UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Yuba County Water Agency	**)**	**Project No. 2246-065**

YUBA COUNTY WATER AGENCY'S RESPONSES TO COMMENTS MADE DURING THE AUGUST 29, 2018 10(j) MEETING

On August 29, 2018, the Federal Energy Regulatory Commission ("FERC" or "Commission") staff held a Federal Power Act ("FPA") Section 10(j) meeting[1] with federal and state fish and wildlife agencies to discuss outstanding differences between those agencies' recommendations and FERC's Draft Environmental Impact Statement ("DEIS").[2] Representatives of Yuba County Water Agency ("YCWA"), as the licensee of the Yuba River Development Project ("Project"), also attended the meeting as did other resource agencies and non-governmental organizations. A transcript of the meeting was subsequently made available.[3] The purpose of this filing is to correct the record and otherwise respond to certain factual assertions by the Section 10(j) fish and wildlife agencies during the course of the meeting, in particular assertions by the U.S. Fish and Wildlife Service ("USFWS") and California Department of Fish and Wildlife ("CDFW").

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1 16 U.S.C. § 803(j)(1) (2012).

2 Draft Environmental Impact Statement for Hydropower License, Yuba River Development Project, Project No. 2246-065 (issued May 30, 2018) ("DEIS").

3 Transcript of the 8/29/2018 scooping meeting held in Sacramento California re the Yuba River Development Project, Project No. 2246-065 (issued Oct. 22, 2018) ("Transcript").

I. RESPONSE TO SECTION 10(j) MEETING COMMENTS

A. Physical Habitat Improvements

1. There is No Project Nexus to the Degraded Lower Yuba River Floodplain.

CDFW and USFWS in their Section 10(j) recommendations have attempted to create a linkage between Project operations and degraded habitat conditions in the lower Yuba River. Consequently, they have proposed that the Project be required to provide significantly higher instream flows and pay for substantial physical habitat enhancements on the lower Yuba River. During the August 29 meeting, USFWS and CDFW continued to maintain that the Project stores (and thus reduces) peak winter and spring flows that provide inundation of the floodplain (i.e., the area along the lower Yuba River that is inundated at flows between 5,000 cubic feet per second ("cfs") and 21,000 cfs) and the bank ecotone (i.e., the transition from aquatic habitat to terrestrial habitat along the river bank and in the lower Yuba River, from the top of the baseflow channel to the edge of the floodplain).[4] According to the agencies, this results in adverse impacts to riparian vegetation recruitment and survival, as well as a reduced amount of juvenile salmonid rearing habitat.[5]

YCWA does not agree that flow-related changes associated with the Project during periods of peak flow events have any biologically meaningful effects on riparian vegetation or juvenile rearing habitat in the lower Yuba River. YCWA agrees with

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[4] Burman, S. G. and G. B. Pasternack. 2017. Riparian Canopy Abundance, Distribution and Height on the Lower Yuba River in 2008. Prepared for the Yuba Accord River Management Team. University of California, Davis, CA, *available at* http://www.yubaaccordrmt.com/Studies%20%20Reports/Riparian/UCDR36_LYR_UCDriparianreport_20170423.pdf.

[5] Transcript at 30, 42, 56.

FERC's conclusion in the DEIS that there is no Project nexus to the degraded lower Yuba River floodplain,[6] and neither CDFW nor USFWS provided any new information at the August 29 meeting to demonstrate otherwise.

The agencies' "nexus" argument is based almost entirely on the graphs and tables presented in the USFWS's slides 29 and 30 from the August 29 meeting.[7] These graphs and tables show estimated reductions in "acre-days" of inundation from February 1-June 15 due to Project operations. The USFWS analysis found, for Schedule 1 years, a median 29 percent reduction in cumulative acre days ("CAD") when comparing the With-Project scenario to the Without-Project scenario. USFWS then concluded that the effects of a 29 percent reduction in CAD equates to effects on 29 percent of the floodplain, leading to the USFWS recommendation that YCWA implement riparian plantings on 29 percent (251 acres) of the floodplain (866 acres in the floodplain filling flow area).

The fundamental flaw in this analysis is that it lacks any methodology or data to calculate changes in actual lost physical salmonid rearing habitat or any causal link between reductions in peak winter and spring flows and changes in riparian vegetation abundance. It is simply not a valid or generally accepted approach to ignore other physical habitat characteristics, like substrate, velocity, depth, or cover, and instead to just assume that any inundated floodplain or ecotone constitutes salmonid juvenile rearing habitat. The USFWS approach also does not include an analysis of the specific flows that result in "disconnection" of off-channel habitat from the main Yuba River channel, or any evidence that off-channel areas would provide habitat suitable for

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[6] DEIS at 3-245 and 5-12.

[7] *See* Agency Section 10(j) Meeting Presentations for the Yuba River Development Project, Project No. 2246-065 (issued Sept. 14, 2018) ("Agency Meeting Presentations").

juvenile rearing if connected. Thus, YCWA does not agree with the concept that a reduction in acre-days of inundation is an adverse impact.

Further, as YCWA previously has pointed out, USFWS has never provided any back-up data or calculations to support the results presented in slides 29 and 30.[8] Even taking the results at face value, equating a percentage reduction in acre-days (an area and time metric) to a mitigation amount equal to that same percentage but using area only (without a time component) is illogical. Finally, the Project's reduction of inundation of an unvegetated, barren floodplain that was mostly un-vegetated even before the Project was constructed provides no equitable basis for a requirement to lower the floodplain and plant the lowered area. The mitigation would be totally disproportionate to the Project impact.

In a filing with FERC, USFWS provided answers to FERC's follow-up questions on the CAD analysis.[9] In response to FERC's question whether there is any analysis that develops a relationship between CAD and acres of riparian vegetation, USFWS did not identify any such analysis, but instead acknowledged that the "CAD serves as a proxy to quantify how many acres should be planted" to mitigate for Project effects.[10] With no established relationship between CADs of inundation and actual acres of riparian vegetation, and no means of quantifiably demonstrating that the Project has adversely affected downstream riparian communities in consideration of the plethora of historical

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[8] Response of the Yuba County Water Agency to Comments, Recommendations, Preliminary Terms and Conditions, and Preliminary Fishway Prescriptions at 63, Project No. 2246-065 (filed Oct. 9, 2017) ("October 2017 REA Response").

[9] USFWS Response to FERC's Request for Clarification Regarding Inundation Analysis Conducted to Support Section 10(j) Recommendations for the Yuba River Development Project, Project No. 2246-000 (filed Oct. 2, 2018).

[10] *Id.* at 4.

anthropogenic impacts from other, non-flow sources (e.g., hydraulic mining and gold dredging), the claim that a 29 percent reduction in cumulative acre-days of inundation equates to a mitigation requirement of 29 percent of the entire lower Yuba River floodplain is simply unfounded.[11]

2. The Project Enhances Salmonid Habitat in the Lower Yuba River.

YCWA believes that the USFWS and CDFW recommendations for restoring lower Yuba River habitat have lost sight of the extensive fishery habitat benefits the Project provides to the lower Yuba River. Not only are reductions in peak flows necessary consequences of the Project's flood control and water storage operations, but subsequent releases of water stored in New Bullards Bar Reservoir provide higher flows and colder water temperatures, which provide significant benefits to spring-run Chinook salmon over-summer adult holding, spring-run and steelhead over-summer juvenile rearing, and spring-run and fall-run Chinook salmon fall spawning. As FERC has recognized, these are substantial enhancements to lower Yuba River fisheries conditions compared to the Without-Project conditions.[12] These releases consume a significant portion of the water stored by the Project and provide flows that are higher than the

[11] YCWA continues to question how USFWS arrived at the mitigation amount of 251 acres. For example, using USFWS's Table A in its October 2 filing, the Without-Project median inundation is 11,693 acre-days. *Id.* at 7. Twenty nine percent of this value is 3,391 acre-days (we note that the data listed in USFWS's Table A for median does not equate to a 29 percent reduction between the Without-Project value of 11,693 and "YRDP" value of 7,216, a 38 percent reduction). To "fully" mitigate for this reduction by planting an area that would result in 3,391 acre-days of inundation in Schedule 1 years, selecting an area for planting that inundates at a flow of at least 2,500 cfs (which is a flow that is achieved in Schedule 1 years from February to June 15th) an average of 117 days per year would require planting 29 acres (117 days times 29 equals 3,393) not 251 acres, or about an order of magnitude less than that proposed by CDFW and USFWS.

[12] DEIS at 3-150 to 3-153, 3-195, 3-201. *See also* Yuba County Water Agency's Amendment to Final License Application ("Amended FLA"), Ex. E - Applicant-Prepared Draft Biological Assessment for Central Valley Spring-Run Chinook Salmon, Central Valley Steelhead and North American Green Sturgeon at BA6-192 to BA6-194 ("APDBA"), Project No. 2246-065 (filed June 5, 2017).

natural flows during some portions of all years, and most of the time in the driest years. The examination of whether the Project affects salmonid rearing habitat and riparian vegetation along the lower Yuba River should not end with reviewing changes in peak flows or gross inundation areas due to the Project. Rather, a complete examination of all Project effects on lower Yuba River flows demonstrates that the changes in the flow regime resulting from the Project have overall positive effects on salmonids.

During the August 29 meeting, a USFWS representative commented that "none of the agencies have said the Yuba [A]ccord is good" for salmon, but rather that "the Yuba [A]ccord was a good placeholder while we studied it."[13] This statement is belied by the unambiguous statements and actions of the USFWS, National Marine Fisheries Service ("NMFS"), and CDFW at the time these agencies recommended to the State Water Resource Control Board ("SWRCB") that the SWRCB adopt them. The agencies' recommendation was based on their participation in the process of development, analysis, implementation, monitoring, and evaluation of the Yuba Accord and resultant flows and water temperatures, following which, SWRCB determined that the Yuba Accord flows were protective of lower Yuba River fishery resources.[14]

The Yuba Accord resulted in three separate awards for the collaborative, science-based process that led to the current instream flow requirements, including a 2009

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[13] Transcript at 134.

[14] SWRCB, Revised Water Right Decision 1644 at 172 (July 16, 2003), *available at* https://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/decisions/d1600_d1649/wrd1644revised.pdf ("The fishery protection measures established in this decision constitute a physically and financially feasible means of protecting public trust resources of the lower Yuba River while continuing to provide sufficient water for other beneficial uses."); SWRCB, Corrected Order WR 2008-0014 at 53 (May 20, 2008), *available at* https://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/orders/2008/wro2008_0014corrected.pdf ("The Petition for Modification, as conditioned, will provide a level of protection for fisheries resources in the Lower Yuba River during the term of the Yuba Accord Fisheries Agreement that is equivalent to, or better than, that which is provided by RD-1644.").

"Governor's Environmental and Economic Leadership Award," California's highest environmental honor. Key statements from CDFW, NMFS, USFWS, and the U.S. Environmental Protection Agency supporting the Yuba Accord include the following excerpts:

1. Policy Statement of CDFW regarding the Petition before the SWRCB for the Yuba Accord (December 5, 2007):[15]

> The Department was involved throughout the process that led to the proposed Lower Yuba River Fisheries Agreement (Fisheries Agreement), an element of the proposed Yuba Accord. Department staff actively participated in the work that led to the development of the proposed Yuba River instream flow schedules that are a key element of the Fisheries Agreement.
> . . .
>
> The Department plans to actively participate on the River Management Team for the Fisheries Agreement. The Department believes that the EIR/EIS analysis done for the Yuba Accord demonstrates that the comprehensive Accord agreements, as a package, will provide an equivalent or better level of protection for fish in the Lower Yuba River relative to the regulatory requirements currently in place.
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> The Department supports the implementation of the Water Purchase Agreement that is a part of the Yuba Accord as the financial element helping to make the Yuba Accord a success.

2. Policy Statement of NMFS regarding the Petition before the SWRCB for the Yuba Accord (December 5, 2007):[16]

> . . . NMFS has been an active participant in the process that led to the Yuba Accord, including the Lower Yuba River Fisheries Agreement. NMFS was actively engaged in development of the flow schedules, River Management Team provisions, and biological studies program that are all key elements of the Yuba Accord package.
>
> NMFS believes that implementation of the provisions of the Accord's Fisheries Agreement will provide a level of protection

[15] CDFW's Policy Statement is attached hereto as Exhibit 1.

[16] NMFS's Policy Statement is attached hereto as Exhibit 2.

for salmonids and green sturgeon in the lower Yuba River that is equal to or greater than those provided under RD-1644.

. . .

In addition to the specific benefits of the Yuba Accord to Yuba River fisheries, NMFS believes that the basic concept underlying the Accord and the cooperative process through which the Accord was developed represent a unique and important breakthrough in the critical interface of fisheries protection and water management in the State of California. We believe that successful implementation of the Yuba Accord could act as a template for future, similar agreements across the state resulting in significant benefits to both the fisheries resources and the water users of California.

3. Policy Statement of USFWS regarding the Petition before the SWRCB to Revise RD-1644 to Implement the Yuba Accord (December 5, 2007):[17]

The Service was involved throughout the process that led to the Lower Yuba River Fisheries Agreement (Fisheries Agreement), an element of the Accord. Service staff participated in the work that led to the development of the proposed Yuba River instream flow schedules that are a key element of the Fisheries Agreement. The proposed Accord has been developed through discussions among the Petitioner and numerous irrigation, environmental, and fisheries interests and State and Federal agencies.

4. U.S. Environmental Protection Agency's "Lack of Objection" comments on the Accord DEIS (December 7, 2007):[18]

We commend the signatories and participants of the Yuba Accord for the comprehensive program to provide increased instream flows to benefit fisheries in the Lower Yuba River. The three Yuba Accord components - Fisheries Agreement, Conjunctive Use Agreements, and Water Purchase Agreement - provide an elegant solution in providing increased instream flows, water for these flows, and revenues to implement the Accord and long-term monitoring. EPA also commends the provision for a long-term guaranteed water supply for the Environmental Water Account.

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[17] USFWS's Policy Statement is attached hereto as Exhibit 3.

[18] EPA's "Lack of Objection" Comments are attached hereto as Exhibit 4.

> Of note is the thorough environmental documentation of existing conditions, legal and water supply context for the project area, analysis methodology and assumptions, detailed analysis of alternatives compared to different no action baselines, cumulative impact analysis induced growth analysis, and description of climate change considerations.

Similarly, the DEIS correctly determined that YCWA's proposed mitigation measures, including the Yuba Accord minimum instream flows, "would adequately protect or maintain aquatic habitat in the project-affected reach."[19]

Data and analyses that examine the complete spectrum of Project effects on flows and water temperatures, and how these changes affect juvenile anadromous salmonid rearing habitat, were the focus of the FERC-approved studies and submittal of the Applicant-Prepared Draft Biological Assessment ("APDBA"). For example, Technical Memorandum 6-2 (Part 1, page 73) includes tables that list the percentages of days inundated at specified flow ranges for all months for the full range of modeled flows. These tables show that the Project compared to the Without-Project condition reduces the number of days with flow above 5,000 cfs (at the Smartsville Gage) during May by 20 percent, increases the number of days with flows in the 1,000 to 5,000 cfs range by 25 percent, and reduces the number of days with flows below 1,000 cfs by 6 percent. During June, the Project reduces the number of days with flow above 5,000 cfs by only 1 percent, but increases the number of days with flows in the 1,000 to 5,000 cfs range by 38 percent, and reduces the number of days with flows below 1,000 cfs by 38 percent. Overall, the Project reduces the occurrence of low flows (< 1,000 cfs) and increases the

[19] DEIS at 5-19; *see also id.* at 3-195 ("YCWA's proposed minimum flows (as modified by staff) should adequately protect salmon and steelhead downstream of Englebright Dam."), 3-206 ("The Yuba Accord is one of the most comprehensive plans for the recovery of anadromous salmonids in the Yuba River Basin.").

occurrence of flows from 1,000 cfs up to bankfull flows (5,000 cfs) during late spring, the result being substantially higher amounts of juvenile salmonid rearing habitat.

The substantially higher flows and lower water temperatures under the Project compared to the Without-Project condition during the summer and fall, which provide significant benefits to spring-run Chinook salmon, steelhead, and fall-run Chinook salmon, cannot occur without storage of water during other times of the year. A simple consideration of peak flows during one specific time of the year, such as that promoted by CDFW and USFWS, does not begin to capture the entirety of Project effects, including the significantly beneficial effects.

YCWA also provided analyses of juvenile salmonid rearing habitat availability under With- and Without-Project conditions in its APDBA using the commonly accepted Physical Habitat Simulation component of the Instream Flow Incremental Methodology in order to quantify habitat suitability and availability expressed as Weighted Usable Area ("WUA").[20] Those analyses demonstrated that, by far, the greatest amount of salmonid juvenile rearing habitat occurs within the main channel and the bank ecotone at flows equal to or less than bankfull flows (that is, at flows under 5,000 cfs). Under the Environmental Baseline, a long-term average of 224 acres of WUA for spring-run Chinook salmon juvenile rearing are provided by the main channel and bank ecotone over the 41-year period of evaluation, compared to a long-term average of 178 acres under the Without-Project condition. In this regard, the USFWS has provided no scientific support for its statement at the August 29 meeting that only ½ acre of year-

[20] APDBA at BA6-116 to BA6-127.

round, optimal juvenile salmonid rearing habitat exists currently in the lower Yuba River.[21]

3. There Are No Project Adverse Impact on Riparian Vegetation in the Lower Yuba River.

Technical Memorandum 6-2 documents the study of riparian habitat downstream of Englebright Dam, and thoroughly examines Project effects on riparian vegetation. Technical Memorandum 6-2 concludes, in part, that "Historical aerial photograph analysis indicates that vegetation cover has increased over time, with short-term decreases associated with stochastic flow events, which are normal for riparian systems, and anthropogenic channel changes."[22]

Because YCWA's Study 6-2 (Riparian Habitat Downstream of Englebright Dam) found a general trend of similar or increased vegetation abundance from pre-Project conditions, the physical evidence is that Project operations have not significantly degraded riparian vegetation and habitat. As noted by USFWS at the August 29 meeting[23] and in the USFWS Section 10(j) meeting presentation slides,[24] YCWA has proposed license conditions in its Amended FLA that would further support riparian vegetation development through limits on springtime flow reductions to promote seedling growth.

The reductions of peaks in spring flows that occur due to Project operations have not reversed, halted or reduced the recovery of riparian vegetation along the lower Yuba

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[21] Transcript at 48-49.

[22] Technical Memorandum 6-2: Riparian Habitat Downstream of Englebright Dam at 87, Project No. 2246-042 (filed Apr. 29, 2014).

[23] Transcript at 24-25.

[24] *See* Agency Meeting Presentations, Slides Shown by USFWS.

River, which has been overwhelmingly impacted by the effects of upstream hydraulic mining, and long-term dredging of those deposits. Contrary to the qualitative and subjective statements of CDFW and USFWS representatives during the August 29 meeting, a systematic study of the subject demonstrated that coincident with the commencement of Project operations in 1970, cumulative riparian recovery along the lower Yuba River has accelerated, except at the two relatively short uppermost sites, which are within a highly constrained canyon with bedrock substrate and subject to repeated scouring high flows.[25]

The CDFW and USFWS proposal for 340 acres of floodplain grading, lowering, and re-planting would necessitate the destruction of about 40 percent of the existing floodplain (866 acres) and adjacent riparian vegetation within the bank ecotone. (This is in addition to the 251 acres on which the agencies are proposing to require YCWA to install riparian plantings in the floodplain.) The basis for this proposed "mitigation" is entirely lacking, given that there has been no evidence presented that flows resulting from the Project have caused any degradation of the riparian habitat along the lower Yuba River. Moreover, the practicality of this recommendation is dubious at best. The land is outside of the current Project boundary and under private ownership. Also, given the massive amount of ground disturbing that would be involved in such an effort, numerous federal and state permits would be required and may be costly and difficult to obtain.

[25] River Management Team, Aquatic Resources of the Lower Yuba River – Past, Present & Future, Yuba Accord Monitoring and Evaluation Program, Draft Interim Report at 3-13 (Apr. 2013), *available at* http://www.yubaaccordrmt.com/Interim%20ME%20Report/ME%20Interim%20Report_Draft_April%202013.pdf ("2013 RMT Draft Interim Report").

4. The Sustainability of Habitat Enhancements Is Unproven.

CDFW and USFWS's rationale statements[26] rely upon conceptual restoration projects described in cbec (2010)[27] and cbec (2013)[28] to support claims that habitat enhancement projects in the lower Yuba River are feasible. However, none of the habitat enhancement concepts described in cbec (2010) and cbec (2013) has been fully evaluated regarding fluvial geomorphologic sustainability, and YCWA is not aware of any project-specific geomorphic analyses or persistence analyses of these concepts. Review of available project-specific documentation for projects (i.e., Hammon Bar, Yuba River Canyon Salmon Habitat Restoration Project, Hallwood Floodplain and Side Channel Restoration Project) currently underway or completed in the lower Yuba River also does not indicate that any sustainability studies were conducted.

The USFWS DEIS Comments requested that FERC review the Hallwood Project Environmental Assessment ("EA") (USFWS and Yuba County 2017) to "see how restoration projects can be designed to address safety of infrastructure and property as well as implement best management practices and other measures to mitigate these potential impacts to less than significant."[29] However, the EA is a planning document, and does not constitute a rigorous, engineering-based, technical risk assessment of infrastructure stability, flood risk, or hydraulic and geomorphic sustainability. The

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[26] Transcript at 50-52, 59, 62-63, 64, 72, 75-76, 79.

[27] CBEC, Inc. Eco Engineering et al., Rehabilitation Concepts for the Parks Bar to Hammon Bar Reach of the Lower Yuba River (Nov. 2010), *available at* https://yubariver.org/wp-content/uploads/2010/12/cbec_LYR_Rehabilitation_Concepts_Final_Report.pdf.

[28] CBEC, Inc. Eco Engineering, Hydrologic and Geomorphic Analysis to Support Rehabilitation Planning for the Lower Yuba River from Parks Bar to Marysville (Dec. 2013), *available at* https://yubariver.org/wp-content/uploads/2013/12/2013_cbec_LYR_Rehabilitation_Planning_Report.pdf.

[29] Department of the Interior Comments on the Draft Environmental Impact Statement for the Yuba River Development Project at 5, Project No. 2246-065 (filed July 30, 2018).

Hallwood Project EA does contain an appendix with a geomorphic analysis,[30] which concluded the following:

> [A]reas of vulnerability along the NTW [("North Training Wall")] were identified. The following concerns have been conveyed to Teichert, the landowner, and areas of vulnerability have been highlighted and presented for their consideration.
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> …
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> The dimensions (i.e., height and width) and erodibility of the NTW raises significant concerns regarding its potential for failure and the flooding that could result. Perhaps even more problematic is the potential capture by the Main Channel of the large dredged ponds immediately north of this training wall. These potential problems could have severe consequences for aggregate extraction activities, adjacent landowners and the river itself (i.e., geomorphic and ecological). This risk is present (and potentially higher) in the absence of Project condition implementation. Accordingly, the existing NTW should be enhanced to protect it from being eroded and to prevent a connection made to the dredged ponds to the north. This work is beyond the scope of the Project.[31]

In response to YCWA's comments on the Hallwood Project EA, cbec conducted additional hydraulic modeling analyses (cbec 2017),[32] and cbec's conclusions regarding scour potential as a function of Shields stress indicated that "[a]t the North Training Wall, increases in Shields stress adjacent to currently at-risk areas will be mitigated for."[33] However, the document provides no indication of how that impact was going to be "mitigated for."

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[30] Hallwood Side Channel and Floodplain Restoration Project on the Lower Yuba River, App. A – Hallwood Side Channel and Floodplain Restoration Project Basis of Design at 41 (2017), *available at* http://www.co.yuba.ca.us/Departments/Community%20Development/Planning/documents/Hallwood%20Floodplan%20Restoration/Appendix%20A/1_Hallwood_BOD.pdf.

[31] *Id.* at 40-41.

[32] CBEC, Inc. Eco Engineering, Hallwood Side Channel and Floodplain Restoration Project Basis of Design, Attachment E – Additional Hydraulic Modeling Analyses at 4 (Nov. 29, 2017) Response to Comments from MBK Engineers on Behalf of YCWA at 4, *available at* http://www.hallwoodproject.org/project-documents/.

[33] *Id.*

CDFW and USFWS also have referred to the Hammon Bar Project as being representative of a sustainable project. However, recent riparian planting success at Hammon Bar may not be representative of future conditions because plantings occurred during a historically severe drought, which allowed several years for seedling roots to become established before higher river flows occurred again. Because of the unusual drought-related circumstances recently experienced, it is questionable whether the Hammon Bar Project should be used as a representative example of a sustainable project.

No long-term empirical evidence of persistence has been documented for habitat enhancement projects on the lower Yuba River. Of the two other projects referenced by CDFW and USFWS, one has not been built yet (Hallwood Floodplain and Side Channel Restoration Project) and the other project just finished construction during the summer of 2018 (Yuba River Canyon Salmon Habitat Restoration Project).

5. Habitat Restoration and Enhancement Measures Would Be Costly and Land for Such Projects Is Limited.

CDFW and USFWS contend that habitat restoration and enhancement measures would be relatively inexpensive. YCWA disagrees.

For one, some of the projects (Hammon Bar, Yuba River Canyon Salmon Habitat Restoration Project) that were used by CDFW and USFWS as examples of relatively low cost projects, volunteer labor was used, and the costs associated with work performed by volunteers was not included in the total costs.

Second, CDFW and USFWS contend that there is evidence demonstrating sufficient land is available for YCWA to implement habitat enhancements, and that land

owner access is confirmed.[34] However, CDFW and USFWS noted that it took "years" to develop the Yuba River Canyon Salmon Habitat Restoration Project,[35] including multiple rounds of funding from the Anadromous Fish Restoration Program ("AFRP") and CDFW and USFWS have not provided any detailed evidence of inexpensive available land. A June 9, 2018 letter to Pacific Gas and Electric Company ("PG&E") requesting funds from the Narrows Enhancement Fund for the Yuba River Canyon Salmon Habitat Restoration Project refers to "*nearly 10 years of development and negotiations for access…*"[36] Similarly, work on the Hallwood Floodplain and Side Channel Restoration Project has involved several years of ongoing discussions with landowners, and the implementation phase for this project still has not begun. In fact, the project had to be re-conceptualized and its design changed after the high flow events that occurred during 2017, which significantly altered the planform geometry of the channel, including erosion and loss of the Middle Training Wall.[37]

The need for negotiations for access involving willing landowners, which took nearly a decade for one project, should be carefully considered before any conclusions are made about cost efficiency, ability to address real estate issues, or timeliness of implementation for large-scale habitat enhancement initiatives.

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[34] *See* Comment by California Department of Fish and Wildlife on DEIS and Preliminary Determination of Inconsistency for Yuba River Development Project at 35, Project No. 2246-065 (filed July 30, 2018) (Table 2 (no source provided)) ("CDFW DEIS Comments").

[35] Transcript at 52.

[36] Letter from Neil Wong, PG&E, to Kimberly Bose, FERC, Enclosure 1 at 1, Project No. 1403-000 (filed June 22, 2018) (emphasis added).

[37] U.S. Bureau of Reclamation, Fisheries Charters Appendix B – 2019 Annual Work Plan at 76, *available at* https://www.usbr.gov/mp/cvpia/docs/2019-annual-workplan-appendix-b.pdf; Cramer Fish Sciences et al., Hallwood Side Channel and Floodplain Restoration Project: Proposed Change to the In-Water Work Window and Number of Temporary Crossing Locations, *available at* http://www.co.yuba.ca.us/departments/Community%20Development/Planning/documents/Hallwood%20Floodplan%20Restoration/Appendix%20E/2_Final_Draft_Hallwood_NMFS_BO_project_changes_proposal.pdf.

6. Simulated Floodplain Experiments Are Irrelevant to the Lower Yuba River.

During the August 29 meeting, a USFWS representative presented a slide (#33), titled "Benefits of Floodplain Rearing," which contained a photo of large and fat juvenile fish (left side of the slide, referencing Faridi 2018) and small and skinny juvenile fish (right side of the slide, referencing Jeffres et al. 2008). There are several problems with USFWS's use of these photographs.

YCWA has been unable to locate the literature citation of Faridi (2018). However, the photograph used in the USFWS presentation was found in a 2015 article titled "Floodplain Sanctuaries for Juvenile Native Fish" by Andrew Rayburn, Director of Science, on the River Partner's website.[38] In addition to the fact that a 2015 photograph is not new information, the large and fat juvenile fish in the 2015 photograph were from a four-week long floodplain rearing experiment conducted in a flooded three-acre grain field on the San Joaquin River floodplain during February of 2015. The fish shown in the second photograph (right) in the USFWS presentation were juvenile fish placed within enclosures located in flooded terrestrial herbaceous vegetation. Other studies conducted in the Central Valley which placed juvenile anadromous salmonids on inundated rice fields also have shown high growth rates and robust individuals.[39]

Although these "simulated floodplain" experiments show that certain conditions can cause juvenile fish to grow faster, it is highly unlikely that floodplain rearing along the lower Yuba River would have results similar to those that occurred in pens on highly

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[38] Andew Rayburn, Floodplain Sanctuaries for Juvenile Native Fish (2015), *available at* https://www.riverpartners.org/wp-content/uploads/2018/08/Journal_2015_v12n2.pdf.

[39] Jacob Katz et al., The Experimental Agricultural Floodplain Habitat Investigation at Knaggs Ranch on Yolo Bypass 2012-2013 (Oct. 1, 2013), *available at* https://watershed.ucdavis.edu/files/biblio/Knaggs%202013%20final%20BOR%20report_0.pdf.

productive, flooded organic grain fields, or even in pens in flooded terrestrial herbaceous vegetation. The characteristics of the floodplain of the lower Yuba River are very different from the two study sites referenced in the CDFW and USFWS presentations. The lower Yuba River floodplain is comprised of inorganic unconsolidated alluvium, and does not include the organic materials which make other systems highly productive. CDFW and USFWS's suggestion that similar results (i.e., large, fat fish) would occur as a result of increased inundation of the floodplain along the lower Yuba River is unproven and most likely incorrect.

B. Minimum Streamflows in Lower Yuba River

1. There Is No Project Adverse Impact on Bank Ecotone in the Lower Yuba River.

CDFW and USFWS contend that their flow proposals are necessary because they would provide a greater quantity of inundated floodplain habitat (newly characterized during the August 29 meeting as "bank ecotone"), which would result in a greater amount of juvenile salmonid rearing habitat, relative to the amounts that would occur with the flows under the Amended FLA or the DEIS.

As previously described, bank ecotone is defined as the transitional area from the top of the baseflow channel to the edge of the floodplain.[40] In terms of hydrology, the bank ecotone zone in the lower Yuba River generally occurs within the range of baseflow (880 cfs upstream of Daguerre Point Dam, and 530 cfs below Daguerre Point Dam) up to bankfull flow (5,000 cfs). In the lower Yuba River, flows that inundate the bank ecotone

[40] *See* Burman & Pasternack, *supra* note 4.

zone are mostly within the controllable ranges[41] of the Project.[42]

During the August 29 meeting, a USFWS representative stated "this was based on an analysis of how the project reduces that springtime inundation of the bank ecotone and floodplain areas"[43] and presented a slide that stated "how the Project reduces inundation of bank ecotone and floodplain areas."[44] These statements mischaracterize inundation of the bank ecotone area during the February to June period under Project operations. When comparing the modeling scenarios of YCWA's Amended FLA proposed flows[45] to the Without Project scenario for water year 1970 to 2010, the average annual number of days with flows that inundate within the bank ecotone under Without-Project conditions is 95 days and under Amended FLA proposed flow operations is 108 days, a 14 percent increase in days of inundation under the Amended FLA proposed flow scenario. The average flow rate under Without-Project scenario during days when the flow is within the bank ecotone area in February to June is 2,732 cfs and under Amended FLA proposed flow conditions is 2,641 cfs, a reduction of 3 percent in average flow rate. Overall, under Project conditions with the Amended FLA proposed flows during the February to June period the bank ecotone area would be inundated significantly more often at a slightly reduced average flow rate.

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41 PG&E's Narrows 1 Powerhouse has a maximum release capacity of 730 cfs, and YCWA's Narrows 2 Powerhouse has a maximum release capacity of 3,400 cfs.

42 Burman & Pasternack, *supra* note 4, at 22.

43 Transcript at 29.

44 Agency Meeting Presentations, Slides Shown by USFWS at 13.

45 *See* October 2017 REA Response, App. 6, Att. A, Scenario 12.

2. The Agencies' Flow Proposal Would Not Enhance Floodplain Inundation.

CDFW's statements during the August 29 meeting that its recommended flow regime would increase springtime floodplain inundation[46] are not correct. Flows associated with CDFW's recommended flow regime would not exceed the bankfull flow of 5,000 cfs and, therefore, would not inundate the floodplain. Rather, the higher flows under CDFW's proposal would simply provide more flow within the main channel of the lower Yuba River.

During the August 29 meeting, CDFW reiterated and emphasized its DEIS Comments which stated: "Our flow and restoration measures were designed to work as a package. Restoration to improve side channel, off channel, and low floodplain habitat, coupled with achievable flows that will wet these restored habitats during the wetter years."[47]

From a practical perspective, if the intent of CDFW and USFWS was to improve bank ecotone inundation, then it is unclear why they did not propose habitat enhancements that could be implemented under the existing flow regime, rather than proposing habitat enhancements designed to require higher flows. Their undocumented, unreviewed methodology does not explain how the thinly supported benefits of their proposal for much higher flows in the spring would outweigh the adverse effects of necessarily lower flows and higher water temperatures in the summer and fall. The perceived need for higher flows during wetter years is particularly troubling because

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[46] Transcript at 80, 81, 83, 102-106.

[47] CDFW DEIS Comments at 10-11.

CDFW and USFWS have failed to quantitatively demonstrate that the existing lower Yuba River flow regime is problematic. Also, YCWA's analysis[48] shows that:

- The CDFW and USFWS proposal would result in fewer days of inundation of the floodplain (the area that would be inundated at lower Yuba River flows above 5,000 cfs) of the lower Yuba River from Englebright Dam to Daguerre Point Dam than under Base Case conditions. Modeling results showed that the CDFW and USFWS recommended revisions to Condition AR3 would reduce the average number of days of inundation for all years from 25.5 to 24.8, and would reduce the median number of days of inundation for all years from 11 to 9, an 18 percent reduction.
- The CDFW and USFWS proposal would result in a slight decrease in the frequency of inundation of the floodplain in wetter years. The CDFW and USFWS recommended revisions to Condition AR3, for Schedule 1 and 2 years (which are 34 of the 41, which is 83 percent, of years modeled), would result in a 1 percent and 2 percent reduction in floodplain inundation expressed in acre-days for the average and median of these years, respectively, compared to the Base Case. The Amended FLA Condition AR3 flows would result in no change from the Base Case for these same years.
- The CDFW and USFWS recommended modifications to Condition AR3 would not significantly increase inundation of the areas USFWS denoted as "ecologically relevant areas." The differences in resulting inundation acre-days from the modeling analysis, between the Base Case and the CDFW/

[48] October 2017 REA Response, App. 7 at 21-22.

USFWS recommended modifications to Condition AR3 for the average of all years, and the average and median of Schedule 1 and 2 years, were less than 2 percent of the number of inundation days under the Base Case.

YCWA previously evaluated potential effects of the Project on bank ecotone areas (i.e., in-channel juvenile rearing habitat) in the lower Yuba River under Without-Project conditions, the Environmental Baseline (Yuba Accord) and the Amended FLA conditions.[49] For the in-channel analysis, amounts of juvenile rearing WUA for spring-run Chinook salmon and steelhead were calculated for simulated river flows up to 5,000 cfs, which generally represents the bankfull flow in the lower Yuba River.

Relative to the Without-Project scenario, the Environmental Baseline (Yuba Accord) provides more rearing habitat availability over the entire exceedance distribution, and provides substantially more habitat over about the lower 40 percent of the distribution for both juvenile spring-run Chinook salmon (Figure 6.5-19 in the APDBA) and for steelhead (Figure 6.5-23 in the APDBA).

YCWA's Project in the Amended FLA and the Environmental Baseline (Yuba Accord) scenarios provide nearly identical amounts of habitat over the entire distribution for juvenile spring-run Chinook salmon (see Figure 8.3-4 in the APDBA) and steelhead (see Figure 8.3-9 in the APDBA) representing all 41 years of the period of evaluation. Based upon these beneficial results, the Project would not contribute to the "degraded" condition of riparian vegetation along the banks of the lower Yuba River, nor would it contribute to adverse effects on juvenile rearing habitat. Consequently, the DEIS

[49] APDBA at BA6-116 to BA6-121, BA6-125 to BA6-129, BA8-10 to BA8-11, BA8-13 to BA8-15, BA8-29 to BA8-31, and BA8-33 to BA8-35.

correctly concluded that there is "no nexus between the [] project and the need for floodplain enhancement in the lower Yuba River."[50]

3. The Agencies' Section 10(j) Flow Proposals Are Not Designed to Work within YCWA-Identified Sideboards.

During the August 29 meeting, a USFWS representative stated that the agencies "worked within [YCWA's] sideboards to get to flows to provide the benefits as best we could to shore up the Yuba [A]ccord."[51] The statement that the agencies worked within YCWA-identified sideboards to design their Section 10(j) flow proposal is not correct.

YCWA's sideboards for lower Yuba River flows were:

- Annual release volume - at most, only a minimal increase in total annual release volume requirement.
- Carryover Storage - at most, only minimal decreases in carryover storage volumes.
- Compliance - must be able to comply with new or changed permit or license conditions.
- Flexibility - not using New Bullards Bar or New Colgate Powerhouse to mitigate effects on lower Yuba River of uncontrolled inflows from Middle Yuba or South Yuba rivers.
- Water supply reliability - no significant additional reduction in water supply reliability and water deliveries.
- Flow schedule occurrence - no significant change in flow schedule probability of occurrence.
- Water temperature benefits - no overall reduction in water temperature benefits achieved with the Yuba Accord.

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[50] DEIS at 5-12.

[51] Transcript at 134.

YCWA informed relicensing stakeholders, including CDFW and USFWS that their recommended Section 10(j) flows were not within YCWA's identified sideboards on at least five occasions[52] beginning in January 2016. YCWA expressed concerns and provided input on various components of the agencies' flow proposal.

During the January 12, 2016 meeting, YCWA informed CDFW and USFWS that, if their flow proposal were in YCWA's new license, then it: (1) would not achieve most of USFWS and CDFW's stated goals; (2) would result in non-compliance events at least 20 percent of the time; (3) would result in substantial water delivery deficits; (4) would substantially reduce system capability by depleting storage available in dry years; and (5) would cause a fundamental shift in the Yuba Accord purposes, which are to maintain water supply reliability and to provide environmentally-beneficial flows throughout a multi-year drought.

YCWA has attempted to work collaboratively with the agencies, including CDFW and USFWS, to understand their interests, to address their stated objectives, and to provide input regarding YCWA's operational constraints, water supply responsibilities and other regulatory obligations. However, the agencies have not "worked within YCWA-identified sideboards" and instead have generally disregarded YCWA's concerns throughout the negotiation process. More importantly, during this entire process, the agencies have failed to provide any scientific basis to demonstrate that there is a need for any alternative to YCWA's Amended FLA flows, that the USFWS/CDFW flow proposal would accomplish their own stated objectives, or why their redirected impacts would be acceptable.

[52] January 12, 2016, June 2, 2016, June 28, 2016, August 12, 2016, September 28, 2016, October 28, 2016, and November 18, 2016.

4. CDFW and USFWS's Section 10(j) Flow Proposals Are Major Changes, Not Just "Tweaks."

CDFW and USFWS alleged during the August 29 meeting that their flow proposals were just minor "tweaks" to the Amended FLA and DEIS flows.[53] To the contrary, their Section 10(j) flow proposals actually would constitute major changes to the lower Yuba River flow regime, and are not "tweaks" to the Amended FLA flows or to the DEIS flows.

As previously described in YCWA's October 2017 REA Response,[54] CDFW and USFWS's flow proposal would result in numerous unaccounted for, redirected impacts by resulting in overall less suitable water temperature conditions for numerous lifestages of spring-run Chinook salmon, fall-run Chinook salmon, and steelhead in the lower Yuba River.[55] CDFW and USFWS continue to provide no evidence to demonstrate that higher flows would result in juvenile anadromous salmonids staying in the lower Yuba River for longer durations of time. In fact, it is unlikely that providing higher spring flows would alter the species- and lifestage-specific outmigration strategies and timing patterns to which the fish have evolved.

In addition to the biological impacts identified above, YCWA's modeling and analysis have shown that the proposed additional operational restrictions would not provide any significant benefits, and that the restrictions would seriously impair the Project's flexibility to provide water supply when needed.[56] Contrary to unsupported statements that the CDFW and USFWS's flow proposals simply represent minor

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53 Transcript at 86.

54 October 2017 REA Response at 16, 36, 41, and 74.

55 *Id.*, App. 9 at 8-27.

56 *Id.* at 12.

"tweaks" to the lower Yuba River flow regime, YCWA has demonstrated that impacts of their proposed flow changes would be substantial, and that their changes would not achieve the desired benefits.[57]

CDFW and USFWS argue that the Yuba Accord flows, which are substantially the same as the Amended FLA and DEIS flows, need to be changed because of "new data" that have been collected since the Yuba Accord was agreed to in 2007. However, CDFW and USFWS have not actually presented or pointed to any substantial "new data." Rather, what they advocate is to change the carefully developed balance in the Yuba Accord between instream and offstream uses of Project water in a way that would require significantly greater dedications to instream flows. And, as the DEIS correctly concludes,[58] CDFW and USFWS have not demonstrated that their proposed new spring floodplain inundation or conditional winter pulse flows would have any significant benefits to existing lower Yuba River aquatic habitat conditions.

During the August 29 meeting, CDFW and USFWS also implied that the cost of implementing their flow proposal would be low (i.e., a "tweak").[59] YCWA's October 2017 REA Response included analyses of the impacts of CDFW and USFWS's flow proposals, including the impacts to water supply, power generation, and water transfer revenues, and explained that these proposals would require extreme Project operations in some years to maintain the proposed required instream flows.[60] During the August 29 meeting, FERC staff requested additional information from YCWA regarding the costs of

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57 *Id.*, App. 7 at 8-10; *id.*, App. 9 at 4-8.

58 DEIS at 5-13.

59 Transcript at 85-86, 92-94, 97.

60 *See* October 2017 REA Response, App. 9.

implementing CDFW and USFWS's flow proposals. YCWA's September 28, 2018 letter to FERC, and subsequent errata filing on October 18, 2018, provided additional information that tabulated results of analyses for the modeling simulation period of water year 1970 to 2010. This additional information showed that the average annual revenue loss would be $5.2 million and the loss could be as high as $41.7 million in a single year. This additional information also showed that there would be large water supply shortages to farmers in some years that were not dry years, due to the very high wetter year instream flows proposed by the agencies.[61]

5. The So-called "Spring Gap" or "April Gap" Does Not Cause Adverse Impacts.

During the August 29 meeting, a USFWS representative presented an argument that CDFW and USFWS's flow proposals would smooth the "April gap" and would keep juvenile anadromous salmonids in the lower Yuba River for longer periods of time.[62] Presumably, what was previously referenced as a "spring gap"[63] by the agencies is now being referred to as an "April gap."

The CDFW and USFWS arguments regarding the "spring gap" were thoroughly addressed in Appendix 7 of YCWA's October 2017 REA Response.[64] As explained there, FERC should not adopt CDFW and USFWS's proposed spring floodplain inundation flows because: (1) the agencies' flow proposals do not recognize the

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[61] *See* Letter from Curt Aikens, YCWA, to Kimberly D. Bose, FERC, Project No. 2246-065 (filed Oct. 1, 2018).

[62] Transcript at 97.

[63] CDFW's rationale statement of its REA comments states that the recommend condition includes requirements "to avoid a drop in flows prior to the end of the natural spring inundation period ('spring gap')." CDFW Notice of Intervention, Enclosure A: CDFW 10(j) Recommendations at 85, Project No. 2246-065 (filed Aug. 25, 2017).

[64] October 2017 REA Response, App. 7 at 8-9, 13-32.

interactions in the lower Yuba River between flow and physical habitat structure; (2) CDFW and USFWS's rationale for their flow proposal does not demonstrate that the current flow requirements, which are based on the Yuba Accord and reflected in the Amended FLA, adversely affect lower Yuba River salmonid populations, or that CDFW and USFWS's flow proposal would provide any benefits to these populations; (3) CDFW and USFWS's flow proposal actually would decrease the magnitude of floodplain inundation and would not substantially increase juvenile salmonid rearing habitat; and (4) CDFW and USFWS's flow proposal would have very significant water costs of 200,000 acre-feet during Schedule 1 Years and 105,000 acre-feet during Schedule 2 Years.[65]

FERC should not make CDFW and USFWS's suggested changes to YCWA's proposed Condition AR3 for higher minimum flows to address the "spring gap/April gap" for two reasons. First, CDFW and USFWS's flow proposal and their stated objective to avoid a "spring gap" are inconsistent with their other statements favoring a more-natural hydrograph. In the rationale statements for their flow proposal, CDFW and USFWS indicate a general desire for a "more natural hydrograph." In fact, the natural hydrograph of the Yuba River includes a "spring gap." During wetter years, April precipitation is significantly less than February and March precipitation, which results in substantially less runoff in April than in February and March. Spring snowmelt does not peak until mid to late May. The result of this lower April precipitation and the mid to late May snowmelt peak is a significant reduction in runoff in April compared to the February-March and May peak runoff. During moderately wet years when precipitation is heavy during the early to mid-winter time period, significant runoff occurs and the

[65] *Id.* at 29.

reduction in natural runoff during April relative to the peak winter runoff from rainfall and the peak runoff from snowmelt in mid-May is even more pronounced. CDFW and USFWS's proposal for flows to avoid a "spring gap/April gap" would move further away from the natural hydrograph.

Second, CDFW and USFWS's flow proposal for Schedule 1 and 2 years has requirements for high spring flows during April that would be much earlier than normally would occur with the spring peak runoff in such years. The average peak flow of the natural hydrograph of the Yuba River in Schedule 1 and 2 years occurs during mid-to-late May. The need for May flows to avoid a "spring gap" during early May can be eliminated if FERC does not adopt CDFW and USFWS's proposal for higher April flows.[66]

As during previous flow-related negotiation meetings, CDFW and USFWS failed to provide any data, analyses or other evidence during the August 29 meeting to demonstrate that higher flows in the lower Yuba River would retain juvenile anadromous salmonids in the river for a longer duration of time. It is unlikely that providing higher spring flows would alter the species- and lifestage-specific outmigration strategies and timing patterns to which fish have evolved.

During the August 29 meeting, CDFW and USFWS stated that their objective is to provide for larger juveniles during outmigration to increase survival.[67] Their premise apparently is that, if a juvenile salmonid remains in the lower Yuba River for the same amount of time, the more suitable rearing habitat and greater food abundance will cause that juvenile to be larger at the time of emigration. However, this is not necessarily the

[66] *Id.*, App. 7 at 30.

[67] Transcript at 28, 101.

case at all. If a juvenile salmonid was exposed to more suitable rearing habitat and greater food abundance, then it is also possible that the juvenile would grow faster and leave when it was the same size, which would just be earlier in the year.

It also is inappropriate for USFWS and CDFW to focus only on spring flows and juvenile rearing habitat. Different spring-run Chinook salmon and steelhead exhibit several different life history strategies. One strategy involves going out of the lower Yuba River as young-of-year during the spring, and another strategy involves holding over the summer and emigrating from the lower Yuba River during the following fall/winter as much larger individuals. Consequently, in addition to spring flows and habitat, summer flows and summer habitat conditions (particularly suitable thermal conditions) are very important for over-summer rearing juvenile spring-run Chinook salmon and steelhead. The Amended FLA flow proposal provides much higher summer flows (and better habitat) than would occur under Without-Project conditions.

6. USFWS Has Not Demonstrated that Pulse Flows Would Attract Returning Adults or Provide a Cue for Outmigration of Juvenile Spring-run Chinook Salmon.

During the August 29 meeting, USFWS stated that pulse flows would have fish attraction benefits for returning adults.[68] However, USFWS provided no new data, analyses or other evidence during the August 29 meeting to demonstrate that: (1) lack of attraction of adult spring-run Chinook salmon into the lower Yuba River is a problem; (2) lack of attraction of adult steelhead into the lower Yuba River is a problem; or (3) winter pulse flows are necessary for juvenile downstream migration in the lower Yuba River. USFWS also did not provide any data, analyses or information indicating that attraction

[68] Transcript at 100-101, 113.

of spring-run Chinook salmon and steelhead into the Yuba River would be any different with USFWS's proposed flows, compared to either the Amended FLA flows or the DEIS flows.

Adult spring-run Chinook salmon attraction into the lower Yuba River was thoroughly addressed in Appendix 7 of YCWA's October 2017 REA Response.[69] CDFW and USFWS have provided no substantial evidence regarding the need for spring-run Chinook salmon attraction flows. These agencies also do not recognize the scientific information demonstrating that spring-run Chinook salmon attraction to the lower Yuba River depends upon the differences in both flows and water temperatures between the Yuba and Feather rivers, and not on any specific Yuba River flow rate. Nor do they acknowledge or consider the scientific evidence that attraction of Chinook salmon into the lower Yuba River is associated with strays, including hatchery strays, and that such attraction would be contrary to NMFS's 2014 Recovery Plan for anadromous salmonids in the Central Valley.

Adult steelhead attraction into the lower Yuba River also was thoroughly addressed in YCWA's October 2017 REA Response.[70] CDFW and USFWS have provided no data, evaluations or information demonstrating that adult steelhead upstream passage is impeded or in need of "improvement" in the lower Yuba River. YCWA has previously demonstrated that, based upon 13 years of empirical data, adult steelhead upstream passage through Daguerre Point Dam has occurred during a variety of flow conditions. No consistent, discernable trend relating pulse flow events and increased passage of adult steelhead at Daguerre Point Dam was observed through examination of

[69] October 2017 REA Response, App. 7 at 9, 27-29, 37.

[70] *Id*., App. 7 at 34-38.

the VAKI Riverwatcher™ data from January 2004 through June 2016. It therefore is questionable whether a regulated flow release could be used as an effective management tool to stimulate adult steelhead upstream passage in the lower Yuba River.

In addition to the conclusions presented above that pulse flows would provide little to no fish attraction benefits for returning adults, pulse flows also would not accomplish CDFW and USFWS's previously stated objective of providing a cue for outmigration of juvenile spring-run Chinook salmon. During the August 29 meeting, CDFW and USFWS provided no new data, analysis, or other evidence indicating that outmigration of juvenile spring-run Chinook salmon in the Yuba River is a problem, nor did they establish any relationship between their proposed pulse flows and juvenile Chinook salmon outmigration rates. YCWA thoroughly evaluated the potential for pulse flows to facilitate outmigration of juvenile salmonids from the lower Yuba River in its October 2017 REA Response.[71] Specifically, RMT (2013) examined nine years of Rotary Screw Trap data collected in the lower Yuba at a downstream location near Hallwood Boulevard.[72] Based upon mean weekly flows at the Marysville Gage and Chinook salmon catch for each annual survey at the Hallwood Boulevard RST site on the lower Yuba River from October 1, 1999 to August 31, 2009, the RMT (2013) concluded that:

- Juvenile Chinook salmon generally emigrate at river flows of less than 2,000 cfs during most years (based on mean weekly flow at Marysville Gage)
- Emigration occurs at relatively stable river flows of about 1,000 cfs or less (e.g., water years 2000, 2001, and 2009)

[71] *Id*., App. 7 at 38-40.

[72] *Id*., App. 7 at 39 (Figure AR3-8).

- An increase in emigration occurred during some peak river flow events (3,500-4,500 cfs) (e.g., water year 2007)

- There was no consistent trend between emigration and pulse flows

Consequently, USFWS's statements regarding pulse flow benefits to adult attraction and juvenile outmigration in the lower Yuba River are unfounded and unsupported.

7. The Agencies' Section 10(j) Flow Proposals Would Cause Adverse Impacts.

CDFW and USFWS's flow proposal would not only result in higher water costs with few benefits in return, but also would result in negative biological impacts, particularly adverse fisheries impacts in the lower Yuba River.

YCWA's October 2017 REA Response[73] evaluated CDFW and USFWS's flow proposal to determine whether it would provide a substantive benefit to aquatic habitat conditions, and whether it would result in redirected adverse impacts to aquatic resources the lower Yuba River. Although there were a few discrete instances where CDFW and USFWS's flow proposal would improve conditions slightly, these agencies' flow proposal generally would not provide substantial benefits. Relative to the Amended FLA and the Base Case, CDFW and USFWS's flow proposal would result in the following lifestage-specific adverse redirected impacts to spring-run Chinook salmon::

- Migration – Less suitable water temperature conditions from June through September
- Holding – Less suitable water temperature conditions from June through September
- Spawning – Less suitable water temperature conditions during September and October
- Embryo Incubation – Less suitable water temperature conditions during September and October
- Juvenile Rearing – Less suitable water temperature conditions from June through October

[73] *Id.*, App. 9 at 8-27.

For other spring-run Chinook salmon lifestages (i.e., fry rearing, juvenile downstream movement) not addressed above, CDFW and USFWS's flow proposal was not found to provide substantial benefits, relative to the Amended FLA or the Base Case.

For steelhead, CDFW and USFWS's flow proposal would result in the following lifestage-specific adverse redirected impacts:

- Migration – Less suitable water temperature conditions during August and September
- Holding – Less suitable water temperature conditions during August, September, and October
- Fry Rearing – Less suitable water temperature conditions from June and July
- Juvenile Rearing – Less suitable water temperature conditions during June, July, and August
- Juvenile Downstream Movement – Less suitable water temperature conditions during June, July, and August
- Smolt (yearling+) Emigration – Less suitable water temperature conditions during September and October

CDFW and USFWS's flow proposal would provide slightly more steelhead spawning habitat during a portion of the exceedance distribution, and slightly more suitable water temperature conditions for spawning and embryo incubation about 10-15 percent of the time. CDFW and USFWS's flow proposal would not provide any substantial benefits, relative to the Amended FLA or the Base Case.

For fall-run Chinook salmon, CDFW and USFWS's flow proposal would result in the following lifestage-specific adverse redirected impacts:

- Adult Immigration and Staging – Less suitable water temperature conditions during July, August, and September
- Spawning – Consistently less spawning habitat over the highest 20 percent of the exceedance probability distribution (when spawning habitat is most limiting)
- Spawning – Less suitable water temperature conditions during October
- Embryo Incubation – Less suitable water temperature conditions during October
- Juvenile Rearing – Less suitable water temperature conditions during June

- Juvenile Downstream Movement – Less suitable water temperature conditions during June

The agencies' flow proposal would provide slightly more suitable water temperature conditions for fall-run Chinook salmon fry and juvenile downstream movement during April about 10 percent of the time. These slight improvements would not counter-balance the negative impacts.

8. Concerns Regarding the Size of Chinook Salmon in the Lower Yuba River Are Misplaced.

During the August 29 meeting, CDFW stated that Chinook salmon in the lower Yuba River are smaller and emigrate later than other juvenile Chinook salmon in the Central Valley.[74] CDFW's DEIS Comments included a similar statement that "We reiterate the concern expressed in our 10(j) rationale (p. 88) that the existing lower Yuba River issues of small outmigrant size . . . have not been adequately addressed."[75]

The above statements made during the August 29 meeting and in CDFW's DEIS comments are not factually correct. CDFW's argument that the DEIS's proposed minimum flow requirements for the lower Yuba River would not be protective of salmonids and need improvement is flawed because the basis of the argument is that the peak of salmonid emigration (i.e., outmigration) from the lower Yuba River occurs relatively early in the year (late December to early March) with the bulk of emigrants being small (30-49 mm in fork length). However, CDFW continues to provide no new data or analyses demonstrating this alleged need for improvement, and instead relies upon a summary characterization of the RMT study results presented in the SWRCB's

[74] Transcript at 55, 62.

[75] CDFW DEIS Comments at 12.

comments on the REA.[76] As discussed in YCWA's August 23, 2018 Response to Comments on the DEIS,[77] YCWA disagrees with CDFW's statements for several reasons.

First, CDFW mischaracterizes the results presented in the 2013 RMT Draft Interim Report. CDFW fails to include results in 2013 RMT Draft Interim Report that demonstrate that the individual size and timing of outmigrating juvenile Chinook salmon from the lower Yuba River are similar to those for other rivers in the Central Valley. Specifically, the 2013 RMT Draft Interim Report states:

> Juvenile Chinook salmon emigration comparisons from the lower Yuba River and other Central Valley rivers provide demonstrable context illustrating that despite differences in stream size, position within the stream network, and sampling years, that juvenile Chinook salmon emigrating from the lower Yuba River are remarkably similar in size and timing to those of other Central Valley rivers.[78]

Thus, CDFW's arguments that size and time of juvenile Chinook salmon emigration are unusual or abnormal in the lower Yuba River due to the flow regime are unsubstantiated and contrary to documented analyses.

Second, CDFW fails to acknowledge that out-of-basin influences strongly affect return rates from juveniles emigrating from the lower Yuba River, which must also traverse the lower Feather River, the lower Sacramento River, and the Bay-Delta, enter and survive the Pacific Ocean and then migrate through this route in the other direction as adults returning to the lower Yuba River. Rather, CDFW attempts to attribute return rates solely to habitat conditions in the lower Yuba River. By contrast, the APDBA in

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[76] State Water Resources Control Board comments on FERC's Ready for Environmental Analysis, Att. A at 11, Project No. 2246-000 (filed Aug. 28, 2017) (as discussed in CDFW DEIS Comments at 12-13).

[77] Response of the Yuba County Water Agency to Comments on the Draft Environmental Impact Statement at 2-5, Project No. 2246-065 (filed Aug. 23, 2018) ("YCWA Response to DEIS Comments").

[78] 2013 RMT Draft Interim Report at 5-42.

YCWA's Amended FLA thoroughly discussed out-of-basin influences, threats, and stressors that have the potential to affect the migratory lifestages of anadromous fish from the lower Yuba River. As described in Section 5 of the APDBA, a total of 63 out-of-basin stressors have been identified by NMFS as affecting all identified lifestages of the lower Yuba River populations of spring-run Chinook salmon and steelhead. For both spring-run Chinook salmon and steelhead, a total of 34 out-of-basin "Very High" and "High" stressors were identified for the adult immigration and holding, and the juvenile rearing and outmigration lifestages combined.[79]

Third, CDFW provides no data or analyses demonstrating that its recommended flow regime would actually provide any benefit. As demonstrated in YCWA's Amended FLA,[80] YCWA's proposed flows, which are included in the DEIS, will provide the following beneficial effects to Endangered Species Act-listed spring-run Chinook salmon and steelhead in the lower Yuba River, relative to the Environmental Baseline: (1) protection from redd dewatering with implementation of YCWA's proposed Condition AR9; (2) reduction and minimization of the potential for fry and juvenile stranding, and juvenile isolation, with implementation of YCWA's proposed Condition AR9; (3) more (2.8 percent) spring-run Chinook salmon spawning habitat during critical water years; and (4) slightly more steelhead fry and juvenile rearing in-channel habitat availability (percent of maximum weighted usable area) during critical water years.

In summary, CDFW did not provide any analyses or other basis during the August 29 meeting that would justify changing the DEIS's conclusion that the DEIS's proposed flows are sufficiently protective of the aquatic resources of the lower Yuba River.

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[79] APDBA at BA5-44 to BA5-45, BA5-123.

[80] *Id*. at BA8-6 to BA8-9, BA8-18, BA8-29 to BA8-37.

C. Extending Duration of Lohman Ridge Tunnel Closures

During the August 29 meeting, a CDFW representative stated that extending the Lohman Ridge Tunnel closures would not cost very much and would enhance the ability of the Project to provide ancillary benefits.[81] These statements are incorrect and not supported by the modeling. YCWA fully analyzed this issue in its August 23, 2018 response to DEIS comments.[82]

D. Use of New Colgate Power Tunnel Upper Intake

During the August 29 meeting, CDFW misrepresented water temperature modeling results, and gave an inaccurate interpretation of those modeling results, particularly regarding its proposal to require the use of both the upper and lower intake ports for the New Colgate Tunnel.

Except for the attempt to demonstrate impacts by presenting temperature estimates for only one day (September 15, 2014) out of 14,965 days in the 41-year period of record, CDFW continues to provide no evidence regarding the need for different water temperature regimes in the lower Yuba River, and CDFW has not demonstrated that water temperatures associated with current or proposed Amended FLA minimum instream flow requirements adversely affect anadromous salmonid populations.

CDFW's August 29 presentation, and CDFW's DEIS Comments,[83] presented the water temperatures estimated to occur using CDFW's Section 10(j) recommended flow proposal and use both of the upper and lower intakes for the New Colgate Tunnel compared to the water temperatures estimated to occur with implementation of CDFW's

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81 Transcript at 190-93.

82 YCWA Response to DEIS Comments at 30-33, 48-53.

83 CDFW DEIS Comments at 23.

Section 10(j) recommended flow proposal and using only the lower intake. CDFW's analysis is flawed because it did not compare the use of both the upper and lower intakes to the use of just the lower intake, with implementation of either the Amended FLA flows or DEIS lower Yuba River flows.

By contrast, YCWA thoroughly evaluated CDFW's proposal to use both New Colgate Power Tunnel intakes in Appendix 11 of YCWA's October 2017 REA Response.[84] YCWA used the Amended FLA operations model scenario output with its water temperature model to estimate the water temperatures that would occur under two scenarios, one with use of both the lower and upper intakes, and one with use of only the lower intake. The YCWA analyses showed that use of both the upper and lower intakes as proposed by CDFW would result in slightly cooler water temperatures during some months of a particular salmonid lifestage, slightly warmer water temperatures during other months of the same lifestage, and similar temperatures during yet other months of the same lifestage, relative to the temperature that would occur under the "lower intake only" scenario. YCWA's analysis demonstrated that the CDFW's recommendation to use both intakes would not provide any substantive benefits relative to the "lower intake only" scenario.[85]

Review of CDFW's water temperature outputs for September 15 of the 40 other years in the period of record indicates that, when modeled water temperatures exceed 56°F at some locations in the lower Yuba River: (1) the estimated water temperature differences between the two CDFW intake scenarios are smaller than those during 2004 but still greater than 1°F for six years (1972, 1977, 1981, 1992, 1997, and **2000**); (2) the

[84] October 2017 REA Response, App. 11.

[85] *Id.* at 44-45.

estimated water temperature differences between the two CDFW intake scenarios are much smaller, between 0.5°F and 1°F for 25 years (1970, 1971, 1973, 1974, **1975**, **1976**, 1978, 1979, **1980**, 1982, 1984, 1985, **1986**, **1987**, **1989**, **1990**, **1993**, 1996, 1999, **2001**, 2003, 2005, 2006, 2009, and 2010); and (3) the estimated water temperature differences between the two CDFW intake scenarios are less than or about 0.5°F for nine years (1983, 1988, **1991**, 1994, 1995, 1998, 2002, **2007**, and 2008). Dry, critical and conference years, as defined by the Yuba River Index, within the 41-year period of record, are listed above in bold font.

E. Monitor Anadromous Fish Near Narrows 2

During the August 29 meeting, NMFS stated that the DEIS inappropriately did not adopt NMFS's Section 10(j) Recommendation #6, *Anadromous Fish Monitoring*, which would require that YCWA deploy an Adaptive Resolution Imaging Sonar ("ARIS") underwater camera in the vicinity of Narrows 2 Powerhouse tailrace and operate and review the ARIS camera video in the two hours before, during, and two hours following each time any one of the following events occurs: (1) the Narrows 2 Powerhouse or the Full Bypass ceases operations; (2) there is a starting flow of 1,500 cfs or greater and the combined discharge from the Narrows 2 Powerhouse and Full Bypass decreases by more than 400 cfs within a one-hour period; and (3) there is a starting flow of less than 1,500 cfs and the combined discharge from the Narrows 2 Powerhouse and Full Bypass decreases by more than 250 cfs within a one-hour period. Under NMFS's proposal, YCWA's review of the ARIS video would focus on finding evidence of fish

false attraction, stranding or mortality related to the event.[86]

The DEIS did not adopt NMFS's Section 10(j) recommendation for three reasons: (1) YCWA's relicensing Study 7.11, *Fish Behavior and Hydraulics Near Narrows 2 Powerhouse*, provided information to determine Project effects on adult and juvenile salmonids; (2) YCWA's proposed Lower Yuba River Aquatic Monitoring Plan would require YCWA to monitor fish stranding at the Narrows 2 Powerhouse and Full Bypass following specified flow reductions that could strand fish; and (3) the benefits of NMFS's recommendation are not worth the estimated levelized annual cost of the recommendation.[87]

During the August 29 meeting, NMFS stated that the DEIS was incorrect and that the relicensing studies did not provide information to determine Project effects on adult and juvenile salmonids because YCWA did not review all the video from the study, implying that if YCWA had, it would have found Project effects, especially strikes at turbine blades.[88]

1. YCWA Conducted Study 7.11 in Accordance with the FERC-Approved Study Plan.

YCWA conducted Study 7.11 in accordance with the FERC-approved study plan, and viewed all available acoustic camera video during operation events. The study did not find any evidence that fish entered the powerhouse draft tubes or that fish were struck by turbine blades.

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[86] NOAA Fisheries' Notice of Intervention, Preliminary Federal Power Act Fishway Prescriptions, § 10(j) Conditions, and § 10(a) Recommendations, Enclosure A at 44, Project Nos. 2246-065 et al. (filed Aug. 25, 2017).

[87] DEIS at 5-43.

[88] Transcript at 251-53.

Study 7.11 required YCWA to install an acoustic camera on the shoreline oriented to face the Narrows 2 Powerhouse to monitor the area near the draft tubes during the following "operational events": (1) planned Narrows 2 Powerhouse shutdown; (2) Narrows 2 Powerhouse start-up; and (3) when significant Narrows 2 Powerhouse and Full Bypass up- or down-ramps (i.e., greater than 400 cfs discharge change) occur. The study plan required the video footage during each operational event be viewed to monitor the area near the draft tubes and, if possible, identify fish behavior in the area of the draft tubes. The cameras employed included a first generation Dual-frequency Identification SONar ("DIDSON") in 2012, and then a next generation, ARIS, in 2013. Both cameras operate similarly, are made by Sound Metrics and produce a comparable video image, but the ARIS incorporates more advanced hardware that greatly improves image resolution. The ARIS was made available in the second year of study because sufficient time and planning allowed for the relatively new camera hardware to be sourced. Both of the acoustic cameras were respectively selected because of the near video-quality images they produce using very high frequency sound waves in conditions absent of light or in high suspended sediment (i.e., turbidity). However, the acoustic beams are compromised in highly aerated water, such as in the tailrace plume from a turbine, and can limit image clarity.

The study plan required the acoustic cameras be deployed and operate continuously before, during and after each operational event described above. However, YCWA found it was more efficient to install the acoustic camera and allow it to continuously record, rather than deploy it in advance of and retrieve it after each operational event.

During the time the DIDSON was deployed in 2012, four operational events occurred, and YCWA reviewed the DIDSON video footage before, during and after each operational event for a total of 95 hours of video (i.e., ~23.75 hours per event multiplied by 4 events). Twelve operational events occurred in 2013 when the ARIS camera was deployed and YCWA reviewed the ARIS video footage before, during and after each operational event, for a total of 184 hours of video (i.e., average of ~6.75 hours per event multiplied by 12 events[89] and an extended subsampling period during an outage from September 8 to October 1, 2013). As reported in YCWA Technical Memoranda 7-11 and 7-11A, *Fish Behavior and Hydraulics Near Narrows 2 Powerhouse, and Radio Telemetry of Spring- and Fall-Run Chinook Migratory Behavior Downstream of Narrows 2 Powerhouse*, YCWA observed during the viewing of the video of the operational events primarily milling behavior and directional swimming oriented to flow. Salmon previously observed rising to the surface would fall back to greater distances from the powerhouse (generally 80 to 125 feet) and would swim or mill into the bubble plume created during generation and in clear water at depths below the bubble plume. No fish were observed entering or exploring the draft tubes before, during or after an operational event.[90]

While not required in the FERC-approved study, YCWA at its own volition subsampled the "extra" footage (i.e., video footage when no operational events occurred)

[89] Eight hours of footage was recorded when possible, but some operational events were truncated or logistical challenges reduced total monitoring length in infrequent situations to less than eight hours. *See* Technical Memoranda 7-11 and 7-11a: Fish Behavior and Hydraulics Near Narrows 2 Powerhouse and Radio Telemetry of Spring- and Fall-Run Chinook Migratory Behavior Downstream of Narrows 2 Powerhouse at 97-111, 113-14, Project No. 2246-065 (filed Mar. 31, 2016) (summary of operational events).

[90] *See id.* at 90-147 (summary of fish behavior and observations made during 2012 and 2013, respectively).

collected during the DIDSON and ARIS monitoring to further inform the study in 2013. YCWA viewed 105 hours of "extra" ARIS video in 2013, mostly that taken during a Narrows 2 Powerhouse outage.[91] As reported in YCWA Technical Memoranda 7-11 and 7-11A, YCWA observed during this viewing of the "extra" video primarily milling behavior. A moderately sized school of adult salmon moved into the Narrows Reach below the Narrows 2 Powerhouse during an outage and milled in front of the powerhouse while it was offline, but no fish were observed entering or exploring the draft tubes.[92]

In addition, as reported in Technical Memorandum 7-11, YCWA conducted extensive telemetry surveys in the vicinity of the Narrows 2 Powerhouse and in the river downstream. Both the acoustic camera and telemetry efforts represent costly, cutting-edge scientific methodological approaches. From all of these investigative efforts over three years, YCWA found no evidence that fish enter and explore the Narrows 2 Powerhouse draft tubes or enter the draft tubes under any condition (during turbine operation or offline), nor is YCWA aware of any such reports.

For these reasons, NMFS's justification for YCWA adopting NMFS's Section 10(j) recommendation #6 is not supported—YCWA properly and in accordance with the FERC-approved study plan reviewed all acoustic video related to operational events, and even reviewed more video footage than required by the plan. These events and other existing information have not documented any instances of Project effects due to fish entering the Narrows 2 Powerhouse draft tubes or striking turbine blades.

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91 *Id.* at 113 (describing length of monitoring and video review of the 2013 outage).

92 *Id.* at 124-25, Fig. 4.5-8 (summarizing fish behavior during the outage).

2. NMFS's Section 10(j) Recommendation #6 Is Tantamount to a Study Request and, Therefore, Is Not a Proper Section 10(j) Recommendation.

During the August 29 meeting, a NMFS representative stated that its Section 10(j) recommendation was needed because sufficient information was not available to determine if the Project affected fish entering the Narrows 2 Powerhouse draft tubes where they might risk being struck by turbine blades.[93]

As described above, YCWA, at FERC's direction, performed an expensive and cutting edge study to assess this potential effect and found no evidence of harm to fish. YCWA has exercised its duty to reasonably explore this potential effect and should not be required to continually prove a negative through the term of the new license, especially given there is no evidence to support that an impact occurs and the high cost to implement NMFS's recommendation. Not only is a recommendation for a study not within the scope of Section 10(j),[94] but NMFS has not shown any need for a further study.

F. Mischaracterization of Chinook Salmon Doubling Goal

During the August 29 meeting, USFWS again[95] stated that one of its general resource objectives for the Project is attainment of the AFRP doubling goal of 66,000 Chinook salmon in the Yuba River. This was in response to FERC's question as to whether there are target fish management numbers that can correlate to habitat.[96]

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93 Transcript at 250-52.

94 *See, e.g.*, *Merimil Ltd. P'Ship*, 110 FERC ¶ 61,240 at P 28 n.30 (2005).

95 U.S. Department of the Interior Comment, Recommendations, Terms and Conditions, and Prescriptions at 3, Project No. 2246-065 (filed Aug. 25, 2017).

96 Transcript at 57-59.

Title 34 (Central Valley Project Improvement Act ("CVPIA")) of Public Law No. 102-575 established the goal of doubling natural production in Central Valley rivers. The doubling goal is for "naturally produced adults." This does not equate to the annual number of spawning adults. The CVPIA identified the doubling goal for naturally-produced adult fall-run Chinook salmon in the lower Yuba River for "Chinook salmon" in general, referred to all Chinook salmon in the river as "fall-run," and did not consider or distinguish between spring-run and fall-run Chinook salmon.

USFWS's (1995) AFRP Working Paper,[97] from which the doubling goals were identified and presented, states that estimated natural production includes up to four components:

(1) in-river spawner abundance (i.e., escapement)
(2) ocean sport and commercial harvest
(3) in-river sport harvest
(4) hatchery returns (not applied to the Yuba River).

The reference period upon which the doubling goal is based is 1967-1991. Average escapement in the Yuba River (1967-1991) was about 13,000 adult Chinook salmon. Total natural production applicable to the Yuba River was estimated to be 33,000 fall-run Chinook for the reference period (1967-1991).[98] The escapement portion is the number of adult spawners used in the calculation of total natural production.

[97] U.S. Fish and Wildlife Service (USFWS). 1995. Working Paper on Restoration Needs. Habitat Restoration Actions to Double Natural Production of Anadromous Fish in the Central Valley of California. Vol. 1 – 3. Prepared for the U.S. Fish and Wildlife Service under the direction of the Anadromous Fish Restoration Program Core Group.

[98] Details regarding how natural production of adult Chinook salmon was estimated can be found in Appendix A of Volume 3 of the Working Paper on Restoration Needs (USFWS 1995).

Lower Yuba River

1967 – 1991 Reference Period[1]				Doubling Goal
Escapement	In-River Harvest	Ocean Harvest	Production	
13,000	1,000	19,000	33,000	66,000

Source: USFWS 1995

[1] All of the individual values presented in the table were rounded to the nearest 1,000, including the natural-production doubling goal.

USFWS (1995) rounded all estimates, which resulted in the natural production estimate of 33,000 adult Chinook salmon (putatively fall-run) in the lower Yuba River. The CVPIA identified an AFRP goal of natural production of anadromous fish at twice the average attained during 1967-1991 in Central Valley rivers and streams, including the lower Yuba River.

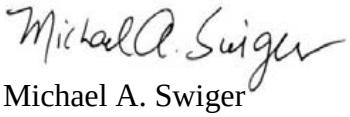
The doubling goal of 66,000 adult Chinook salmon in the lower Yuba River was determined by simply doubling each of the variables included in the estimation of natural production. Hence, the spawning stock escapement (annual spawner abundance) equates to 26,000 adult Chinook salmon associated with the CVPIA doubling goal for naturally-produced adult Chinook salmon. The remaining 40,000 adult Chinook salmon are categorized as harvest, and thus are not directly relevant to the habitat question raised by FERC.

CDFW's decision to begin with an input value of 66,000 spawning adults, rather than 26,000, is incorrect and results in nearly a 2.5-fold increase in the target number of emerging fry. If such an over-estimation occurs at the first step in the calculation process, and is carried forward, it produces a gross over-estimation of juvenile habitat requirements in the lower Yuba River associated with the AFRP goal of doubling natural production.

II. CONCLUSION

YCWA appreciates this opportunity to comment on the Section 10(j) meeting and respectfully requests that the Commission consider the information provided when it prepares its Final Environment Impact Statement.

Respectfully submitted,



Michael A. Swiger
Sharon L. White
Van Ness Feldman, LLP
1050 Thomas Jefferson Street, NW
Seventh Floor
Washington, D.C. 20007
Tel: (202) 298-1800
mas@vnf.com
slw@vnf.com

Counsel for Yuba County Water Agency

Dated: November 2, 2018

List of Exhibits

Exhibit 1	Policy Statement of CDFW regarding the Petition before the SWRCB for the Yuba Accord (December 5, 2007)
Exhibit 2	Policy Statement of NMFS regarding the Petition before the SWRCB for the Yuba Accord (December 5, 2007)
Exhibit 3	Policy Statement of USFWS regarding the Petition before the SWRCB to Revise RD-1644 to Implement the Yuba Accord (December 5, 2007)
Exhibit 4	U.S. Environmental Protection Agency's "Lack of Objection" comments on the Accord DEIS (September 7, 2007)

Exhibit 1

Policy Statement of CDFW regarding the Petition before the SWRCB for the Yuba Accord (December 5, 2007)

Before the State Water Resources Control Board
Regarding Yuba County Water Agency (YCWA) Petition to Modify Water Right Permits 15026, 15027 and 15030 And YCWA Petition for Long-Term Transfer of up to 200,000 Acre-Feet of Water from YCWA to the Department of Water Resources (DWR) and the United States Bureau of Reclamation (USBR) under Permit 10506

POLICY STATEMENT
CALIFORNIA DEPARTMENT OF FISH AND GAME

Hello and good morning. I am Sandra Morey, Regional Manager of the North Central Region of the California Department of Fish and Game (Department). Yuba County is located in the Department's North Central Region. I am here today to voice the Department's support for the YCWA Petition to Modify Water Right Permits 15026, 15027 and 15030 and the YCWA Petition for Long-Term Transfer of up to 200,000 Acre-Feet of Water from YCWA to the Department of Water Resources (DWR) and the United States Bureau of Reclamation (USBR) under Permit 10506. These petitions were discussed among the parties to the Yuba Accord as necessary steps in the implementation of the Yuba Accord.

The Department was involved throughout the process that led to the Lower Yuba River Fisheries Agreement (Fisheries Agreement), an element of the Yuba Accord. Department staff actively participated in the work that led to the development of the proposed Yuba River instream flow schedules that are a key element of the Fisheries Agreement. Department staff also participated in the negotiation of other aspects of the Fisheries Agreement, including the development of a cooperative River Management Team approach to river management and creation of an outline of a program of studies for the Lower Yuba River.

The Department plans to actively participate on the River Management Team for the Fisheries Agreement. The Department believes that the EIR/EIS analysis done for the Yuba Accord demonstrates that the comprehensive Accord agreements, as a package, will provide an equivalent or better level of protection for fish in the Lower Yuba River relative to the regulatory requirements currently in place.

The Department supports the implementation of the Water Purchase Agreement that is a part of the Yuba Accord as the financial element helping to make the Yuba Accord a success. Therefore, just as the Department supported the 2006 and 2007 pilot programs testing the Yuba Accord actions, the Department supports the long term-implementation of the Yuba Accord, which includes the Water Purchase Agreement.

The Department urges the State Water Resources Control Board to approve the petitions before it today to create the path forward for implementation of the Yuba Accord.

Thank you very much for your time and attention today.

Exhibit 2

Policy Statement of NMFS regarding the Petition before the SWRCB for the Yuba Accord (December 5, 2007)

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Sacramento Area Office
650 Capitol Mall, Suite 8-300
Sacramento, California 95814-4706

POLICY STATEMENT OF NOAA's NATIONAL MARINE FISHERIES SERVICE

REGARDING THE

YUBA COUNTY WATER AGENCY'S PETITIONS FOR THE LOWER YUBA RIVER ACCORD

BEFORE THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

DECEMBER 5, 2007

Members of the Board, thank you for the opportunity to provide this statement for the State Water Resources Control Board's hearing regarding the Yuba County Water Agency (YCWA) petitions for modifications of its water-right permits and the long-term transfer for the Lower Yuba River Accord. NOAA's National Marine Fisheries Service (NMFS) would like to express our support for these petitions.

NMFS has statutory obligations under the federal Endangered Species Act (ESA) and the Magnuson-Steven Fishery Conservation Act (MSA) to insure the protection of Pacific Salmon and federally listed threatened or endangered anadromous fish species, including Central Valley spring-run Chinook salmon, Central Valley steelhead and the southern distinct population segment of North American green sturgeon, all three of which are listed as threatened and which occur in the lower Yuba River. For this reason, NMFS has been an active participant in the process that led to the Yuba Accord, including the development of the Lower Yuba River Fisheries Agreement. NMFS was actively engaged in development of the flow schedules, River Management Team provisions, and biological studies program that are all key elements of the Yuba Accord package.

NMFS believes that implementation of the provisions of the Accord's Fisheries Agreement will provide a level of protection for salmonids and green sturgeon in the lower Yuba River that is equal to or greater than that provided under RD-1644. Key elements of the Accord such as the initiation of flow schedules and funding of biological studies in the Lower Yuba River are important steps in the recovery of listed anadromous fish which occupy the lower Yuba River.

NMFS will continue to participate in the EIR/EIS analyses of the Yuba Accord and work with interested stakeholders to ensure that perceived benefits will in fact be realized by the fisheries resources. NMFS also intends to maintain its active participation in the

River Management Team and help to direct how studies and restoration projects will be implemented under the Lower Yuba River Fisheries Agreement.

In addition to the specific benefits of the Yuba Accord to Yuba River fisheries, NMFS believes that the basic concepts underlying the Accord and the cooperative process through which the Accord was developed represent a unique and important breakthrough in the critical interface of fisheries protection and water management in the State of California. We believe that successful implementation of the Yuba Accord could act as a template for future, similar agreements across the state resulting in significant benefits to both the fisheries resources and the water users of California.

NMFS believes that the State Water Resources Control Board should approve YCWA's petitions for the Yuba Accord so that this process can go forward.

Thank you.

Exhibit 3

Policy Statement of USFWS regarding the Petition before the SWRCB to Revise RD-1644 to Implement the Yuba Accord (December 5, 2007)

POLICY STATEMENT

of the United States Fish and Wildlife Service before the California State Water Resources Control Board at the December 5, 2007 Water Right Hearing on Yuba County Water Agency's Petition to Modify Water Right Permits 15026, 15027, and 15030 and Petition for Long-Term Transfer of up to 200,000 Acre-Feet of Water from Yuba County Water Agency to the Department of Water Resources and the United States Bureau of Reclamation under Permit 15026

The Yuba County Water Agency (Petitioner) requests that the State Water Resources Control Board (Board) modify the conditions on Permits 15026, 15027, and 15030 by making specific changes to Revised Decision 1644 (RD-1644). The Petitioner also requests approval of a long-term transfer of water under Permit 15026. These petitions were deemed necessary to implement the proposed Yuba Accord (Accord), which would provide for new instream flows in the lower Yuba River for purposes of increased fisheries protection compared to that which would be provided by the longterm instream flow requirements in RD-1644.

The Service was involved throughout the process that led to the Lower Yuba River Fisheries Agreement (Fisheries Agreement), an element of the Accord, Service staff participated in the work that led to the development of the proposed Yuba River instream flow schedules that are a key element of the Fisheries Agreement. The proposed Accord has been developed through discussions among the Petitioner and numerous irrigation, environmental, and fisheries interests and State and Federal agencies.

The proposed Accord, if approved, should result in improved water supply reliability for the U.S. Bureau of Reclamation, as well as for the California Department of Water Resources; including a firm commitment of 60,000 acre-feet of water per year for the Environmental Water Account (EWA), and up to an additional 140,000 acrefeet of water in dry years for State Water Project (SWP) and the Central Valley Project (CVP) uses, including for fish and wildlife purposes.

Water acquired under a Water Purchase Agreement, one of three separate agreements referred to in the Accord, could be used to improve water supply reliability for the projects, including for fish and wildlife purposes, and could contribute toward a longterm EWA or equivalent program to assist protection of Delta fisheries. Following completion of consultation under the Federal Endangered Species Act (ESA), the Service looks forward to participation in the appropriate implementation of the Yuba Accord.

CONCLUSION

The Service supports existing efforts to date and those continuing to complete environmental compliance, including consultation under ESA that would allow for appropriate implementation of the Accord in the future.

Exhibit 4

U.S. Environmental Protection Agency's "Lack of Objection" comments on the Accord DEIS (September 7, 2007)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

September 7, 2007

Ms. Dianne Simodynes
HDR – Surface Water Resources, Inc.
1610 Arden Way, Suite 175
Sacramento, CA 95815

Subject: Draft Environmental Impact Statement (DEIS) for the Proposed Lower Yuba River Accord, Yuba County, California (CEQ# 20070269)

Dear Ms. Simodynes:

The U.S. Environmental Protection Agency (EPA) has reviewed the DEIS referenced above. Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. Our comments are provided in accordance with the EPA-specific extension to the comment deadline date from August 24, 2007 to September 7, 2007, granted by Tamara LaFramboise of the US Bureau of Reclamation on August 6, 2007.

Based upon our review and the identification of the Yuba Accord Alternative as the preferred alternative, we have rated this DEIS as Lack of Objections (LO) (see enclosed "Summary of the EPA Rating System"). We commend the signatories and participants of the Yuba Accord for the comprehensive program to provide increased instream flows to benefit fisheries in the Lower Yuba River. The three Yuba Accord components - Fisheries Agreement, Conjunctive Use Agreements, and Water Purchase Agreement - provide an elegant solution in providing increased instream flows, water for these flows, and revenues to implement the Accord and long-term monitoring. EPA also commends the provision for a long-term guaranteed water supply for the Environmental Water Account.

Of note is the thorough environmental documentation of existing conditions, legal and water supply context for the project area, analysis methodology and assumptions, detailed analysis of alternatives compared to different no action baselines, cumulative impact analysis, induced growth analysis, and description of climate change considerations.

We appreciate the opportunity to review this DEIS. When the FEIS is released for public review, please send one copy to the above address (mail code: CED-2). If you have any questions, please call me at 415-972-3846 or Laura Fujii, of my staff, at 415-972-3852 or fujii.laura@epa.gov.

Sincerely,

/s/

Nova Blazej, Manager
Environmental Review Office

Enclosures: Summary of EPA Rating Definitions

cc: Tamara LaFramboise, US Bureau of Reclamation
Curt Aikens, Yuba County Water Agency
Teresa Geimer, California Department of Water Resources
Regional Manager, Region 2, California Department of Fish and Game
Maria Rea, National Marine Fisheries Service
Susan Moore, US Fish and Wildlife Service
Executive Director, South Yuba River Citizens League
Conservation Director, Friends of the River
California Hydro Power Coordinator, Trout Unlimited
Program Director, The Bay Institute

CERTIFICATE OF SERVICE

Pursuant to Rule 2010 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission, I hereby certify that I have this day caused the foregoing document to be served upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, DC, this 2nd day of November, 2018.

/s/ Mealear Tauch
Mealear Tauch
Van Ness Feldman, LLP
1050 Thomas Jefferson Street, NW
Seventh Floor
Washington, D.C. 20007-3877
Telephone: (202) 298-1800
mzt@vnf.com