for impacts on fish and wildlife. Thus, FERC clearly distinguishes between the project area and the vicinity for purposes of considering impacts on natural resources.

Regulations governing the preparation of the license application require the inclusion of an Exhibit E. FERC's guidance on what must be in Exhibit E includes a summary of the resource agencies' views on resource needs in the project vicinity and region. This further confirms the absolute requirement to collect information on resources affected beyond the project boundaries.

From a purely scientific basis, by its very nature, a dam could affect resources well beyond project boundaries. If the project is affecting the environment down or upstream of the actual project boundaries, it would be arbitrary and nonsensical to consider and mitigate only for impacts occurring within the project boundaries.