UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
777 Sonoma Ave., Room 325
Santa Rosa, CA 95404-4731

October 14, 2009

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Re: Comments of the National Marine Fisheries Service on the Commission's Order Directing the Modesto and Turlock and Modesto Irrigation Districts to Develop and Implement Instream Flow and Temperature Modeling in the Tuolumne River, for the Don Pedro Hydroelectric Project, FERC No. 2299.

Dear Secretary Bose:

In the July 16, 2009 Order on Rehearing, Amending License, Denying Later Intervention, Denying Petition, and Directing Appointment of a Presiding Judge for a Proceeding on Interim Conditions (Order), the Commission directed the Turlock and Modesto Irrigation Districts (Districts) to develop and implement instream flow and water temperature modeling in the Tuolumne River below La Grange Dam, for the Don Pedro Hydroelectric Project, FERC No. 2299 (Project).

INSTREAM FLOW MODELING

The Commission's Rationale for the Study Need is Unclear

The Order lacks clarity about the need for the study, how the study results will be used in decision making, or how other flow-related studies will complement the modeling. The Order is unclear about why an instream flow model is appropriate, and why PHABSIM was chosen as the model to be applied. We suggest the Commission review the regulations followed by the agencies (required when requesting information or studies in the relicensing process), and apply them here in their own request.

The Commission Incorrectly Assumes NMFS Support for its Study Requirement

The United States Department of Commerce (DOC), National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), and the Conservation Groups have recommended that the Districts release and study various instream flows (summarized in Order Paragraph 90, p. 37). However, a predictive, hydraulic-based habitat model (computer model) was not recommended, nor has it been recommended by NMFS, USFWS, CDFG, or the

Conservation Groups during the current Proceeding on Interim Conditions. There is a clear difference between the habitat modeling required of the Districts in the Commission's Order and empirically based experimental flow releases requested by NMFS and others. When discussing the study of instream flow needs, the Commission fails to distinguish between predictive habitat models and experimental flow releases that are accompanied by biological investigations to determine outcomes – with adaptive management to adjust the experimentation. As a result, when directing the Districts to develop and implement a PHABSIM flow model, the Commission misrepresents NMFS' viewpoint by implying that we have agreed with the nature or necessity of such a study:

> *However, we agree that the Districts should be required to develop and implement an instream flow study to determine flow requirements for Central Valley steelhead.* (p. 38).
>
> *We require the Districts, in consultation with the resource agencies, to develop and implement an instream flow incremental methodology (IFIM) study to determine instream flows necessary to maximize Chinook salmon and O. mykiss production and survival throughout their various life stages. The results of the physical habitat simulation (PHABSIM) flow model under the IFIM framework would assist in identifying the amount of available habitat (weighted usable area) for the species under various flow conditions.* (p. 38).

To be clear, NMFS has not consulted with Commission staff regarding the need for a predictive, hydraulic-based habitat model in the lower Tuolumne River. NMFS has not consulted with Commission staff regarding the appropriateness of applying a predictive, hydraulic-based habitat model in the lower Tuolumne River. Therefore, NMFS does not agree that the Districts should be required to develop and implement a PHABSIM model, without first consulting with the Commission and the Agencies.

The Commission Risks Repeating Past Mistakes With Regard to Studies

As is evident in the Project history recounted in the Order, studies designed and implemented by the Licensee for this Project have met with very limited success in the past. Most recently, following 10 years of study of the lower Tuolumne River (required by License Article 58), Commission staff found the results were insufficient to reach any valid conclusions. They also found that studies were improperly designed or executed and could not therefore produce data that would allow valid conclusions (p. 10).

The failed process of the past should not be repeated. The flawed methodology applied by the Commission has generally consisted of: 1) Commission staff decide on study components without consulting the agencies or Districts; 2) Commission staff do not provide specifics or clear rationale; 3) the Commission orders the Districts to design executable studies in consultation with the agencies (but absent Commission staff); 4) the Commission orders the Districts to implement the studies in cooperation with the agencies (without Commission staff involvement); 5) the Districts proceed with studies that fail to satisfy certain key requirements for scientific protocols, methodology, and/or statistical rigor; and 6) the Commission requires the

reporting of results, but specifies little about what is deemed acceptable, and approves reports filed with some results lacking completion or clarity.

In the case before us now, the Commission has decided in the Order that an instream flow model is necessary, without consulting the agencies or Districts, while other study needs will be scrutinized by the fact-finding in the Proceeding on Interim Conditions. A PHABSIM model has been chosen by the Commission, with little to no rationale as to need or applicability vis-à-vis other instream flow setting techniques. Target flows for the PHABSIM modeling have been established by the Commission staff without consultation. The Districts are ordered to design an executable PHABSIM model, with agency consultation. Fundamental questions such as why a model is appropriate at all, or why PHABSIM is an appropriate model, are not addressed. Commission staff are removed from the consultation, but review written comments, and will not be active in the implementation of the study. The requirements for reporting of results are unclear, as is how the results will be applied or interpreted alongside other study results needed to determine instream flows.

Without further discussion with Commission staff, we do not agree that the Districts should be required to develop and implement a PHABSIM model, and do not believe it would be useful to consult with the Districts on this issue in the absence of Commission staff.

NMFS suggests the Commission convene a meeting between the Districts, Agencies, and Conservation Groups to discuss instream flow study needs rather than adopt, with little explanation, a directive to design and conduct a PHABSIM study that may not be necessary or appropriate.

WATER TEMPERATURE MODELING

In the Order, the Commission directs the Districts to develop a water temperature model to determine the downstream extent of thermally suitable habitat under various flow conditions, and to determine flows necessary to maintain water temperatures at or below 68 degrees F from La Grange Dam to Roberts Ferry Bridge (p. 38).

To be consistent with NMFS' proposed interim measures in the current Proceeding on Interim Conditions, a temperature model should be designed to determine:

1) The flows necessary to maintain 7-day averages of the daily maximum (7DADM) water temperatures 18°C from La Grange Dam downstream to Roberts Ferry Bridge (RM 39.5).

2) The flows necessary to maintain 7DADM water temperatures 18°C from La Grange Dam downstream to the confluence with the San Joaquin River (RM 0) from October 15 to December 1.

3) The flows necessary to maintain 7DADM water temperatures of 13°C from La Grange Dam downstream to Roberts Ferry Bridge (RM 39.5) from October 15 to February 15.

4) The flows necessary to maintain 7DADM water temperatures of 15°C from La Grange Dam downstream to the confluence with the San Joaquin River (RM 0) from March 20 to May 15.

The model should determine the minimum pool elevation(s) in New Don Pedro Reservoir needed to supply the flows to meet the temperature objectives over the range of water year types and under realistic water year forecast and planning scenarios. The model should also be capable of evaluating potential facilities modifications that might be necessary to meet these objectives, e.g.- reservoir temperature control devices and any other hydro-mechanical improvements that offer a higher degree of discharge water temperature control.

Additional water temperature studies should be devised to determine the location and (3-D areal) extent of any temperature "refugia" downstream of the LaGrange Dam, which thus far have not been identified by the Commission or others.

If you have questions regarding this correspondence, please contact Mr. Larry Thompson at (916) 930-3613.

Sincerely,

Steven A. Edmondson
Northern California Habitat Supervisor

cc: Maria Rea, NMFS, Sacramento
Bob Hoffman, NMFS, Long Beach
Service List