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GOVERNOR



MATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

## State Water Resources Control Board

**JAN 30 2014**

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

Dear Secretary Bose:

UPDATED STUDY REPORT COMMENTS ON YUBA COUNTY WATER AGENCY'S YUBA RIVER DEVELOPMENT PROJECT; FEDERAL ENERGY REGULATORY COMMISSION (FERC) PROJECT NO. 2246; YUBA COUNTY

Yuba County Water Agency (YCWA) owns and operates the Yuba River Development Project (Project), also known as Federal Energy Regulatory Commission (FERC or Commission) Project No. 2246. On December 2, 2013, YCWA filed the Project's Updated Study Report (USR) and Draft License Application with FERC. The USR contains an update to the 48 FERC approved studies being performed by YCWA. The Draft License Application contains YCWA's Project proposal for its new FERC license.

Following the release of the USR, on December 17, 2013, YCWA held a public meeting at its office in Marysville. On December 31, 2013, YCWA posted its USR Meeting Summary, which began a 30-day comment period, in which "any participant or the Commission may file a disagreement concerning the applicant's [YCWA] meeting summary... This filing must also include any modifications to ongoing studies or new studies proposed by the Commission staff or other participant." (18 C.F.R. § 15(c)(4).)

The State Water Resources Control Board (State Water Board) is the state agency responsible for issuing water quality certification in California (Wat. Code § 13160.). The water quality certification is issued with conditions to ensure the project will be in compliance with specified provisions of the Clean Water Act (CWA), including water quality standards and implementation plans promulgated pursuant to Section 303 of the CWA (33 U.S.C. § 1313). Accordingly throughout the FERC relicensing process, the State Water Board maintains independent regulatory authority to condition a proposed project's operations to protect water quality and beneficial uses of water consistent with section 401 of the CWA, the *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Basin Plan), State Water Board regulations, the California Environmental Quality Act (CEQA), and other applicable state laws.

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

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State Water Board staff submits the following comments pertaining to YCWA's USR:

- Attachment A: New Study Request – Fish Passage Assessment for Spring-run Chinook and Central Valley Steelhead; and
- Attachment B: General Comments and Study-Specific Comments.

State Water Board staff will provide comments on YCWA's Draft License Application in separate correspondence prior to the comment deadline of March 2, 2014.

If you have questions related to this letter, please contact me at 916-341-5321 or through email at [parker.thaler@waterboards.ca.gov](mailto:parker.thaler@waterboards.ca.gov). Written correspondence should be addressed as follows:

State Water Resources Control Board  
Division of Water Rights  
Water Quality Certification Program  
Attn: Parker Thaler  
P.O. Box 2000  
Sacramento, CA 95812-2000

Sincerely,

  
Parker Thaler  
Environmental Scientist  
Water Quality Certification Program

Attachments: Attachment A: New Study Request – Fish Passage Assessment for Spring-run Chinook and Central Valley Steelhead  
Attachment B: General Comments and Study-Specific Comments

cc: See next page.

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cc: Mr. John Kemmerer, Acting Director  
U.S. EPA, Region 9  
Water Division  
75 Hawthorne Street  
San Francisco, CA 94105

Ms. Alison Willy  
Senior Fish and Wildlife Biologist  
U.S. Fish and Wildlife Service  
2800 Cottage Way, Suite W-2605  
Sacramento, CA 95825

Ms. Elizabeth Lee  
Senior Water Resource Control Engineer  
Central Valley Regional Water Quality Control Board  
Water Quality Certification/Municipal Storm Water  
11010 Sun Center Drive, Suite 200  
Rancho Cordova, CA 95670-6114

Ms. MaryLisa Lynch  
Water Program Supervisor  
California Department of Fish and Wildlife  
1701 Nimbus Road, Suite A  
Rancho Cordova, CA 95670

Mr. Larry Thompson  
Fishery Biologist, NOAA Fisheries West Coast Region  
U.S. Department of Commerce  
650 Capitol Mall, Rm 5100  
Sacramento, CA 95814

Mr. Curt Aikens  
General Manager, Yuba County Water Agency  
1220 F Street  
Marysville, CA 95901

Ms. Amy Lind  
Hydroelectric Coordinator  
Tahoe Plumas National Forests  
631 Coyote St.  
Nevada City, CA 95959

ATTACHMENT A:  
PROPOSAL FOR A NEW STUDY  
FISH PASSAGE ASSESSMENT FOR SPRING-RUN CHINOOK AND CENTRAL VALLEY  
STEELHEAD

State Water Resources Control Board (State Water Board) staff proposes the following new study, *Fish Passage Assessment for Spring-run Chinook and Central Valley Steelhead Study* (Study), which focuses on compiling and synthesizing existing new information so that it may be used to inform the Federal Energy Regulatory Commission (FERC or Commission) relicensing of Yuba County Water Agency's (YCWA's) Yuba River Development Project (Project). The Study will be valuable in informing the alternatives analysis associated with environmental review of the Project under the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA), as well as the conditions of the FERC license and State Water Board water quality certification.

To increase coordination between the State Water Board and FERC regarding relicensing proceedings and their associated water quality certifications, the State Water Board is requesting that the Study described below be incorporated as part of the Project's FERC proceeding. This would allow the information to inform FERC's NEPA analysis at the earliest juncture, and would allow for increased coordination between FERC and the State Water Board regarding Study needs. If FERC denies this request, however, the State Water Board intends to pursue the requested information from YCWA through the water quality certification proceeding, under California Water Code section 13383 and under other applicable provisions of California law. To address questions regarding the extent to which YCWA and the United States Army Corps of Engineers (ACOE) bear the benefits of and responsibilities for the fish barrier, the State Water Board anticipates requesting similar relevant information from the ACOE under Clean Water Act section 313, 33 U.S.C. § 1323 and applicable provisions of state law. Section 313 authorizes states to apply all of their substantive and procedural water quality requirements to federal facilities. (33 U.S.C. § 1323.)

The following addresses criteria for requesting a new study (18 C.F.R. § 5.15(e)):

*Good Cause* - The availability of new information that directly relates to the operations and management of the Project, as well as to the protection of beneficial uses provides the basis for this Study request. This existing information will serve to better inform the Project relicensing and is critical to the evaluation of potential Project alternatives. This new Study does not involve the performance of new on-the-ground fieldwork, but rather the gathering, synthesis, and further desktop analysis of information that is readily available and which should be incorporated in the Project relicensing.

Additionally, this request is in line with the Memorandum of Understanding (MOU) the State Water Board executed with FERC on November 19, 2013. Section II *Commitments of the Commission and the State Water Board, Pre-Application Filing Activities Under the ILP, Part 5* states, "Prior to the start of the Post-Filing Activity portion of the ILP (prior to Box 18), the Commission and the State Water Board will discuss the needs of their respective agencies related to the Commission's issuance of the license and the State Water Board's issuance of water quality certification. With respect to the development of environmental documents, this discussion should include the types of alternatives that the Commission may consider in the environmental documents, as well as what analysis, data, or information are expected to be necessary to complete the environmental documents. To the extent possible, the State Water Board will present to the Commission alternatives and analyses that the State Water Board has determined are necessary for issuance of water quality certification."

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In accordance with the MOU the State Water Board is informing FERC and YCWA of analysis, data, and information necessary to complete the environmental documents and inform development of the water quality certification.

*Material changes in the law or regulations* – Not applicable.

*Why goals and objectives could not be met with approved study methodology* – No studies were previously approved by FERC that assess methods to improve habitat and populations of anadromous fish species affected by YCWA's Project operations and the facilities it uses upstream of Englebright Dam. No available FERC studies contain the requested information.

*Why the request was not made earlier* – National Marine Fisheries Service (NMFS) requested a fish passage assessment study on March 7, 2011, and again on January 28, 2013. NMFS's study request would have provided a sufficient basis of information for the State Water Board, and the State Water Board would have had the ability to request any additional information based on the study results and progress. At the earliest comment period following FERC's denial of NMFS's study request (this Updated Study Report comment period), the State Water Board is now requesting a fish passage assessment study incorporating new information developed following NMFS study request. The information derived from this Study request is necessary to enable appropriate assessment of Project alternatives under CEQA and NEPA, and to appropriately condition the Project during the water quality certification process.

*Significant changes in the project proposal or that significant new information material to study objectives became available* – In March 2013, after the Initial Study Report comment period (concluded January 28, 2013), the Yuba Salmon Forum (YSF) released the *Fish Passage Infrastructure Report* (YSF Report) to YSF participants. Following issuance of the YSF Report, in September 2013 YSF released the Draft *Summary Habitat Analysis* (SHA) to YSF participants. Both documents provide significant new information that became available after the Initial Study Report comment period. The YSF Report and SHA should be considered during YCWA's relicensing.

*Extraordinary circumstances warranting approval (18 C.F.R., 5.15(f))* – The amount of available new information as well as the circumstances surrounding the NMFS Biological Opinion on Englebright and Daguerre Point Dams are extraordinary and warrant approval. As mentioned previously and throughout this Study request, there is abundant new information available regarding fish passage alternatives on the Yuba River, which directly relate to Project operations and which should be considered as part of the Project relicensing for a 30-50 license.

Additionally, the future actions that will be necessary to comply with NMFS Biological Opinion(s) for the hydroelectric Project and for Englebright and Daguerre Point Dams are uncertain. In 2012 NMFS issued the *February 29, 2012, Yuba River Biological Opinion* finding that Englebright Dam blocks anadromous fish passage. The Biological Opinion prescribed Reasonable and Prudent Alternatives (RPAs), which required analysis of methods for fish passage at Englebright and Daguerre Point Dams. Long-Term Fish Passage Action 2, stated its objective to "Provide structural and operational modifications to allow safe fish passage and access to habitat upstream and downstream of Englebright Dam and upstream of Daguerre Point Dam." In 2013, NMFS agreed to again rewrite the Biological Opinion for ACOE's activities at Englebright and Daguerre Point Dams.

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Reasonable and Prudent Alternatives described in NMFS 2012 Final Biological Opinion would have addressed State Water Board informational needs. It is unknown if the revised Biological Opinion, which is anticipated in May 2014, will meet State Water Board informational needs. In any case, existing available information related to fish passage should be included and evaluated as part of the Project relicensing to examine alternatives to mitigate Project impacts to beneficial uses in the Yuba River.

YCWA's codependence and use of two federally owned facilities to conduct its Project operations (hydroelectric peaking, and water deliveries) is an extraordinary circumstance warranting FERC's approval of this study request.

*Why the new study satisfies the study criteria in 18 Code of Federal Regulations part 5.9 (b) – see below.*

The following addresses criteria for requesting a new study (18 C.F.R. § 5.9(b)):

1. *Describe the goals and objectives of each study proposal and the information to be obtained:*

The goals of the Study are:

1. Evaluate the YSF Report's seven alternatives to improve habitat and population dynamics for federally listed anadromous fish species (spring-run Chinook salmon [*Oncorhynchus tshawytscha*] and Central Valley steelhead [*Oncorhynchus mykiss*]) affected by YCWA's current operations, and the facilities its uses.
2. Collate and synthesize information from numerous sources to provide YCWA, FERC, and relicensing participants with a better understanding of fish passage improvement options in the Yuba River system.

Specifically, State Water Board staff requests YCWA:

Collate information contained in: 1) March 2013 YSF Report; 2) SHA; 3) information from completed Technical Memorandums; and 4) any other applicable documents related to the evaluation of fish passage, habitat availability, water quality impacts, and fish population changes associated with the seven alternatives presented in the YSF Report.

Analyze and synthesize the collated information to:

- I. Discuss potential changes in YCWA's operations (e.g., changes to operations at Narrows 2 powerhouse, peaking at New Colgate Powerhouse) associated with Alternatives 2, 3, 4, 5, 6, and 7 from the YSF Report.
- II. Using existing sediment core samples, assess general water quality impacts associated with Alternatives 4 and 5; include an evaluation of 25, 50, and 100 percent sediment pass through scenarios at Englebright Dam. Impacts to water quality should consider: dissolved oxygen, turbidity, pH, toxicity, mercury, methylmercury, and temperature. Impacts should include an assessment of short and long term effects, and how far down the Yuba River system effects are expected to occur. If effects are anticipated to continue past the Yuba River's confluence with

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the Feather River please discuss expected effects and approximately how long the effects are expected to persist in the water systems below the Yuba River.

- III. For each alternative and all water years<sup>1</sup> quantify the amount of habitat available for Chinook adult migration, adult holding, spawning, juvenile rearing, and smolt emigration; and steelhead rearing, and emigration. For Alternatives 2 and 3 also quantify habitat availability using flow proposals discussed in the SHA for all water year types. In determining habitat availability, use United States Environmental Protection Agency (EPA) 2003 Temperature standards<sup>2</sup> when EPA 2003 Temperature standards are different from the Upper Optimum Temperature Criteria as listed in the SHA. For Alternative 2, habitat availability analysis begins at Our House Diversion Dam and ends at Englebright Dam. For Alternative 3, habitat availability analysis begins at Spaulding Dam and ends at Englebright Dam.
  - IV. Describe potential effects to State and Federal special status aquatic species currently present upstream of Englebright Dam for the seven alternatives in the YSF Report. For Alternative 2 and 3 also evaluate potential effects to State and Federal special status aquatic species with flow proposals discussed in the SHA.
2. *If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied:*

The State Water Board has broad authority under the federal Clean Water Act (33 U.S.C. § 1251-1387), the state constitution, and the state water code and regulations to restore and maintain the chemical, physical and biological integrity of the state's waters, and to regulate water diversion and use through the water right priority system in accord with the State Water Boards reasonable use and public trust responsibilities. Section 401 of the federal Clean Water Act allows for broad application of appropriate state and federal environmental laws when entities apply for new or renewed federal licenses that may result in a discharge to the navigable waters of the state. (33 U.S.C. § 1341.)

Throughout a FERC relicensing process the State Water Board maintains independent regulatory authority to condition the operation of the project to protect water quality and beneficial uses of stream reaches consistent with section 401 of the federal Clean Water Act, the *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Basin Plan), State Water Board regulations, CEQA, and any other applicable state laws. The Project as described has the potential to impact water quality in the Yuba River system, including multiple beneficial uses, and its operation requires public trust balancing and a balancing of the public interest in water use and water quality. The analysis of these potential impacts requires information on potential alternatives to address the fish barriers at

<sup>1</sup> Water year types from the Yuba-Bear/Drums-Spaulding model.

<sup>2</sup> EPA 2003 Temperature requirements from United States Environmental Protection Agency. 2003. *EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards*. EPA 910-B-03\_002. Region 10 Office of Water, Seattle, WA. State Water Board staff recognizes the Project is located in Region 9, but Region 10 EPA 2003 Temperature requirements have been used in the Central Valley 303(d) list recommendations. Additionally, the EPA 2003 Temperature requirements have been used by NMFS to analyze the effects of long term operations of the Central Valley Project and State Water Project, and to develop the reasonable and prudent alternatives actions to address temperature related issues in the Stanislaus River.

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Englebright Dam, as well as the associated costs, and effects on beneficial uses and water quality.

The Basin Plan designates the beneficial uses of water to be protected, along with water quality objectives necessary to protect those users. The Basin Plan lists the following beneficial uses of the waters in the Yuba River:

- From Source to Englebright Reservoir: municipal and domestic supply; irrigation; stock water; power; recreation-1 contact, canoeing and rafting; recreation-2 (non-contact); cold water habitat; cold water spawning; and wildlife habitat.
- From Englebright Dam to Feather River: irrigation; stock water; power; recreation-1 contact, canoeing and rafting; recreation-2 (non-contact); cold freshwater habitat; warm freshwater habitat; warm water migration, cold water migration, warm water spawning, cold water spawning, and wildlife habitat.

The beneficial uses of cold water habitat, cold water spawning, and wildlife habitat directly relate to Chinook and steelhead. The State Water Board must have complete information to make informed decisions regarding measures to reduce impacts to beneficial uses caused by YCWA Project operations and the facilities it uses.

3. *Describe existing information concerning the subject of the study proposal, and the need for additional information:*

YCWA is responsible for how the majority of water in the Yuba River is managed. The following paragraphs describe how YCWA controls the flow of water in the Yuba River through its Project operations. This Study is needed to incorporate new information to better inform the Project relicensing.

YCWA's water storage and management on the Yuba River first occurs at New Bullard's Bar Reservoir, located 2.3 miles upstream of the North Yuba River's confluence with the Middle Yuba River. YCWA also manages water through its operations at Englebright Reservoir and Dam (Englebright Complex) located downstream on the Yuba River at river mile 23.9. Our House Diversion Dam diverts water from the Middle Yuba into Lohman Ridge Diversion Tunnel (maximum capacity of 860 cubic feet per second [cfs]), which releases water into Oregon Creek. The Lohman Ridge Diversion Tunnel is located just above the Log Cabin Diversion Dam. The Log Cabin Diversion Dam diverts most of the combined flows from Lohman Ridge Diversion Tunnel and Oregon Creek into New Bullard Bar Reservoir via the Camptonville Diversion Tunnel (maximum capacity of 1,100 cfs).

YCWA controls releases from New Bullards Bar Reservoir through: 1) the New Colgate Power Tunnel into New Colgate Powerhouse; or 2) the release valve that discharges into the North Yuba River. YCWA operates New Colgate Powerhouse as a peaking facility that can quickly increase or decrease its energy production. As a result of peaking, flows released from New Colgate Powerhouse can quickly change. Flows from New Colgate Powerhouse enter Englebright Reservoir and are regulated through the Narrows 2 Powerhouse to meet flow requirements in the lower Yuba River.

Flows from Englebright into the lower Yuba River are supplied from: 1) spill over the top of Englebright Dam; 2) Pacific Gas and Electric's (PG&E) Narrow 1 Powerhouse (maximum release capacity of 730 cfs); or 3) YCWA's Narrow's 2 Powerhouse (maximum release

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capacity of 3,400 cfs). At times YCWA's Narrows 2 Powerhouse provides the only flow release into the lower Yuba River.

On November 5, 2010, YCWA issued its Pre-Application Document (PAD) and Notice of Intent to relicense the Project. Following issuance of the PAD relicensing participants submitted comments and study requests. NMFS submitted a study request for "Effects of the Project and Related Activities on Fish Passage for Anadromous Fish" in its March 7, 2013, comment letter. On September 30, 2011, FERC denied many aspects of NMFS' study request for lack of Project nexus, and because Englebright Dam is the limit of anadromous fish passage in the Yuba River.

On October 20, 2011, NMFS requested formal dispute resolution for its fish passage study request. FERC held a full panel hearing and the issued its decision on December 9, 2011. Following the study dispute resolution YCWA modified: 1) Study 7.11 to assess behavior and presence of fish in the vicinity of Narrows 2 Powerhouse below Englebright Dam, and 2) Study 7.12 to assess Project effects on fish facilities associated with Daguerre Point Dam. FERC again determined there was no Project nexus for elements of NMFS' study request that involved anadromous fish above Englebright Dam.

NMFS again requested its Fish Passage study in its January 28, 2013, comment letter on the Initial Study Report. NMFS stated that the issuance of a Biological Opinion requiring fish passage at Englebright is a new change that should be considered. FERC denied the request because implementation of the Biological Opinion was uncertain.

The YSF, a group formed by the NMFS and comprised of various stakeholders including YCWA, PG&E, California Department of Fish and Wildlife, United States Fish and Wildlife Service, and several nonprofits developed the YSF Report in March 2013. The YSF Report examined seven fish passage alternatives to establish federally listed fish species above Englebright Dam. Evaluation of the potential alternatives included engineering assessment of the facilities, appurtenances, costs, permitting, and changes to the infrastructure and operations of existing facilities required for implementation, operation, and maintenance of an anadromous fish passage program.

The fish passage alternatives examined in the YSF Report included:

1. A collection and transportation program to the North Yuba River.
2. A collection and transport program to the Middle Yuba River.
3. A collection and transport program to the South Yuba River.
4. Englebright Dam removal and restoration of the area under Englebright Reservoir.
5. A modification (notching) of Englebright Dam, including the construction of a fish ladder and downstream passage facility.
6. Construction of an upstream fish ladder and downstream passage facility past the existing Englebright Dam.
7. Improvement of habitat in the lower Yuba River.

Following the YSF Report, in September 2013 the YSF released the SHA to YSF participants. The SHA evaluated miles of habitat available in different segments of the Yuba River, under current and proposed flows using a temperature metric system designed through YSF's data analysis. The SHA did not use EPA 2003 temperature standards for steelhead and Chinook.

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The information requested in the Study is necessary for the State Water Board to make informed decisions regarding how to best address the impacts of the Project's operations and the facilities it uses on anadromous fish. The information requested directly relates to the feasibility and potential impacts of identified options available to address the impacts of YCWA's operations and the facilities it uses. This information is necessary to inform the State Water Board's decision whether or not to grant water quality certification and how to condition any such certification. This readily available information should also be included in the development of any environmental document developed as part of the Project relicensing.

The YSF was created in an effort to address anadromous fish population impacts in a unified manner, given the complexity of the Yuba River water development systems, with several mixed-use hydropower, flood control, and water supply projects depending on and/or affected by the presence of downstream fish barrier dams owned by the ACOE. One or more of the options identified by YSF could come to be implemented by other means than the water quality certification.

If this were the case, the presence of anadromous fish above Englebright Dam would constitute a part of the conditions under which YCWA would operate under its new license, and would therefore be critical to the water quality certification analysis. YCWA's actions under the different YSF Report alternatives would have different water quality impacts, and the State Water Board needs this information to make an informed water quality certification decision. The Study will also provide relevant alternatives for review and potential evaluation under CEQA and NEPA.

4. *Explain any nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements:*

YCWA controls releases from New Bullards Bar through the New Colgate Power Tunnel into New Colgate Powerhouse. Flows from New Colgate Powerhouse are released into the Yuba River above the Englebright Complex. YCWA operates New Colgate as a peaking facility. As a result of peaking operations, flows releases from New Colgate Powerhouse can quickly change. Fluctuating flows from New Colgate Powerhouse enter Englebright Reservoir and are regulated through YCWA's Narrows 2 Powerhouse to meet flow requirements in the lower Yuba River.

YCWA's past and proposed Project operations rely on the Englebright Complex. YCWA uses Englebright Reservoir as an afterbay for New Colgate Powerhouse and a forebay for the Narrows 2 Powerhouse.

Without Englebright Dam, YCWA would be unable to operate the Project in its current manner, or as YCWA is proposing in the Draft License Application it submitted to FERC on December 2, 2013. YCWA would be limited in the peaking activities it currently performs at Colgate Powerhouse, and would be unable to operate the Narrows 2 Powerhouse. YCWA's current and proposed operations depend on Englebright Dam.

The State Water Board disagrees with FERC's finding that there is no nexus between fish passage and Project No. 2246: the State Water Board has acted on this connection in

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regulating Yuba County Water Agency's facilities through our water rights authority. (See State Water Board Revised Decision 1644 (2003)<sup>3</sup>, pp. 31-32.) As mentioned above, YCWA uses Englebright Reservoir as a forebay for Narrows 2, and uses it as an afterbay to regulate flows downstream of New Colgate, its peaking facility. YCWA's FERC license required it to contract with the ACOE regarding the use of Englebright facilities. (Article 47.) The ACOE has granted an easement to YCWA for its use of Englebright facilities. (DACW05-2-75-716.) While the ACOE owns Englebright Dam, it has stated that it does not control releases below the dam, and instead defers to YCWA and PG&E for such operations to support hydropower generation. (See October 2013 Biological Assessment, p. 9.) YCWA has challenged NMFS's draft Biological Opinion of the ACOE facility in federal district court because of its hydropower interests in the dam. (*South Yuba Citizens League v. NMFS, YCWA v. NMFS* (Related Case Nos. 2:13-cv-00059-MCE-EFB & 2:13-cv-00042-MCE-CKD) Memorandum and Order (August 12, 2013) p. 7, lines 14-23; p. 18, lines 20-22). Even though YCWA does not own Englebright Dam, the facility does have a nexus with YCWA's hydroelectric energy production. The State Water Board believes investigating alternatives that may require alteration of a federal facility is within the authority granted to FERC under the Federal Power Act. Though FERC may not license a federal agency, FERC does have the authority to require a project applicant to gain certain concessions from facility owners as a condition of licensing. Such authority is also within the scope of a state's authority under Clean Water Act section 401.

Because the Federal Power Act and the Clean Water Act have different requirements regarding the physical scope of analysis of an action, the State Water Board's evaluation of the Project is not limited to YCWA's Project description. The State Water Board must condition a water quality certification so as to ensure that the applicant will comply with "any applicable specific requirements under the Clean Water Act and with any other appropriate requirement of State law," and any such requirements become a condition of the federal license. The State Water Board must evaluate YCWA's potential impacts to water quality, the public trust, and beneficial uses of the Yuba River. Conditions in the State Water Board water quality certification will become conditions of the FERC license. The requested Study will inform the State Water Board's water quality certification conditions and in turn conditions of the FERC license.

5. *Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge:*

Methodologies recommended by the State Water Board are generally accepted practices. State Water Board staff in collaboration with other resource agencies, use vetted scientific methodologies in the studies it requests. Current EPA guidelines and peer reviewed studies inform the State Water Board's methodologies.

Requiring a desktop study evaluating seven fish passage alternatives with developed flow proposals in different water year types to assess methods to improve anadromous fish

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<sup>3</sup> State Water Board Revised Decision 1644 is available online at: [http://www.waterboards.ca.gov/waterrights/board\\_decisions/adopted\\_orders/decisions/d1600\\_d1649/wrd1644revised.pdf](http://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/decisions/d1600_d1649/wrd1644revised.pdf) (Last visited January 29, 2014).

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passage in the Yuba River is an acceptable practice. The State Water Board does not anticipate the Study to require field activities, and is willing to work with YCWA on a mutually agreeable study design that meets State Water Board requirements.

6. *Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.*

State Water Board staff anticipates a low to moderate level of effort would be needed to complete the requested study. No field work is anticipated. The requested information can be obtained by using desktop models and current data available through the YSF and YCWA relicensing process. The State Water Board anticipates staff time as the main cost associated with the request. Qualified staff can likely gather the needed information within one to two months of work. The level of effort, including time required, and cost to perform the Study is dependent on the staff assigned to the task. The cost of the proposed Study is estimated to be \$55,000 - \$80,000.

State Water Board staff believes this is a reasonable study given the readily available new information and its ability to be used to inform the Project relicensing process.

ATTACHMENT B:  
GENERAL AND STUDY-SPECIFIC COMMENTS ON THE UPDATED STUDY REPORT  
FOR THE YUBA RIVER DEVELOPMENT PROJECT

State Water Resources Control Board (State Water Board) staff provides the following general and study-specific comments in response to the Yuba County Water Agency's (YCWA's) release of the Updated Study Report Meeting Summary for the Yuba River Development Project (Project). The study-specific comments cover the following studies: Technical Memorandum 7-02 Narrows 2 Powerhouse Intake Extension; Technical Memorandum 3-11 Entrainment; Technical Memorandum 3-8 Upstream Fish Population; and Incomplete Interim Technical Memorandum.

**GENERAL COMMENT:**

1. Code of Federal Regulations Title 18, Section 5.22(a) states, "When the Commission [Federal Energy Regulatory Commission or FERC] has determined that the application meets the Commission's requirements as specified in Sections 5.18 and 5.19, the approved studies have been completed, any deficiencies in the application have been cured, and no other additional information is needed, it will issue public notice as required in the Federal Power Act... Finding that the application is ready for environmental analysis."

State Water Board staff would like to know how FERC plans to address incomplete studies with respect to release of the Ready for Environmental Analysis.

**Technical Memorandum 7-02 Narrows 2 Powerhouse Intake Extension:**

1. In addition to operation requirements under its FERC license, YCWA operates its facilities in conformance with its water right permits, the terms of which were amended in a series of State Water Board public trust hearings, resulting in Revised Water Right Decision 1644 (RD-1644). RD-1644 required YCWA to "diligently pursue development of the Narrows 2 Powerhouse Intake Extension Project at Englebright Dam, in coordination with the Department of Fish and Game [now referred to as California Department of Fish and Wildlife], the United States Fish and Wildlife Service and the National Marine Fisheries Service." (*Id.*, at 2(a).) State Water Board Water Right Order No. 2008-0025 amended RD-1644, to enable implementation of the Lower Yuba River Accord and, among other changes, allowed YCWA to report annually on whether continued development of the Narrows 2 Powerhouse Intake Extension Project should be pursued. The Deputy Director for Water Rights has granted annual permission to forego pursuit of constructing a cold-water intake structure each year since 2008. The amendment of RD-1644 enables continued study of the cold-water intake structure to be informed by the new flow regime and by studies under the FERC relicensing process.

Please note that YCWA remains obligated to pursue the Narrows 2 Powerhouse Intake Extension Project under its water right permits. There remain reasonably foreseeable situations in which an intake structure at Narrows 2 would be necessary to meet temperature targets for listed fish species in the lower Yuba River. Situations that may necessitate an intake structure include, but are not limited to: 1) habitat enhancement of the lower Yuba River; 2) the operation of Englebright Reservoir at lower water levels than those currently in place; 3) the application of different temperature targets than those recommended by the River Management Team; 4) climate change altering Englebright water inflow temperatures; or 5) the notching of Englebright Dam to accommodate volitional fish passage.

ATTACHMENT B: GENERAL AND STUDY - SPECIFIC COMMENTS ON THE UPDATED STUDY REPORT FOR THE YUBA RIVER DEVELOPMENT PROJECT

The State Water Board is evaluating existing information and may identify additional information needed to make a determination regarding the need for an intake extension structure. Additional information may include a determination of whether Narrows 2 is currently meeting United States Environmental Protection Agency (EPA) 2003 Temperature standards.

**Technical Memorandum 3-11 Entrainment:**

1. YCWA should address methods to reduce entrainment at its diversion facilities, in its Final License Application. Twenty nine percent (29.8%) of tagged fish in the Lohman Ridge Diversion Tunnel, and 2.1 percent of tagged fish in the Camptonville Diversion Tunnel were entrained. The tunnels were conveying flows of 200-250 cfs 79 percent of the time. The tunnels are capable of conveying 860 cfs at Our House and 1,100 cfs at Log Cabin. Potential entrainment would likely increase with increased flows.

**Technical Memorandum 3-8 Upstream Fish Population**

1. Does YCWA have an explanation as to why the fish populations are drastically different between the two study sites (i.e., Oregon Creek Upstream of Log Cabin Dam [RM<sup>4</sup> 4.5], and Oregon Creek Upstream of Middle Yuba River [RM 0.3]) separated by the Log Cabin Diversion Dam? State Water Board staff requests analyses of Project' effects on fish population dynamics associated with entrainment at Our House Diversion Dam, Lohman Ridge Diversion Tunnel, Log Cabin Diversion Dam, and Camptonville Diversion Tunnel in their respective environmental documents.

Table 3.2-2 on page 19 lists the abundance of fish collected via electrofishing at two sites on Oregon Creek. In 2012 and 2013, 72 and 266 individual fish were recorded at the site above Log Cabin Diversion Dam, respectively. The survey site below Log Cabin Diversion Dam recorded 2,266 individuals in 2012 and 1,430 individuals in 2013. Assuming that the habitat above and below the dam are of equal suitability, the abundance discrepancy between the two locations could relate to Log Cabin Diversion Dam and Camptonville Diversion Tunnel operations. Accordingly, the difference in abundance may indicate entrainment upstream of Log Cabin Diversion Dam.

The Lohman Ridge Diversion Tunnel diverts water from the Middle Yuba River into Oregon Creek. Inflow from the Lohman Ridge Diversion Tunnel could be disorienting fish and increasing the likelihood of entrainment into Camptonville Diversion Tunnel.

**Incomplete Interim Technical Memorandums:**

1. Several of the Interim Technical Memorandums are not complete. Consequently it is not possible for the State Water Board to fully review and provide comments on these incomplete studies/memorandums. These reports include: 1) *Fish Behavior and Hydraulics*, 7.11; 2) *Radio Telemetry*, 7.11a; 3) *Recreational Flows*, 8.2; and 4) *Fish Stranding* 7.13. When the studies have been completed State Water Board staff plan to provide comments, as needed.

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<sup>4</sup> River Mile