



# Foothills Water Network

## COMMENTS ON DRAFT LICENSE APPLICATION FOR THE YUBA RIVER DEVELOPMENT PROJECT (P-2246)

March 3, 2014

Hon. Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, DC 20426

*Via Electronic Submittal*

Dear Ms. Bose:

Pursuant to 18 C.F.R. § 5.16(e), the Foothills Water Network (Network) submits these Comments on the Draft License Application (DLA) for the Yuba River Development Project (YRDP or Project) as filed on December 2, 2013 by the Yuba County Water Agency (YCWA or Licensee).<sup>1</sup>

### Foothills Water Network

This response was jointly developed and signed by non-governmental organizations and individuals participating in the Yuba River Development Project relicensing. The Network represents a broad coalition of non-governmental organizations and water resource stakeholders in the Yuba, Bear, and American watersheds. The overall goal of the Foothills Water Network is to provide a forum that increases the effectiveness of non-profit conservation organizations to achieve river and watershed restoration and protection benefits for the Yuba, Bear, and American Rivers. This includes negotiations at the county, state, and federal levels, with an immediate focus on the FERC relicensing processes.

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<sup>1</sup> eLibrary no: 20131202-5097. All subsequent footnote citations or references to the DLA omit the eLibrary Accession number.

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**BACKGROUND**

The initial license for the Yuba River Development Project (Project) was issued to YCWA by the Federal Power Commission, the predecessor to the Federal Energy Regulatory Commission (FERC or Commission) on May 16, 1963, effective as of May 1, 1963.<sup>2</sup> The Federal Power Commission’s May 6, 1966 Order Amending License changed the license’s effective beginning date to May 1, 1966 and set the expiration date as April 30, 2016.<sup>3</sup> On November 5, 2010, YCWA filed with FERC a Notice of Intent to File an Application for a New License for the Project on or before April 30, 2014.<sup>4</sup> In its Draft License Application (DLA), YCWA proposes to continue operating the Project for the next 50 years with one modification to an existing generation facility (the addition of a tailwater depression system to New Colgate Powerhouse), the addition of a new flood control outlet to New Bullards Bar Dam, and the adoption of the resource management measures proposed in its license application. YCWA does not propose changes to its operations downstream of Englebright Dam with the exception of a new minimum flow requirement for conference years.

**SUMMARY OF RECOMMENDED CHANGES AND ADDITIONS TO FINAL LICENSE APPLICATION**

The Network appreciates that the DLA proposes significant mitigation and environmental enhancement measures. Specifically, we commend YCWA for proposing measures to provide environmental training to employees (GEN6), maintain minimum pool in New Bullards Bar Reservoir for cold water resources downstream (WR5), maintain minimum streamflows below project dams that are higher than current minimum flow requirements (AR1), control spills at Our House Diversion Dam (AR2), and control spills at New Bullards Bar Dam (AR4). Additionally, the DLA proposes to implement a variety of plans, including an erosion and sediment control plan; plans for passing sediment and large wood at Our House and Log Cabin Dams, and a plan for invasive species management. These draft measures and plans represent a substantial start in mitigating Project effects and protecting resources during the new license term.

The Network recommends that the Licensee make the following changes and additions to the Final License Application (FLA), to ensure that the application provides an adequate basis for Office of Energy Project’s (OEP) NEPA analysis (*see* 18 C.F.R. § 380.3), in particular for the development of NEPA alternatives. Specifically, the Network recommends that the Final License Application include the following:

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<sup>2</sup> DLA, p. IS-1.

<sup>3</sup> Id.

<sup>4</sup> Id.

- 1) Additional analysis regarding the low return rate of juvenile salmonids to the lower Yuba River and proposed measures that address juvenile rearing habitat and long-term monitoring for assessing Project effects on juvenile salmonid production;
- 2) Utilization of a single concept approach to opportunistically address sediment transport, spill cessation and recreational flow opportunities in the same measure;
- 3) Development of a post-licensing monitoring plan for all Project-affected river reaches that includes fish and other aquatic resources, benthic macroinvertebrates, water temperature, water quality, geomorphologic conditions and riparian conditions;
- 4) Development of a recreation plan with measures that enhance public access, angling, and whitewater boating along specific river reaches;
- 5) More complete analysis of the relationship of the Project to Englebright Dam;
- 6) A modified No-Action Alternative that assumes as baseline conditions the outcomes of the just-concluding coordinated relicensing of the Yuba-Bear and Drum-Spaulding projects, some of whose facilities are located upstream of Yuba River Development facilities;
- 7) An alternative that examines reintroduction of salmon and/or steelhead to the upper Yuba River watershed including an analysis of fish passage options and effects of the Project on anadromous fish habitat upstream of Englebright Dam;
- 8) An alternative that analyzes changes to Project operations in response to a reasonable suite of flow requirements required to meet Delta flow objectives pursuant to the State Water Resources Control Board's ongoing update of the Bay-Delta Water Quality Control Plan;
- 9) An alternative that evaluates changes to the operation of the Oroville facilities on the Feather River in combination with operations alternatives on the Yuba River;
- 10) A revised Biological Assessment completed *after* information is obtained from ongoing studies ordered by the Commission and requested by relicensing participants, and that addresses the alternatives that must also be analyzed under NEPA.

The Network's comments discuss these recommended changes and additions in more detail in the sections below.

## **COMMENTS ON SPECIFIC PRIORITY ISSUES AND SECTIONS OF THE DLA**

### **JUVENILE SALMON AND STEELHEAD SURVIVAL**

The FLA should include additional analysis regarding the poor success of juvenile salmonids in the lower Yuba River and potential mitigation measures to increase juvenile rearing

habitat and improve outmigration. As noted by the Yuba Accord River Management Team's (RMT) 2013 Draft Interim Monitoring and Evaluation Program Report, juvenile survivorship from the lower Yuba River is extremely low.<sup>5</sup> Neither the RMT nor Licensee has thoroughly evaluated the possible factors that may be responsible for the extremely low survivorship and return of juveniles emigrating from the lower Yuba River. Licensee's analysis instead attributes responsibility exclusively to out-of-basin factors.<sup>6</sup>

Additional evaluation may demonstrate that the stressors on juvenile salmonid rearing and outmigration, such as lack of habitat complexity and diversity, may be further mitigated by changes in flow or temperature. A more recent hydrologic analysis for the lower Yuba River commissioned by the Fish and Wildlife Service reveals that Project flows in comparison to unimpaired flows result in a substantial reduction in juvenile rearing habitat.<sup>7</sup> The reduction in habitat is generally associated with stream banks, riparian areas and floodplain, so it is likely that the loss of this habitat is a limitation to juvenile salmonid growth and fitness, and in turn a factor limiting survival and return.

Additionally, the RMT found emigration of juvenile Chinook salmon appeared to occur approximately one month later on average during Yuba Accord flow years as compared to previous years. If timing of outmigration is an important factor in downstream survival, then this could be yet another example of the interaction of flows and juvenile survivorship. This confirms the need for the continued development and assessment of information necessary to consider flow-related Project mitigations and enhancements. To that end, the FLA should include a monitoring measure targeted at assessing Project effects on juvenile salmonid production over the long-term.

## **SINGLE CONCEPT FOR RECESSION FLOWS**

The Network commends the DLA's inclusion of proposed license measures that address sediment transport and spill cessation. However, the Network believes that having a single concept that can be applied to sediment transport, spill cessation and recreation flow opportunities, may be a preferable approach to each of these resource areas. Licensee should consider crafting single measures that address all of the following:

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<sup>5</sup> Draft Interim Monitoring and Evaluation Program Report, Chapter 4, Yuba Accord River Management Team. (2013).

<sup>6</sup>Of 680,000 juvenile Chinook salmon captured in outmigrant traps and marked in 2004-2007, only three returned to the Yuba River as adults (See Tech Memo 7-8 Appendix Draft M&E Report, Chapter 4).

<sup>7</sup> cbec, inc. 2013 Hydrologic and Geomorphic Analysis to Support Rehabilitation for the Lower Yuba River from Parks Bar to Marysville. Report to the U.S. Fish and Wildlife Service – Anadromous Fish Restoration Program. cbec Project #13-1003, 107 pp. The report found that existing hydrology produces flows of 5000 cfs 1 out 2 years for 3 days or longer compared to unimpaired hydrology which would produce flows of 5000 cfs or more 2 out of 3 years for 21 days or longer. The comparative frequency and duration of flows of 5000 cfs in unimpaired hydrology now equates to a flow at 1700 cfs. This represents 41% less habitat, or a reduction in wetted habitat (Parks Bar to Marysville) from 695 acres 494 acres.

- Flow that will be high enough and be long enough in duration to mobilize and transport sediment.<sup>8</sup>
- Flows that have rates of change consistent with the flows coming into the Project diversions, and are consistent with rates of change that will be protective of aquatic resources.<sup>9</sup>
- Flows that will be high enough to provide recreational boating opportunities, and be timed so that recreationists can take advantage of these flows during daylight hours and weekends.<sup>10</sup>

The Network looks forward to working with Licensee to further develop its proposed measures to achieve maximum benefit consistent with the recommendation above.

## ENTRAINMENT

The Network is concerned that the DLA's entrainment section may underrepresent actual Project effects of entrainment on fish populations. This section discusses entrainment of fish into Project facilities including from the Middle Yuba into the Lohman Ridge Tunnel, from Oregon Creek into the Camptonville Tunnel and from Englebright Reservoir into the Narrows II Powerhouse intake. The DLA (and Study 3.11 on which it relies) suggests that entrainment is lower than might be expected when taking into account several limitations of the entrainment study.<sup>11</sup>

Study 3.11 resulted in an estimated rate of rainbow trout entrained into the Lohman Ridge Tunnel of 0.56 fish per day, and an estimated rate of rainbow trout entrainment into the Camptonville Tunnel of 0.03 fish per day (DLA, Table 3.3.3-32). These estimates are low because they average a number of days with incomplete monitoring or operation of the detection equipment in the tunnels. The implementation of the study involved a variance associated with pulling the trash rack at the inlet of the Lohman Ridge Tunnel, and the equipment did not operate at greater than 80% efficiency as necessary to support valid inference on entrainment rates. We refer to comments by the California Department of Fish and Wildlife (CDFW) for more details on this issue and the need for more information on entrainment at these tunnels.<sup>12</sup>

Additionally, Licensee did not evaluate entrainment in Englebright Reservoir. (*See* comments of CDFW on the Updated Study Report.)<sup>13</sup> Nevertheless, YCWA did detect rainbow trout in the vicinity of the Narrows II inlet despite the extremely limited sampling. The Network

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<sup>8</sup> Technical Memo 1-1 indicates that flows ranging from 1,700 cfs to over 6,000 cfs are needed to mobilize and transport bedload sediment through the Our House Dam reach, and 1000 cfs are needed below Log Cabin Dam.

<sup>9</sup> Typical recession rates for unregulated Sierra Nevada rivers are 5% to 10% per day. (Epke G. 2003. Spring Snowmelt Recession in Rivers of the Western Sierra Nevada Mountains. Master thesis, Univ. California, Santa Cruz, 67 p. Literature on the Natural Flow Regime (Poff et al. 1997) and Ecology and Management of the Spring Snowmelt Recession (Yarnell et al. 2010).

<sup>10</sup> Technical Memorandum 8-2, page 15 states that flows above 700 cfs provide a technical boating experience.

<sup>11</sup> DLA, Section 3.3.03.

<sup>12</sup> e-Library no: 20140210-0014; Comments on the Updated Study Report, California Department of Fish and Wildlife.

<sup>13</sup> *Id.*

supports comments by CDFW on the need for more information on this subject and encourages the Commission to make a determination on an additional study phase.

## **GEOLOGY AND SOILS**

Section 3.3 of the DLA contains large amounts of information on geology and soils of the Project area but makes no mention of the shot rock found in the Englebright Dam Reach of the Lower Yuba River. It is important to understand the extent and location of shot rock when considering habitat enhancement measures, which must account for movement of the shot rock material during high flows. The FLA should describe the shot rock in the Englebright Dam Reach and propose relevant mitigation measures to address its effects.

## **HISTORY OF THE PROJECT**

Section 15.0 (History of the Project) does not include the Narrows II bypass facility. The FLA should include a full description of when and how this facility was constructed, for what purpose, and to what effect.

## **COMMENTS ON SPECIFIC MEASURES**

### **CONDITION GEN7: DEVELOP AND IMPLEMENT A COORDINATED OPERATIONS PLAN FOR YUBA RIVER DEVELOPMENT PROJECT AND NARROWS PROJECT**

Licensee proposes to consult with Pacific Gas & Electric (PG&E) to develop a Coordinated Operations Plan for YRDP and the Narrows I Project within 90 days of the new license term. (DLA, E2-10.) The condition further provides that if YCWA and PG&E cannot reach agreement on the Plan, then the Commission will be requested to issue an order. (Id.) The purpose of the measure is to ensure the implementation of flow-related conditions in the two licenses. (Id.) Licensee notes that the Plan is not included in the DLA because the terms of the plan cannot be negotiated until new license terms are known and adopted by the Commission. In addition, the DLA notes that the Power Purchase Agreement (PPA) between PG&E and YCWA will also be renegotiated in 2016 (DLA, B-27.) The PPA specifies conditions of PG&E's power purchase from YCWA and PG&E's rights to require releases of water from New Bullards Bar Reservoir for power production. (Id.)

As indicated by the Licensee, PG&E and YCWA, through their operations of Narrows I and II, directly influence the amount and timing of flows in the lower Yuba River and therefore affect the fish resources in the lower Yuba River. It is necessary for the Licensee to provide information to relicensing participants prior to the issuance of the license. The information should explain how the coordinated operations currently operate and how they may change in the future with a new operations plan and new PPA. Such information will help facilitate the development of appropriate terms and conditions for the new license.

### **CONDITION GEN8: RIGHT TO USE ENGLEBRIGHT DAM**

Licensee proposes to make use of Englebright Dam and Reservoir for Project purposes so long as Licensee's use does not interfere with the primary use of the reservoir for debris control. (DLA, ER-10.) Licensee omits language contained in the original license condition (Article 47) that specifies that it must enter into contractual arrangements with the U.S. Army Corps of Engineers (Corps), owner of Englebright Dam, to specify the manner of its use of Englebright Dam and payment for such use. As noted in the section below entitled *Relationship of Englebright Dam to Project*, Licensee pays significant fees to the Corps because the service Englebright provides in re-regulating flows is fundamentally essential to YCWA's power generating business. This condition should more explicitly reference and describe the arrangement between Licensee and the Corps that facilitates the use of Englebright Dam by Licensee for power generation.

### **CONDITION GS2: IMPLEMENT OUR HOUSE AND LOG CABIN DIVERSION DAMS SEDIMENT EXCAVATION PLAN**

Licensee's FLA should consider removing sediment from Our House and Log Cabin Diversion Dams through the use of diversion facilities instead of through excavation and storage of sediment. Such analysis should include an assessment of whether cost savings can be achieved through passing sediment through diversion structures, as opposed to excavation. (*See the Network's comments on Condition GS3 for additional discussion.*)

### **CONDITION GS3: PASS SEDIMENT AT OUR HOUSE AND LOG CABIN DIVERSION DAMS**

Licensee proposes, beginning in the second year of the new license term, to pass sediment downstream of the Our House and Log Cabin diversion dams by opening the low level (5-foot diameter) outlet valves in the dams. (DLA, E2-12.) The Network appreciates the inclusion of this measure. Restoring natural pulses to the Middle Fork Yuba and Oregon Creek is an important component of improving conditions below Our House Dam and Log Cabin Dam. However, we believe that Licensee should explore opportunities to coincide this release with flow pulses for other purposes including spill recession and recreation.

Because both of these dams store little water, the Network recognizes that Licensee is limited in their ability to manufacture pulses and, to some degree, control ramping rates downstream of Project diversions. However, the primary goal of this measure should be to convey the transport of sediment, flow pulses and associated ramping rates downstream of Project diversions.

The Network believes that having a single concept that can be applied to sediment transport, spill cessation and recreation flow opportunities may be a preferable approach to each of these resource areas. Additionally, there may be significant cost savings associated with passing sediment through diversion structures, as opposed to excavating and storing sediment that comes into the reservoirs.

Licensee has two mechanisms at its disposal to help facilitate natural flow pulses below its diversions; manipulate the amount of water being diverted into the tunnel, or open the low

level outlet at the dam. Licensee should provide more information regarding how these flow control structures are operated to inform the development of future conditions. To ensure success, the flow conditions should account for the following:

- Flow that will be high enough and be long enough in duration to mobilize and transport sediment.<sup>14</sup>
- Flows that have rates of change consistent with the flows coming into the Project diversions, and are consistent with rates of change that will be protective of aquatic resources.<sup>15</sup>
- Flows that will be high enough to provide recreational boating opportunities, and be timed so that recreationists can take advantage of these flows during daylight hours and weekends.<sup>16</sup>

Additional information from the lower-level outlet release study is necessary to determine what is achievable with the existing outlet structures at Our House and Log Cabin Dams.<sup>17</sup> Several of Licensee's measures, including this one, make assumptions regarding the capacity of the lower level outlets that may prove to be inaccurate when the study information is available. Before relevant measures are finalized, the Network recommends the completion of the lower level outlet study as proposed by the United States Forest Service in its comments on the Updated Study Report.<sup>18</sup>

The proposed measures Licensee has provided in the DLA for sediment pass-through and spill cessation provide a reasonable starting point for discussions. The Network looks forward to working with Licensee to further refine these measures.

#### **CONDITION GS5: PASS LARGE WOODY MATERIAL AT OUR HOUSE AND LOG CABIN DIVERSION DAMS**

The passage of woody material to river reaches below Project dams is important to minimize Project effects on aquatic resources. With this measure, Licensee proposes to mobilize large woody material so that it passes through Our House and Log Cabin Diversion Dams into downstream reaches. (DLA, p. ER-18.) The Network generally supports this concept however it is not clear from the measure why the size of woody material to be passed has been limited to a range greater than 8 inches in diameter and 36 feet in length. Licensee also indicates that it may cut the large woody material if necessary to implement the measure (Id.) Restricting the size of the large woody material that passes without an adequate rationale is not preferable as it may

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<sup>14</sup> Technical Memo 1-1 indicates that flows ranging from 1,700 cfs to over 6,000 cfs are needed to mobilize and transport bedload sediment through the Our House Dam reach, and 1000 cfs are needed below Log Cabin Dam.

<sup>15</sup> Typical recession rates for unregulated Sierra Nevada rivers are 5% to 10% per day. (Epke G. 2003. Spring Snowmelt Recession in Rivers of the Western Sierra Nevada Mountains. Master thesis, Univ. California, Santa Cruz, 67 p. Literature on the Natural Flow Regime (Poff et al. 1997) and Ecology and Management of the Spring Snowmelt Recession (Yarnell et al. 2010).

<sup>16</sup> Technical Memorandum 8-2, page 15 states that flows above 700 cfs provide a technical boating experience.

<sup>17</sup> See Log Cabin and Our House Diversion Dam Low Level Outlet Capacities New Study requested by the United States Forest Service in its response to Licensee's Updated Study Report; e-library no:20140130-5031.

<sup>18</sup> Id.



limit the ecological benefit of the action. The Network recognizes that it may be necessary to cut large woody material at times to free it from Project facilities however the FLA should include additional information that specifies more precisely the circumstances predicted to warrant cutting the material. Additionally, the FLA should provide the rationale for limiting the size of the passing woody material.

This measure should also address wood captured in New Bullard Bar (NBB) Reservoir, the largest of Licensee's facilities. The Network has reviewed a draft Licensee plan for management of large wood captured by NBB Reservoir. The plan indicates that Licensee will not pass wood to river reaches downstream. The Network believes that Licensee must pass wood below New Bullard Bar Dam to appropriately mitigate the effects of the Project. The Army Corps of Engineers (Corps) developed a Large Woody Material Management Plan for the Yuba River (2011) that describes the large amount of woody material captured in NBB after storm events and methods to transport and place the wood for habitat benefit downstream.<sup>19</sup> The Corps no longer plans to implement such a project however its plan can help inform the development of a measure to be implemented by Licensee. The FLA should either include a revised and comprehensive measure that addresses the passage of large woody material past all Project dams or an additional measure focused on the utilization of large wood captured by NBB Reservoir for downstream habitat projects.

#### **CONDITION WR2: DETERMINE WATER YEAR TYPES FOR CONDITIONS PERTAINING TO OUR HOUSE DIVERSION DAM, LOG CABIN DIVERSION DAM AND NEW BULLARDS BAR DAM**

Licensee proposes that the water year type, for the purposes of implementing articles and conditions of the license that are dependent on water year type and that concern flows in Project affected reaches upstream of Englebright Dam, shall be based on California Department of Water Resources (DWR) water year forecast of unimpaired runoff in the Yuba River at Smartsville as set forth in DWR's Bulletin 120 entitled "Water Year Conditions in California." (DLA, E2-19.) Licensee's proposal includes an extreme critically dry year classification. The Network generally agrees with the use of the water year type methodology described above. However we believe more discussion should occur amongst relicensing participants regarding the use and description of the extreme critically dry year classification.

#### **CONDITION WR3: DETERMINE WATER YEAR TYPES FOR CONDITIONS PERTAINING TO NARROWS II POWERHOUSE AND NARROWS II FULL BYPASS**

The water year type methodology proposed in this measure is the same as is used for the implementation of the Yuba Accord. This method of water year determination may be appropriate if the new license reflects no changes to stream flow requirements in the lower Yuba River as compared to the requirements in the Yuba Accord. However, the Network believes that additional analysis is necessary prior to making such a determination. Therefore, Licensee

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<sup>19</sup> U.S. Army Corps of Engineers. 2011. Lower Yuba River Woody Material Management Plan. Sacramento District, Sacramento, CA.

should continue discussions with relicensing participants regarding whether this is the appropriate methodology to use for the lower Yuba River.

**CONDITION WR4: IMPLEMENT STREAMFLOW AND RESERVOIR LEVEL MONITORING PLAN**

The Network supports the inclusion of this measure. However, Licensee should work with relicensing participants to identify where additional gages may be necessary to ensure compliance with sediment pass-through and spill cessation measures in the Middle Yuba River and Oregon Creek (both upstream and downstream of the diversion dams) and with spill cessation measures downstream of New Bullards Bar Dam.

**CONDITION WR6: OPERATE NEW BULLARDS BAR RESERVOIR FOR FLOOD CONTROL**

With this measure, Licensee proposes to operate Project reservoirs for flood control. (DLA, E2-29.) The FLA should include additional information regarding how the new proposed spill gates can be used to regulate flows when the Project is in a spill condition as well as how the new spill gates will affect reservoir flood pool levels.

**CONDITION AR1: MAINTAIN MINIMUM STEAMFLOWS BELOW OUR HOUSE DIVERSION DAM, LOG CABIN DIVERSION DAM AND NEW BULLARDS BAR DAM**

Licensee should continue discussions with relicensing participants regarding appropriate minimum flows below Project dams. The Network views Licensee's proposed minimum stream flows as preliminary pending more evaluation in the relicensing process, including additional model runs and discussions with relicensing participants. The Network appreciates that Licensee has utilized a systematic rationale guided by a Weighted Usable Area (WUA) analysis to develop its proposed minimum flows. (DLA, pp. 32-49.) However, we believe additional discussion with relicensing participants is necessary to ensure the proposed minimum flows appropriately optimize limited water resources for fisheries and aquatic habitat benefit.

**CONDITION AR2: CONTROL PROJECT SPILLS AT OUR HOUSE DIVERSION DAM**

The Network appreciates the inclusion of this measure as minimizing the frequency and magnitude of flow changes is an important component of improving recreation and resource conditions below Our House Dam. The Network proposes that this condition also include spill recession measures for below Log Cabin Diversion Dam. As mentioned in the response to Measure GS-3, the Network supports a single concept that can be applied to sediment transport, spill cessation and recreation flow opportunities. (*See* the Network's response to GS-3 for more discussion on this concept.)

This measure as well as measures proposed in the DLA for sediment pass-through, provide a reasonable starting point for discussions. We look forward to working with Licensee to further refine these measures.

### **CONDITION AR3: MAINTAIN MINIMUM STREAMFLOWS AT NARROWS II POWERHOUSE AND NARROWS II FULL BYPASS**

The minimum streamflows proposed in this measure are the same as those established for the Yuba Accord, except Licensee has proposed new minimum flows for Conference Years. (DLA, E2-54.) The Network believes that it is premature to conclude that the Yuba Accord minimum flows are the appropriate minimum flows for the lower Yuba River. The Network notes that the lower Yuba River consists of two hydrologic regimes owing to the large diversions in the vicinity of Daguerre Point Dam that can cumulatively divert more than 1200 cfs during some periods. Additionally, actual streamflows in the lower Yuba River are frequently much greater than minimum flows due to the transfer of water either to diversions at Daguerre Dam or to locations further downstream (*See* the No Project Alternative discussion, *supra*, for more information on this topic).

The proposed minimum stream flows may be appropriate however the Network believes that it is premature to make this determination given the outstanding analysis and information relevant to this issue. The Network believes that the provision of additional information and analysis including modeling of alternative flows and evaluation of Project effects on riparian condition and juvenile salmonid rearing habitat should occur prior to finalizing this condition. Additional analysis should also discern between the effects associated with the two hydrologic regimes and water transfers. The Network looks forward to continued discussions with the Licensee on this issue.

### **CONDITION AR4: CONTROL PROJECT SPILLS AT NEW BULLARDS BAR DAM**

The Network appreciates the inclusion of this measure. Spill cessation rates that closely mimic natural conditions are critical to restoring ecological function below New Bullards Bar reservoir. Unlike the conditions at Our House Dam or Log Cabin Dam, which are largely controlled by the upstream hydrology, flows below New Bullards Bar will be determined by the Project release structures. Licensee should provide additional information regarding how the existing spill gate structures, the new proposed spill gates, and the low level outlet can each be used to regulate flows when the Project is in a spill condition. This will facilitate an understanding regarding the increment of control and at what flow levels each of the structures can be used.

It is important to note that regulation of spill flows from New Bullards Bar will not only affect flows on the North Yuba River above Englebright Dam, but will also determine the flow changes that occur on the lower Yuba River below Englebright Dam. With this in mind, Licensee's condition TE4, as it pertains to spill flow ramping, should be consistent with the requirements in this condition. Both should work to minimize Project effects on riparian seedling germination and survival during the spring. Additionally, both should minimize Project effects to fish habitat. This spill control measure begins May 1. However, cottonwoods begin their main period of seed dispersal in March and juvenile Chinook and steelhead rearing is important in all spring months. It is unclear why the initiation of this measure is in May. Licensee should provide a rationale for the selection of its start date.

The Network recommends flow cessation rates that are measured in percent per day rather than a constant cubic feet per second (cfs) increment, such as the 250 cfs per day that the licensee suggests in the DLA (DLA, E2-58.) Typical recession rates for unregulated Sierra Nevada rivers are 5% to 10% per day.<sup>20</sup> Using a percent per day metric for down ramping will provide for consistent stage changes throughout the reach during spell cessation events. Using the 250 CFS per day, as suggested by Licensee in the DLA, would result in larger stage changes as flows decrease. This is not consistent with how flows recede in natural systems.

The spill cessation measure should also be crated to maximize opportunities for whitewater boating below New Bullards Bar Dam. The *Recreation Flow Study* (TM 8-2), found that flows between 500 and 1000 cfs are boatable in the reach from New Bullards Bar Dam to Englebright reservoir. Currently, flows move through this boatable range in just a few days, or even hours, as flows are reduced during spill events. The DLA reports that there are on average only 3 boatable days per year on this reach.<sup>21</sup>

The Network appreciates the fact that the Licensee has proposed to improve flow conditions through its spill cessation measure and we look forward to improving the measure through continued discussions with relicensing participants.

## **CONDITION TE2: MONITOR CHINOOK SALMON DOWNSTREAM OF NARROWS II POWERHOUSE**

Licensee's proposed measure should include monitoring for a variety of different fish in the lower Yuba River and should be re-titled "Monitor Fish Populations" to accurately reflect its scope. In addition to Chinook salmon, Licensee should monitor rainbow trout or steelhead populations and green sturgeon. Use of rotary screw traps to monitor juvenile salmonid fitness, production and outmigration is not mentioned in the measure but should be considered. This measure should be clearly linked to the Anadromous Fish Ecological Group as it can function as the advisory group for assessing and informing monitoring projects.

## **CONDITION TE3: ESTABLISH LOWER YUBA RIVER ANADROMOUS FISH ECOLOGICAL GROUP**

With this measure, Licensee proposes to include a measure that establishes a post-licensing implementation group. Unfortunately, it is of limited participation and scope.

YCWA's proposed Project includes the establishment of an Anadromous Fish Ecological Group to assist YCWA with the implementation of the terms and conditions of YCWA's new license, as they pertain to anadromous fish in the Yuba River downstream of the Narrows II Powerhouse. This group will discuss conditions of anadromous fisheries in the Yuba River below the Narrows II Powerhouse and may provide comments and

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<sup>20</sup> Epke G. 2003. Spring Snowmelt Recession in Rivers of the Western Sierra Nevada Mountains. Master thesis, Univ. California, Santa Cruz, 67 p.

<sup>21</sup> DLA, p. E3.3.6-33.

insight on YCWA operations as they pertain to anadromous fish in the Yuba River downstream of the Narrows II Powerhouse.

DLA, App. E2, p. TE3.

The Network strongly supports the inclusion of a post-licensing implementation group however it should include non-governmental representatives. Extending the public a post-licensing role is beneficial for the Licensee, the Commission, the regulatory agencies and the public at large. It not only provides a forum and mechanism to avoid formal conflict, but also results in an improved understanding of project operations; direct and organized communication to foresee potential implementation problems; more rapid and seamless response to unforeseen circumstances; and improvements in institutional memory. For instance, post-licensing groups facilitate the cooperative sharing and reviewing of pertinent information. This is particularly important for complex technical data, such as hydrologic modeling data, that is not always readily available to the public at all or in a form that can be utilized. Licensees will improve their own efficiency and their good will with others in the process by encouraging such an information exchange through the existence of a post-licensing group.

NGO participation in the Yuba Accord River Management Team has been a benefit to the YCWA and participating resource agencies for the very reasons described above. NGO participants have contributed technical and contextual information that would otherwise be lacking from a group comprised only of the Licensee and resource agency representatives. For example, NGO participants can be credited with the development of riparian mapping data and a pilot project for expanded floodplain rearing habitat for juvenile Chinook salmon. NGO contributions to the RMT's reports have broadened their scope of consideration and made them more acceptable to various resource agency personnel and members of the public. NGO participation has ameliorated suspicion and criticism of YCWA and the RMT as operators of flows in the Lower Yuba River. These benefits are the result of the simple designation of a formal NGO representative and because that representative is available to address questions and concerns of any other NGO with an "insider's" account. Finally, NGO representation on the RMT has benefited the perceived transparency of the group and contributed to the development of an annual Symposium and the increasingly large attendance at those events. Any additional costs associated with the NGO representative for RMT are more than saved when considering the alternative of no NGO representation and the associated loss of services and substantially increased risk of procedural or legal challenge.

The Network recommends that Licensee include NGO and/or public representatives in this group. In addition, we recommend that Licensees work with relicensing participants to further refine its scope of duties and decision-making process. Licensee should expand the geographic scope of the group to include the Upper Yuba River and Middle Yuba River operations (or create a similar separate group).

#### **CONDITION TE4: CONTROL PROJECT RAMPING AND FLOW FLUCTUATIONS DOWNSTREAM OF ENGLEBRIGHT DAM**

This measure allows for sequential daily flow reductions to 70% of the prior days average flow. This down-ramping criteria may allow for water levels to drop faster than the maximum root growth rate of 2.5 cm per day for riparian seedlings (Stella et al. 2010) as explained in the letter from YCWA to FERC on January 29th regarding additional analysis to be conducted for Study 6.2 - Riparian Conditions Downstream of Englebright Dam.<sup>22</sup> The additional analysis for Study 6.2 is designed to examine the effects of current Project operations on recession rates that limit establishment and survival of riparian seedlings during the spring and summer. The additional analysis has not yet been completed. When complete, the new information should be used to evaluate the maximum down-ramping rate proposed by Licensee and develop, if needed, a measure that limits Project impacts to natural recruitment of cottonwood and other riparian tree species.

## **CONDITION RR1: IMPLEMENT RECREATION FACILITIES PLAN**

### **Safe and legal river access**

In general, the Network supports the Recreation Facilities Plan (Plan) and the careful work done to date by YCWA, the Forest Service and others in its development. However, the Plan fails to adequately address recreational needs created by the Project beyond the immediate Project boundary and Forest Service lands and facilities. The Project creates recreational opportunities and directly influences recreational use of the affected river reaches and their immediate surroundings as a result of its operation. The Network believes that the Commission should use its authority to require measures beyond the statutory jurisdiction of other federal agencies, in order to facilitate the enhancement of recreational uses within the Project's sphere of influence and within its geographic scope as outlined in Scoping Document 2 and the DLA.

Operation of the Project creates the need for safe and legal access to project-affected river reaches. The Project's operation as proposed, with improvements required by the new license, will increase recreational opportunities and thus demand for boating, fishing, swimming, hiking, horse and bike riding, and aesthetic enjoyment. Additionally, the past, present, and future efforts of the Bear Yuba Land Trust within the project's sphere of influence, both at Rice's Crossing and elsewhere in the Yuba River watershed, require ongoing coordination and development with Licensee.

### **Specific river access recommendations and comments**

The Network recommends that the FLA evaluate the following river access measures:

1. Provide access at Oregon Creek Day Use Park during winter;
2. Provide access immediately below New Bullards Bar Dam;
3. Provide subsidized shuttle service from North Yuba River whitewater run to the marina;
4. Provide access to the Narrows Canyon below Narrows II Powerhouse;
5. Provide access at Parks Bar on the lower Yuba River;
6. Improve and maintain the portage at Daguerre Point;
7. Provide access at Hallwood;

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<sup>22</sup> e-library no: 20140129-5244

8. Help coordinate and facilitate actions by others to provide trail access to the confluence of the North Yuba and the Middle Yuba.

These recommendations are discussed in more detail below.

### **(1) Provide access at the Oregon Day Use Park during the winter and spring**

The reach from Our House Dam to Highway 49 is widely considered to be one of the best Class IV runs in California.<sup>23</sup> Oregon Creek Day Use Area is take out for the 8 mile Our House Dam run and the put-in for the 12 mile stretch beginning at the Highway 49 bridge down to Englebright Reservoir. All the facilities needed for recreation are already in place. However, the parking lot and facilities are behind a gate. The gate should be open during the winter and spring to facilitate their use by whitewater recreationists.

### **(2) Access immediately below New Bullards Bar Dam**

Paddlers, anglers and other river recreationists have a strong interest in access below New Bullards Bar Dam. This location is the only existing access point to the upper part of this reach of the North Yuba River.

The reach from New Bullards Bar Dam to Englebright reservoir was first run in 1983 and has had sporadic use since that time.<sup>24</sup> The DLA points to several reasons why boating use has been limited on this run. These include poor access (currently paddlers have to walk over a mile from the highway down to the base of the dam), poor flow information, the fact that this is a steep narrow canyon, and limited cell phone service. DLA, p. 3.3.6-32 – 33. We certainly agree with the first two limitations highlighted by the Licensee; however, we do not believe that paddlers are deterred from running this reach because of the steepness of the canyon or because of the lack of cell phone service. The primary reason this run sees little use is the lack of boatable flows. This run has flows in the boatable range on average only 3 days per year. *Id.*, p. 33. We address our recommendations for improving flows on this run in section in our comments related to condition AR4.

Licensee states in the DLA that the paddlers surveyed would prefer vehicle access to the put-in below New Bullards Bar Dam. However, Licensee has gated the access road to this location because of poor suitability for vehicular use by the public, frequent use by maintenance vehicles, and potential terrorist threat. *Id.* Licensee states in the DLA that paddlers preferred to be able to hike down the road as opposed to climbing down the steep canyon walls. We agree; walking access on this road is acceptable. Limiting public access during times when heavy equipment is in use is also completely reasonable. However, we believe that denial of walking access to concerns over potential terrorist threats is not warranted, particularly in light of the fact

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<sup>23</sup>The DLA misrepresents the difficulty of this run as class VI at some flows, page E3.3.6-34. See Online guidebooks <http://www.awetstate.com/MYubaOH.html>. Both this online resource and TM 8-2, clearly state that this is a class IV run with no mandatory portages. This inaccuracy should be corrected in the Final License Application.

<sup>24</sup>Holbeck, Lars and C. Stanley. 1998. The Best Whitewater in California: The Guide to 180 Runs. Third Edition. Watershed Books. Coloma, CA. p. 134.

that cars are allowed to drive over the top of the dam. We believe that reasonable public access to project affected reaches is required under the equal consideration clause of Section 4(e) of the Federal Power Act.<sup>25</sup>

The new flood control outlet on New Bullards Bar Dam may provide an opportunity to create road access to the North Yuba River at a location that is downstream from the dam. Certainly, there will be a number of construction roads built as a part of this facilities modification. We recommend exploring the possibility of using construction roads built for this project as permanent access to this river reach. We look forward to finding a solution that will meet the interest of the Licensee and will provide reasonable public access.

### **(3) Provide shuttle service from North Yuba River whitewater run to marina.**

Although the North Yuba River above New Bullards Bar reservoir is a reach whose flows are not impacted by the Project, the Project reservoir does have substantial impacts on the recreation opportunities on this reach. The whitewater reach from Highway 49 to New Bullards Bar reservoir is a class III/ IV run that flows during the winter and spring, and in wet years well into the summer. Length of this run is greatly influenced by the reservoir elevation. When the reservoir is at full pool, the whitewater run is approximately 6 miles long. With a full reservoir, paddlers are also required to paddle, or be shuttled, approximately 12 miles on the reservoir to reach the one of the boat ramps. As the reservoir drops, the whitewater run becomes longer and the amount of flat water on the reservoir becomes shorter. At no reservoir level is it truly realistic for boaters to paddle the reservoir to the takeout. In the past, some commercial outfitters and a few private boaters have opted to rent boats from the Marina and be shuttled out by power boat from the end of the reservoir. Clearly, changing reservoir elevations have a large impact on paddlers' ability to utilize this reach.

We recommend that the Licensee develop a shuttle service that would be offered during the paddling season. This shuttle service should be available for a reasonable fee, to be determined jointly by the Licensee and American Whitewater. This alternative is far less expensive than building road access to the end of the reservoir. The Licensee states that it is unclear as to whether this run would become more popular if a shuttle service were available.<sup>26</sup> While this may be true, it is also true that the expense of providing this shuttle service would be directly related to the amount of use. If there were little use, as the Licensee suggests there may be, there would also be little expense associated with this access improvement. Given that increasing opportunity on this reach would have no impact on power generation, this is a very low-cost measure that should be included in the new license.

### **(4) Provide a recreational access point to the Narrows Canyon below Narrows II Powerhouse**

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<sup>25</sup> See Heather Campbell and Frank Calgano, *Offering Public Access While Maintaining Security*, Hydro Review, October 2005, pp. 16ff.

<sup>26</sup> DLA, p. E3.3.6-35.



The whitewater run below Narrows II Powerhouse is detailed in whitewater guidebooks.<sup>27</sup> The run is mostly class II with one portageable class IV rapid. This run has the distinct advantage of having boatable flows year round. It is also likely of significant interest to anglers in drift boats. Universally, paddlers cite the poor access as the main deterrent to this run. There is a road to the Narrows II facility and a parking lot, and just above that point there is a rocky trail that leads to river. We recommend allowing public access to the area downstream of the Narrows II facility and an enhanced footpath to the river for recreational access.

#### **(5) Provide organized access at Parks Bar**

Parks Bar, where Highway 20 crosses the lower Yuba River, is used for access by anglers, CDFW staff, and recreational boaters. The access is not maintained and requires crossing large loose river cobbles. Although access could be provided at either end of the bridge, we recommend developing an organized access within the CalTrans easement on the north side of the bridge. Parks Bar is the most important access point for drift boat use by the angling public.

#### **(6) Improve and maintain the portage at Daguerre Point**

USACE has constructed, but does not adequately maintain, a portage route along the south side of the lower Yuba River at Daguerre Point Dam. The portage trail requires minor improvements and maintenance.

#### **(7) Provide Access at Hallwood**

Currently, access at this location requires a walk of approximately more than a quarter mile. There have been past conflicts property owners in the neighborhood for parking vehicles. There is a need for access that is acceptable to neighboring property owners that also allows safe and legal retrieval of boats from the river. Such a facility might also provide improved opportunities to anglers wishing to fish from boats in the lower end of the river.

#### **(8) Coordination with other entities who are constructing and maintaining trails (other than Forest Service trails) within the Project's geographic scope**

Immediately below we describe several different trail developments that are in planning or underway in the area of the Project. The Network requests that YCWA coordinate with the entities that are constructing and maintaining these trails. For example, YCWA may be able to add value by providing access at trailheads or across YCWA-owned land. We believe that trail development in the project area offers substantial recreational and economic opportunities for Yuba County and its residents, who are currently underserved in terms of river-based recreational venues and facilities.

##### **(a) The Yuba River Trail at Rice's Crossing**

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<sup>27</sup> Holbeck, *Id.*, p. 107.

Rice's Crossing includes 2,700 acres along the Yuba River in both Yuba and Nevada Counties, which, until recently, has been closed to the public through private ownership. The land was recently acquired by the Bear Yuba Land Trust (BYLT) for public recreation and conservation of natural resources, funded through the River Parkways grant program of California Department of Water Resources, plus grants from Sierra Nevada Conservancy and CalTrans Environmental Enhancement and Mitigation Program.

The six river miles through Rice's Crossing connect to nine river miles of adjacent public lands. The resulting 15 miles of river flows through over 8,400 acres of now contiguous public open space along the Yuba River. This includes existing and new trails in South Yuba River State Park, Plumas National Forest, Bullards Bar Recreation Area and Tahoe National Forest. Other adjacent public land ownership includes Army Corps of Engineers recreation land, the Bureau of Land Management and Yuba County Water Agency.

The Yuba River Trail will provide multiple recreation uses and support for year around rural tourism and economic development in nearby disadvantaged communities. Opportunities for the public to fish, boat, kayak, raft, hike, mountain bike, horseback ride, swim, and gold pan all need to be considered, along with the impacts of proposed recreation on water quality, ecosystem restoration and protection of the Yuba River.

#### **(b) Yuba River Trail segments requiring coordination, construction, and maintenance**

At the south end of the Rice's Crossing property (Nevada County), access to the area from the south is off the paved Pleasant Valley Road through the South Yuba River State Park. A spur road through a small U.S Army Corps of Engineers (USACE) parcel connects to Rice's Crossing.

Opening this stretch of the Yuba River to the public will provide connectivity to, and thereby enhance the use of, adjacent state and federal managed lands. Recreation in this part of the property will be designated for river visitation, easy hiking, swimming, rafting, kayaking, fishing, bird watching, and picnicking. It will include an interpretation area.

A partially built structure exists on this section of the property. BYLT proposes to develop a youth fish camp to be used by organized groups. Portions of this area will be ADA accessible where appropriate and feasible.

A rough road along the trail route exists today. BYLT intends to adapt this road as a trail. Construction would include grading, culverts, out-sloping, and dips. The trail is well above the high-water mark of the river. Safe spur trails to river access points should be included.

At the north end of the Rice's Crossing property (Yuba County) the trail extending north on the Nevada County side of the river is more complex and will require engineering and surveying to plan a safe route above the high-water mark. Existing logging roads and fire breaks would be restored and adapted for trail use once a route is planned. An access area built off of

the paved Marysville Road near the old quarry site would provide staging areas that can accommodate horse trailer parking and corrals desired by the equestrian community.

This northern part of the property will be maintained as a rugged wild lands trail that begins more than 300 feet above the North Yuba River and follows the ridge with long distance views as far as Grouse Ridge in the high Sierra Nevada, 75 miles to the southeast. The trail will be designed for mountain biking, horseback riding, and hiking. This area features good soils for construction and few barriers such as large rock outcroppings. Construction would include tree removal, brush clearing, grading, small bridges to protect drainages, and culverts. The staging area would be covered with asphalt in the driveway and parking lot, corrals and hitching posts for horse, and possibly pit toilets.

The potential is for this trail to extend for six miles south connecting at the historic Colgate Powerhouse. Parking for a trailhead in this area is accessible via a paved road through the town of Dobbins and Lake Francis recreation area.

### **(c) Regional Trails Connectivity**

South from Rice's Crossing, trails will connect to well-used existing trail networks within the South Yuba River State Park (SYRSP) through USACE land. SYRSP is a day-use area with most recreational activity centered on the Yuba River. A proscriptive trail already exists between the Park and Rice's Crossing that would be formally dedicated as a public trail.

North from Rice's Crossing, trails will connect across the New Bullards Bar Dam to a developed network of wilderness trails for hiking and mountain biking, and campgrounds on the south side of the Reservoir. These trails are part of Tahoe National Forest, including the Bullards Bar Trail and the Schoolhouse Trail. A foot and bike path is proposed as a roadside trail along Marysville Road on the Yuba County right-of-way.

### **CONDITION RR2: PROVIDE RECREATIONAL FLOW INFORMATION**

Publicly available flow information is essential for safe recreation on river reaches downstream of project facilities, and is extremely important for recreationists of all types. These flow gauges also provide a mechanism for all members of the public who are interested in the operation of this project.

In the DLA the Licensee proposes to provide public flow information at the following locations:

- Reservoir Storage (end-of-day reservoir water surface elevation in feet): New Bullards Bar Reservoir
- Streamflow (hourly data in cubic feet per second): Middle Yuba River downstream of Our House Diversion Dam; Oregon Creek downstream of Log Cabin Diversion Dam; North Yuba River downstream of New Bullards Bar Dam (when dam is not spilling); Yuba River at Smartsville; Yuba River at Marysville

- Streamflow (mean daily flow in cfs) North Yuba River downstream of New Bullards Bar Dam (when dam is spilling)

The Network supports reporting all of these stream and reservoir gauges on the internet, with the time steps specified, except that we recommend that the streamflow gauge downstream of New Bullards Bar Dam be reported hourly and year-round, consistent with the other flow gauges on this project. Mean daily flow is too coarse a measurement to be of value to the recreating public. As noted above, the DLA reports that one of the primary reasons for low paddling use of the North Yuba downstream of New Bullards Bar Dam is the lack of accessible flow information.<sup>28</sup> Technical Memo 8-2 reports: “Currently, flow information on the reach is primarily based on guessing or driving out the dam to see what the flows are and extrapolating what the Middle Yuba River gage reads. The result is that the reach primarily boatable for a very local population.”<sup>29</sup>

The Network also recommends that Licensee report hourly readings from the following existing flow gauges on the North Yuba above Slate Creek and on the Middle Yuba above Our House Dam. Both of these flow gauges are currently being provided by the Licensee and they are available on the Internet. These gauges provide valuable information for paddlers, anglers and other river recreationists.

The Network recommends the addition of a real-time gage below the confluence of Oregon Creek and the Middle Yuba. This gage is important because of the accretion that occurs in the 8 miles below Our House Dam and in the 4.5 miles below Log Cabin Dam upstream of the confluence. This gage would provide recreationists with the better and safer flow information.

Finally, we recommend that YCWA report hourly data on flows in the Yuba River downstream of Colgate Powerhouse and flows in the lower Yuba River downstream of Deer Creek.

## **COMMENTS ON ONGOING STUDIES**

The Network offers comments on the following ongoing studies: 7.11, 7.11a and 7.13.

### **Study 7.11 Fish Behavior and Hydraulics**

The final Tech Memo for Study 7.11 has not been provided and thus substantial information from this study, including all data collected in 2013, has not been available to inform evaluation of project effects on Chinook salmon. The Network concurs with NMFS in their comments on the Updated Study Report and would like to emphasize particularly points for FERC to consider regarding this study. First of all, it is apparent that neither FERC, nor any of the relicensing participants were adequately aware of how operational conditions in the vicinity of the Narrows II powerhouse may affect Chinook salmon at the time of the determination for

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<sup>28</sup> DLA, p. E3.3.6-33.

<sup>29</sup> Technical Memorandum 8-2, Attachment 8-2F, 2008 New Bullards Bar Dam Whitewater Study Results, p. 16.

Study 7.11 was proposed and adopted. As evidence, Study Plan 7.11 makes no reference analyzing the frequency of operation, opening and closing sequence, flow through or flow rate changes of the partial bypass. The Network supports the request of NMFS for more detailed hydrological information than the Study Plan specified and the rationale that such a study modification is warranted due to a material change in the knowledge of project conditions.

### **Study 7.11a Radio Telemetry for Chinook Salmon**

The Network has reviewed the FERC determined Study Plan for 7.11a, the letter submitted by YCWA to FERC on February 10<sup>th</sup> concerning study method consultation, and the letter from YCWA to FERC on February 11<sup>th</sup> requesting a postponement of the year for conducting field work for this study from 2014 to 2015 due to hydrologic conditions.<sup>30</sup> We respect that the development of final methods for this study is requiring substantial cost and time, and we encourage FERC to provide guidance as possible to ensure successful implementation. The Network considers that it is better to delay full implementation of the study to 2015, then to expend the one year of field work during a period of anomalous flow and atypical operational dynamics. However, we suggest that some form of data collection on Chinook salmon interactions with project facilities during 2014 is important. Finally, we note that Study Plan 7.11a defines the study area as the portion of river downstream of Narrows II powerhouse and above the Narrows pool. If YCWA were to implement this study with hydrophones located only above Narrows 1 powerhouse, as suggested by the letter to FERC on February 10<sup>th</sup>, then that would represent a failure to fully complete the study. Monitoring of fish movements throughout the reach, including below Narrows 1 powerhouse is important to fully understand the use of the area by salmon in response to project operations. While the study is not intended to evaluate the effects of Narrows 1 on fish behavior, Narrows 1 is too proximal to YCWA's facilities to attempt to exclude that area. Furthermore, Narrows 1 is operated in coordination with Narrows II and YCWA has provided in the DLA a proposed measure for continued coordination of these facilities.

### **Study 7.13 Fish Stranding Associated with Narrows II Bypass**

The Network has preliminarily reviewed Tech Memo 7.13 provided to Relicensing Participants on February 21, 2014. The information gathered in this study and the revelation that more than one type of fish stranding incident may be resulting from YCWA's operations in the vicinity of Narrows II Powerhouse is of great importance toward the development of appropriate new license conditions, including possible mitigations. The Network requests FERC to require YCWA to continually monitor for stranding incidents associated with operational changes at Narrows II powerhouse, partial bypass and full pass until the implementation of a new license.

### **Reservation of Right to Comment**

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<sup>30</sup> Communication dated February 11, 2015, YCWA requested that FERC delay completion of study 7.11a to 2015 (from 2014) because extraordinarily dry conditions may mean limited operation of Narrows II this year. E-library no: 20140211-5070.

The Network reserves the right to comment on the final study results of the studies listed below which, as noted by the Licensee in the USR, are not complete at this time. The expected date of completion follows each study.

- Study 7.11 Fish Behavior and Hydraulics Near Narrows II Powerhouse - March 31, 2015
- Study 7.11a Radio Telemetry Study of Spring-run and Fall-run Chinook Salmon Downstream of Narrows II Powerhouse - March 31, 2015<sup>31</sup>
- Study 6.2 Riparian Habitat Downstream of Englebright Dam – estimated to be completed prior to the Final License Application
- Study 8.2 Recreational Flow - June 30, 2014 (it is possible that the completion of this study may extend beyond the estimated date given the projected water year conditions)
- Study 7.13 Fish Stranding Associated with Shutdown of Narrows II Powerhouse Partial Bypass - February 28, 2014

## **GENERAL COMMENTS ON THE DLA**

### **RELATIONSHIP OF ENGLEBRIGHT DAM TO PROJECT**

Englebright Dam, constructed by the California Debris Commission to control mining debris and currently owned by the U.S. Army Corps of Engineers, is an integral part of the Yuba River Development Project. It is also the terminal barrier to upstream passage of Chinook salmon and steelhead at river mile 24, confining these fish to the lower Yuba River. The Licensee acknowledges that Englebright Reservoir acts as the afterbay for operation of the New Colgate Powerhouse as well as the forebay for the Narrows I and II powerhouses, and that it is able to derive significantly more value from the Project as a result of the presence of Englebright Dam.

Through the use of Englebright Reservoir as a buffer to avoid fluctuating flows in the lower Yuba River, YCWA can operate the New Colgate Powerhouse in a manner to provide hydroelectric generation at times when it has more value than if YCWA was unable to use Englebright Reservoir. Similarly, it provides YCWA with the ability to regulate releases from the New Colgate Powerhouse to account for variability in flow on the Middle Yuba River above Our House Dam and from the South Yuba River; without Englebright Reservoir, YCWA would need to operate the New Colgate Powerhouse without consideration for inflow from the Middle Yuba River and South Yuba River, reducing available storage in New Bullards Bar Reservoir, creating greater variability in Yuba River flow below the Narrows II Powerhouse and Narrows II Bypass, and decreasing the ability of the New Colgate Powerhouse to provide significant regulation and stability for the Northern California power grid.”

DLA, p. E3.3.2-125.

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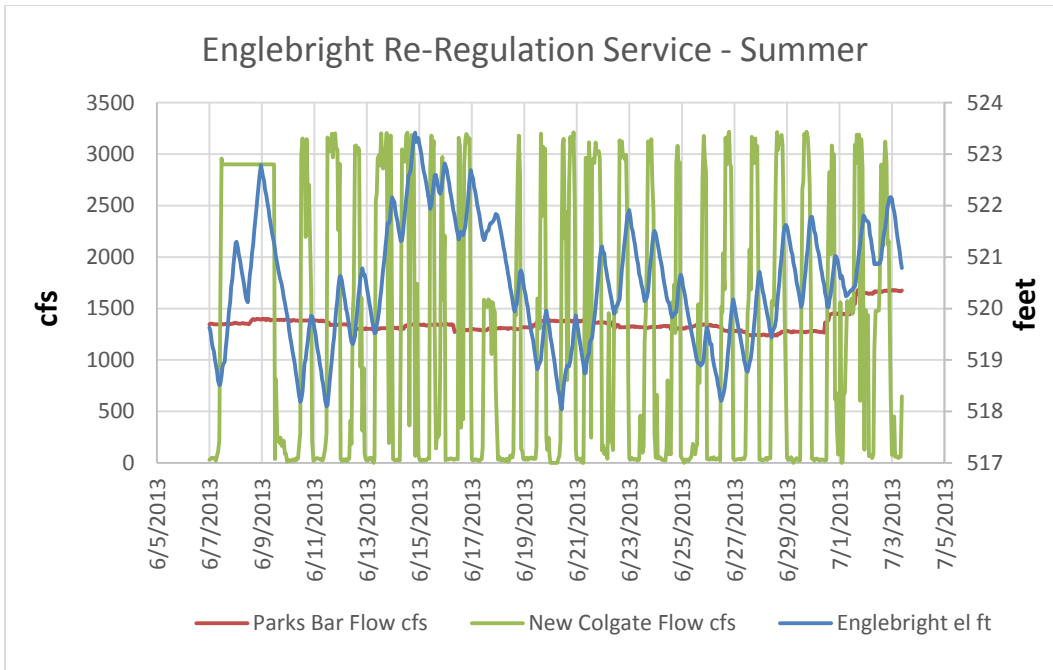
<sup>31</sup> Communication dated February 11, 2015, YCWA requested that FERC delay completion of study 7.11a to 2015 (from 2014) because extraordinarily dry conditions may mean limited operation of Narrows II this year. E-library no: 20140211-5070.

Despite its reliance on Englebright Dam for its operations, Licensee proposes to remove from the project description “the area that contains Englebright Dam including a 50-foot offset from the dam structure” concluding that “[t]hese land parcels are not used for Project O&M and do not have any Project or non-Project facilities except for the Narrows II Power Tunnel that passes underneath Englebright Dam. As such, the purpose is to remove the portion of the non-Project Englebright Dam from the Project Boundary.” (DLA, p. E2-43.) At the same time, Licensee seeks to include the use of Englebright Reservoir as a Project condition (General Condition 8).

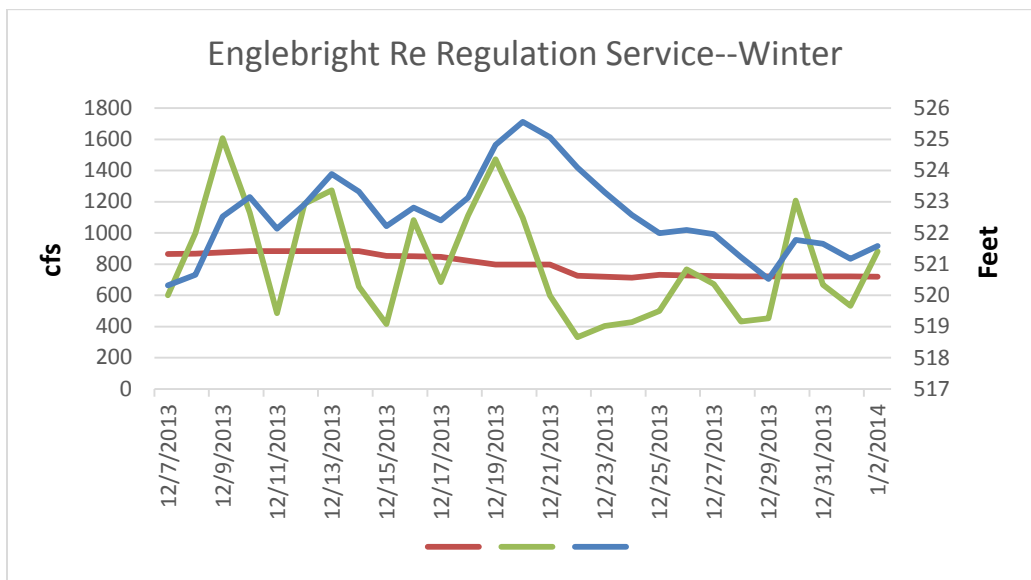
Under the Federal Power Act (FPA) Part I, the Commission has jurisdiction over any non-federal entity which constructs, operates, or maintains any dam or related work for power generation using (i) navigable and other waters subject to the Commerce Clause of the U.S. Constitution, (ii) waters on federal lands such as a National Forest, or (iii) “surplus waters” from any federal dam. 16 U.S.C. § 797(e). It is unlawful for any non-federal entity to operate such works absent a license. 16 U.S.C. § 817. A license, however, is more than the project works, defined as “physical structures” (16 U.S.C. 796(12)). Each license must assure “that the *project* adopted, including the maps, plans, and specifications, shall be such as in the judgment of the Commission will be best adapted to a comprehensive plan of development ....” 16 U.S.C. § 803(a) (emphasis added). A new license “cover[s] any *project or projects* covered by the original license ....” 16 U.S.C. § 808(a) (emphasis added). Under FPA section 3(11), “project” means the complete unit of development, both the project works and all other associated interests in land and water rights. 16 U.S.C. § 796(11).

Englebright buffer storage is a necessary functional element in the hydro power generation at New Colgate Power House (NCPH), and at Narrows II Power House Narrows II. Englebright acts as an afterbay that re-regulates NCPH flow fluctuations, and as a forebay that provides water to Narrows II and thus falls squarely within the statutory definition of project work under FPA § 3(12). Englebright’s re-regulating services are described in more detail below.

NCPH and Narrows II are operated in a coordinated manner, using Englebright as buffer storage to transform large flow fluctuations required by the NCPH business model into steady flows required by downstream beneficial uses.



The graph above depicts the discharge of New Colgate Power House, the water surface elevation of Englebright, and the flow rate in the Yuba River at Parks Bar last June. Because it was a dry year, YCWA was using its limited water to generate the most valuable power, which is peaking power and grid control power. Consequently NCPH flows were fluctuating frequently from a few cfs to over 3,000 cfs. The water surface elevation at Englebright varied daily by a foot or two, and by as much as five feet over a period of a week or so. Buffering provided by Englebright resulted in negligible flow variation at Parks Bar.



Last December, NCPH was operating in more of a block-loaded manner, with flow variation limited to about 1,000 cfs, over a period of days rather than 3,000 cfs variation over a period of hours as in the June graph. Nonetheless, changes in flow rate still required the



buffering storage of Englebright in order to provide steady flows at Parks Bar. This graph suggests that the buffer storage function that Englebright provides would be required, though perhaps a lesser extent, even if NCPH were not operated as a peaking and grid control plant.

Although Englebright dam is larger than it needs to be to provide afterbay/forebay services for YCWA power plants, without Englebright Dam (or a smaller dam providing re-regulating service) YCWA would be unable to operate the Project in its current manner, or as YCWA is proposing in the DLA.

It is clear that the Corps is compensated for the valuable service that Englebright provides. Below is an excerpt from the YCWA DLA:

**Table 5.1-2. Federal, State, and local fees and payments in 2013 U.S. dollars unrelated to environmental or recreation measures paid by Yuba County Water Agency in Calendar Year 2013.<sup>1</sup>**

Agency to which Payment Was Made	Description of Payment	Annual Payment (2013 U.S. Dollars)
Federal Energy Regulatory Commission	Use of Federal Land, including National Forest System (NFS) Land and Land Managed by the United States Army Corps of Engineers	\$303,000 <sup>2</sup>
Federal Energy Regulatory Commission	Project Administration	\$772,000
California State Water Resources Control Board (SWRCB)	Water Rights	\$80,000
United States Army Corps of Engineers (USACE)	Payment for Storage of Water in Englebright Reservoir	\$100,000
California Division of Safety of Dams	Dam Safety	\$121,000
<b>Total</b>	--	<b>\$1,376,000</b>

<sup>1</sup> Federal State and local sales tax on capital improvement equipment is included in the costs for the capital improvement equipment shown in Sections 5.1.4 and 5.1.6.

<sup>2</sup> Based on 3,834.470 acres of Zone F federal land in the FERC Project Boundary, per FERC's most recent Statement of Use Annual Charges for U.S. Lands.

YCWA anticipates local, state and federal fees will increase from the existing annual costs to approximately \$2,000,000. In part, this increase is due to payments to the federal government for use of Englebright Dam in accordance with FPA § 11.4.

Table 5.1.2 of the DLA reproduced above shows that YCWA pays USACE \$100,000 per year for “Storage of Water in Englebright Reservoir”. This payment is likely to increase, apparently to about \$624,000; “this increase is due to payments to the federal government for use of Englebright Dam in accordance with FPA Para 11.4”. (FPA para 11.4 refers to pumped storage; the correct reference is FPA para 11.3).

However, regardless of the actual fees paid by YCWA to the Corps for storage in Englebright, the sums are substantial (particularly if the fees comply with FPA 11.3). YCWA pays these substantial fees because the flow re-regulating service currently provided by Englebright is fundamentally essential to YCWA’s power generating business. That this business arrangement exists and these fees are paid make it clear that Englebright is “part” of the complete unit of development, “used and useful” for power generation, and “directly connected” to the Narrows II powerhouse, which is part of the licensed works. *See* FPA 3(11), 16 U.S.C. § 796(11). As such, it is appropriately a project work under FPA § 3(12) and must be included in the Project Description for this Project.

## **Project Impacts and Protective Measures**

Licensee is required to include information in its license application sufficient to permit the Commission to analyze the effects of the project and construct appropriate protection, mitigation and enhancement measures. 18 C.F.R. § 380.3(b)(1)-(2). As explained by the preceding section, Englebright Dam is a Project work. Additionally, Licensee acknowledges that Englebright Dam is a complete barrier to fish migration.

“However, the USACE’s Englebright Dam at River Mile (RM) 24.3 on the Yuba River is currently a complete physical barrier to anadromous fish upstream migration....”

DLA, p. E1-26.

Despite this fact, neither the DLA nor the Draft Biological Assessment contains information concerning the Project impact’s on fish passage or anadromous fish habitat upstream of Englebright Dam or appropriate mitigation measures.

This information must be included in the FLA. Despite the requests of the Network and some Resource agencies, the Commission has not approved any studies that would generate information adequate to evaluate an alternative whereby the new license is conditioned on fish passage provisions that mitigate the impacts of YCWA’s operations and use of Englebright Dam. Provision of such information by the Licensee is necessary to ensure that the Commission and the State Water Resources Control Board have the information needed to fulfill their respective regulatory obligations.

The State Board, in its comments on the Applicant’s Updated Study Report, requested such information.<sup>32</sup> Information relevant to this request has been developed by the Yuba Salmon Forum (YSF) and is readily available to Licensee. For instance, since the completion of the Initial Study Report comment period, YSF has released two reports: the Fish Passage Infrastructure Report and the Draft Summary Habitat Analysis. Licensee can, at least in large part, meet the informational needs of the State Board by entering both reports into the FERC docket. Following this action, the State Board and the Commission should communicate to Licensee whether there are specific additional informational needs.

The Network is encouraged by the information that has been generated by the Yuba Salmon Forum and by the active support of the Licensee for the Yuba Salmon Forum process. We look forward to continuing progress in evaluating feasible alternatives for reintroducing fish above Englebright Dam.

As noted above, the Draft Biological Assessment also declines to assess the impacts associated with the continued existence and use of Englebright Dam.

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<sup>32</sup> See *Fish Passage Assessment for Spring-run Chinook and Central Valley Steelhead Study*, State Water Resources Control Board Comments on the Updated Study Report. e-Library no: 20140210-0013.

“In consideration of YCWA’s lack of authority to remove or significantly alter the infrastructure and facilities associated with Englebright Dam in any way that would benefit listed species, the following effects resulting from the existence of Englebright Dam and Reservoir are included in the Environmental Baseline for this BA. NMFS (2007) identified several key stressors associated with Englebright Dam: (1) blocking access of listed salmonids to the habitat above the dam; (2) forcing overlapping use of the same spawning areas by spring and fall-run Chinook salmon below the dam; (3) forcing fish to spawn in a limited area without the benefit of smaller tributaries which can provide some level of refuge in the event of catastrophic events; and (4) preventing the recruitment of spawning gravel and large woody material from upstream of the dam into the lower river. NMFS (2007) further suggested that Englebright Dam’s disruption of natural geofluvial processes reduces the quantity and quality of the PCEs (e.g., suitable spawning substrates, riparian vegetation, SRA habitat) of critical habitat in the lower Yuba River.”

Draft Biological Assessment, p. E6-21. Irrespective of the potential legal issues associated with the inclusion of Englebright Dam as part of the Environmental Baseline for the purposes of Endangered Species Act consultation, the Licensee has a separate obligation under the Federal Power Act to explain the effects of the applicant’s proposal on resources and otherwise provide information necessary for the Commission to prepare the FEIS. *See* 18 C.F.R. §§ 5.18; 380.3. This includes information concerning the Project’s impacts on fish passage and anadromous fish habitat upstream of Englebright Dam and appropriate mitigation measures. Such information should be included in the FLA.

## **NEPA ANALYSIS AND ALTERNATIVES**

The Commission must assure that the information contained in the license application is adequate to inform its NEPA analysis. While it is ultimately the Commission’s responsibility to comply with NEPA, the Commission’s regulations implementing NEPA require that the license applicant “[p]rovide all necessary or relevant information to the Commission,” and “[c]onduct any studies that the Commission staff considers necessary or relevant to determine the impact of the proposal on the human environment and natural resources.” 18 C.F.R. § 380.3(b)(1)-(2).

The regulations describing application content specify that the license application include information regarding cumulative effects (*see* 18 C.F.R. § 5.18(b)(2)); compliance with applicable laws such as Section 401 of the Clean Water Act, Endangered Species Act, and the National Historic Preservation Act (*see id.* at § 5.18(b)(3)); the proposed action and action alternatives and their effects on the environment as indicated by studies, including any unavoidable adverse effects and any environmental measures to mitigate effects (*see id.* at § 5.18(b)(5)). The DLA does not provide adequate information for the Commission and other parties to assess the Project’s direct and cumulative effects on the environment, develop appropriate protection, mitigation or enhancement measures to mitigate the adverse effects of the Project, or develop and analyze reasonable alternatives. To ensure compliance with Commission regulations, the Licensee’s FLA should include additional alternatives and analysis consistent with the sections below.

### **Alternatives**

The Commission must assure that the information contained in the license application is adequate for analysis of a reasonable range of alternatives. NEPA expressly requires that a NEPA document consider a reasonable range of alternatives to the proposed action which would achieve a given purpose. *See* 42 U.S.C. § 4332(2)(E); 40 C.F.R. § 1508.9(b).

The FLA should include the following alternatives: 1) a No-Action Alternative representing existing conditions and including final 4(e) conditions filed for the relicensing of the Yuba-Bear (FERC no. 2266) and Drum-Spaulding (FERC no. 2310) projects located upstream of some Yuba River Development facilities; 2) a Salmon and Steelhead Reintroduction Alternative that evaluates the consequences of reintroducing salmon and steelhead to the North Yuba River, to the Middle Yuba River and/or to the South Yuba River; 3) a Bay-Delta Water Quality Control Plan Alternative that analyzes flow operations to meet 40%, 50%, and 75% of January through June unimpaired flow as measured at Marysville, with off-ramps for multiple dry year sequences and 4) a Modified Feather River Operations Alternative.

### **(1) No-Action Alternative**

NEPA regulations specify that the no-action alternative may be used as a “benchmark, enabling decision makers to compare the magnitude of environmental effects of the action alternatives.”<sup>33</sup> The DLA follows this model noting that its no-action alternative constitutes “the baseline from which to compare all action alternatives.”<sup>34</sup> The Network recognizes a reasonable and foreseeable change in baseline conditions: final 4(e) conditions have been filed for the relicensing of the Yuba-Bear (FERC no. 2266) and Drum-Spaulding (FERC no. 2310) projects located upstream of some Yuba River Development facilities. It is therefore reasonable to expect changed instream flows entering into the Yuba River Development Project from the Middle Yuba and South Yuba rivers. As NEPA does not preclude lead agencies from including anticipated future conditions in the impact assessment, the FLA can include as part of the no-action alternative relevant projects that are likely to occur in the future irrespective of the Project. The new operations of the Yuba-Bear and Drum-Spaulding (YBDS) projects pursuant to the final 4(e) conditions will occur regardless of the outcome of this proceeding and are sufficiently well-defined to allow for meaningful review. Therefore, the No-Action Alternative conditions should include the new minimum instream flows and new spring snowmelt recession flows to be released in accordance with the final 4(e) conditions for the YBDS projects.<sup>35</sup> This will facilitate the assessment of Project effects and development of measures tailored to the conditions that will be present over the term of the License.

As noted above, Licensee considers the No-Action Alternative to constitute “the baseline from which to compare all action alternatives.”<sup>36</sup> The DLA specifies that the No-Action Alternative baseline flows for the lower Yuba River are the Yuba Accord flow requirements.

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<sup>33</sup> CEQ’s *Forty Most Asked Questions Concerning CEQ’s NEPA Regulations*

<sup>34</sup> DLA, p. E1-43.

<sup>35</sup> This approach is also allowed under CEQA. The CEQA baseline for assessing significance of impacts is normally the environmental setting, or existing conditions, at the time a Notice of Preparation (NOP) is issued; however, the word *normally* in this context indicates that CEQA lead agencies have the discretion, where justified, to fully or partially update baseline conditions beyond the time of issuance of the NOP. *Smart Rail v. Exposition Metro Line Construction Authority*, 57 Cal.4<sup>th</sup> 439 (2013).

<sup>36</sup> DLA, p. E1-43.

Under the No-Action Alternative, the Project would continue to operate into the future as it has historically operated (i.e., for the past 5 years), and no new environmental PM&E measures would be implemented.

DLA, p. E2-1.

Since 2008, YCWA has been operating the Project to implement the Yuba Accord according to the authorizations and requirements in SWRCB Corrected Order WR 2008-0014.

DLA, p. E2-17.

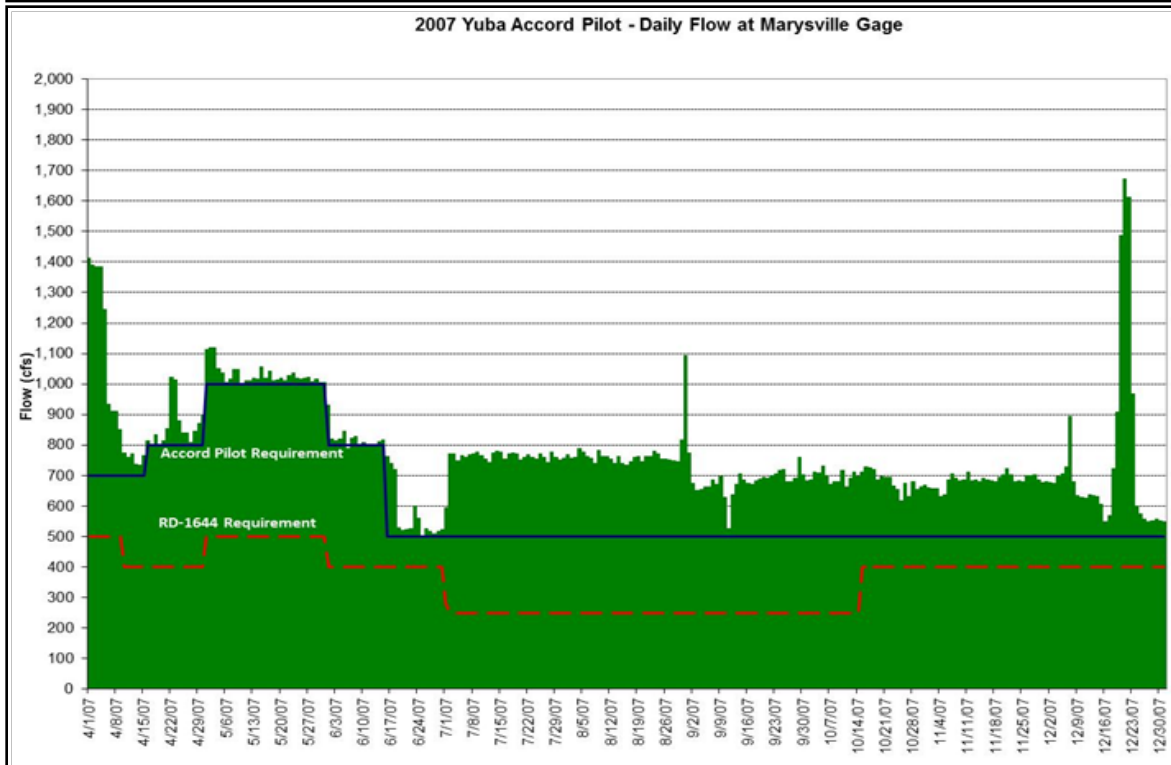
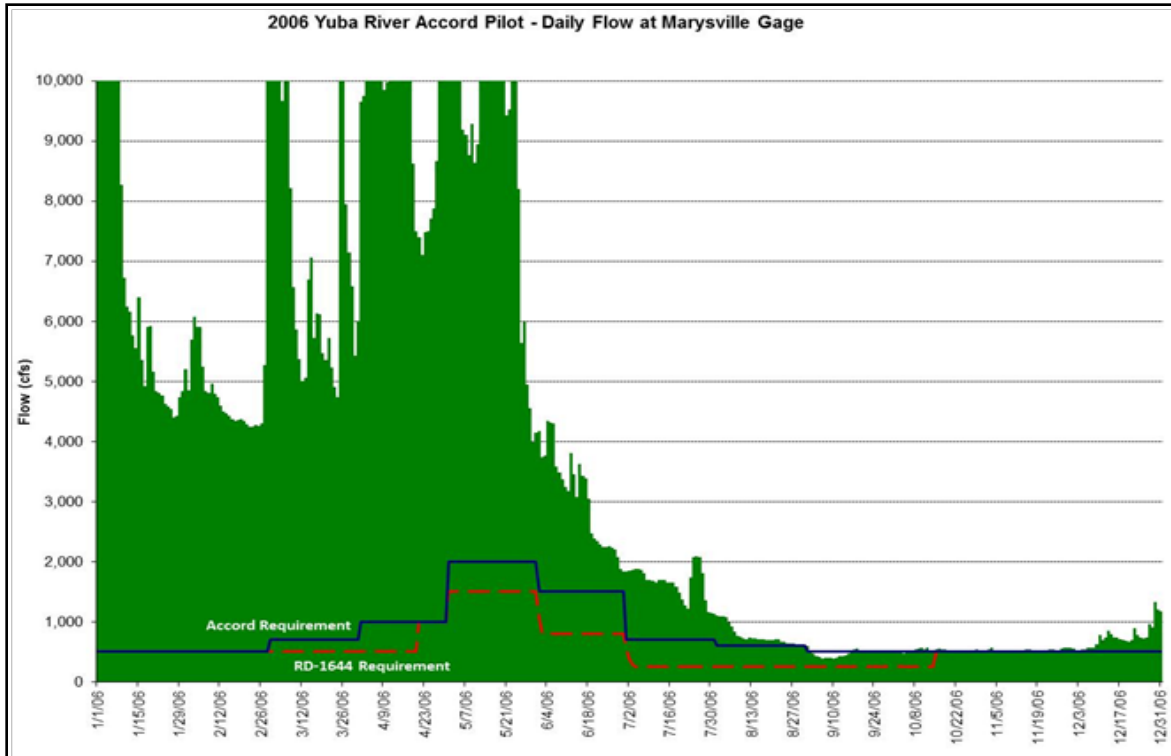
In many instances, however, actual flows observed in the lower Yuba River are significantly different than the flows prescribed by the Yuba Accord. For instance, flows observed during the summer in the Yuba River are considerably higher than the minimum flows required by the Yuba Accord. This is due to Licensee's releases for hydropower purposes and/or water transfers.

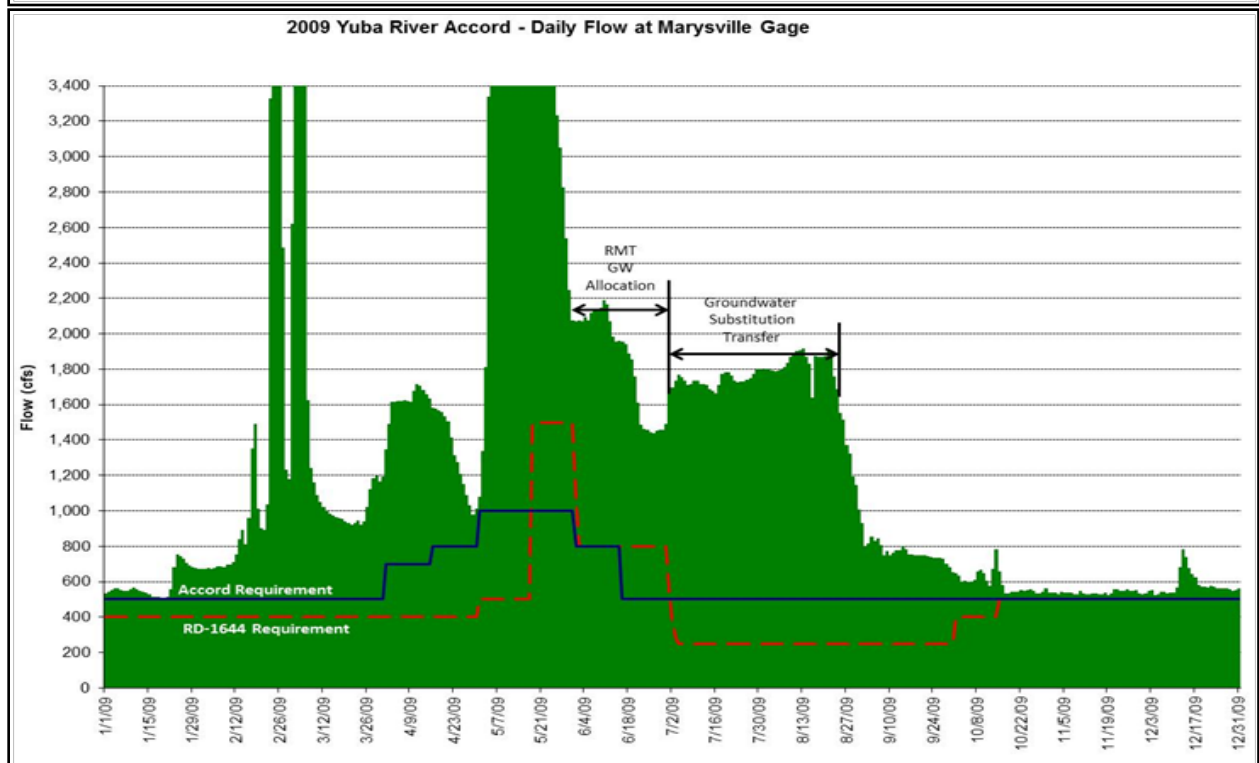
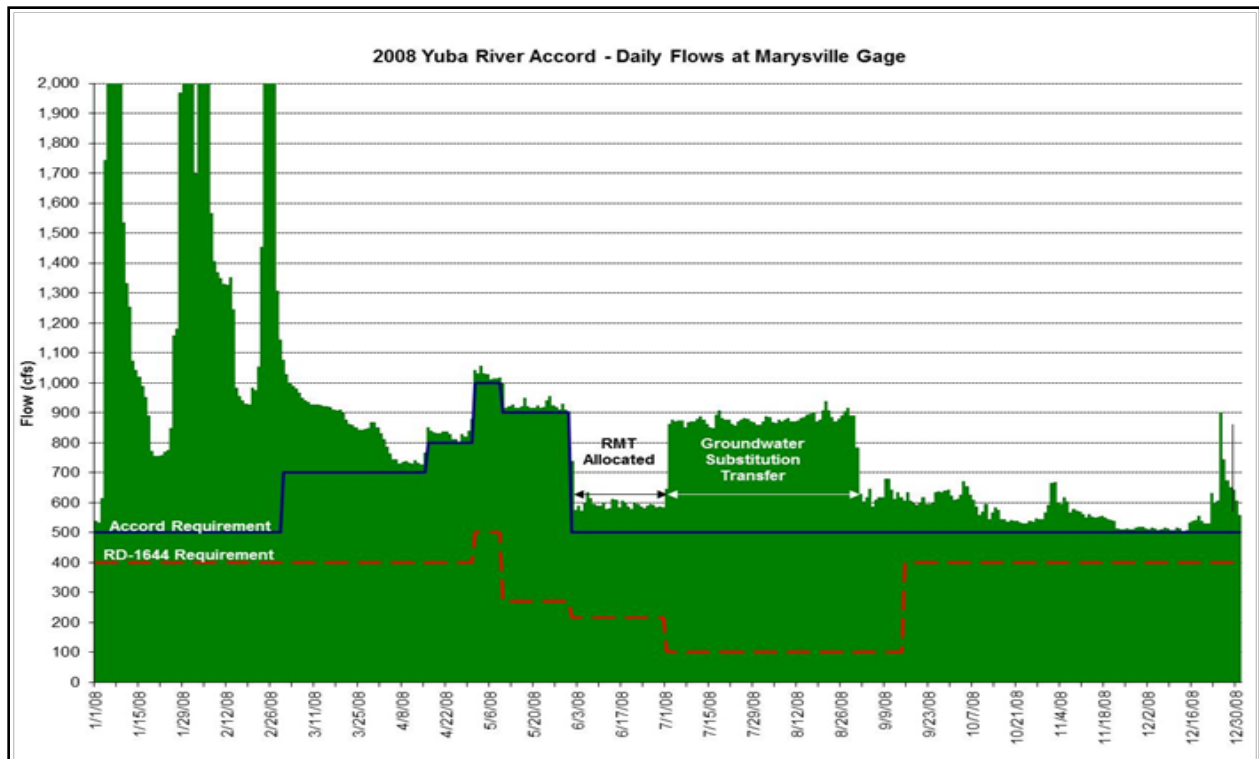
“Stored water transfers have typically occurred from July through September. Under the Yuba Accord, transfer releases can occur throughout the year, but through reoperation of the state and federal projects only delivered across the Delta in the summer months.”

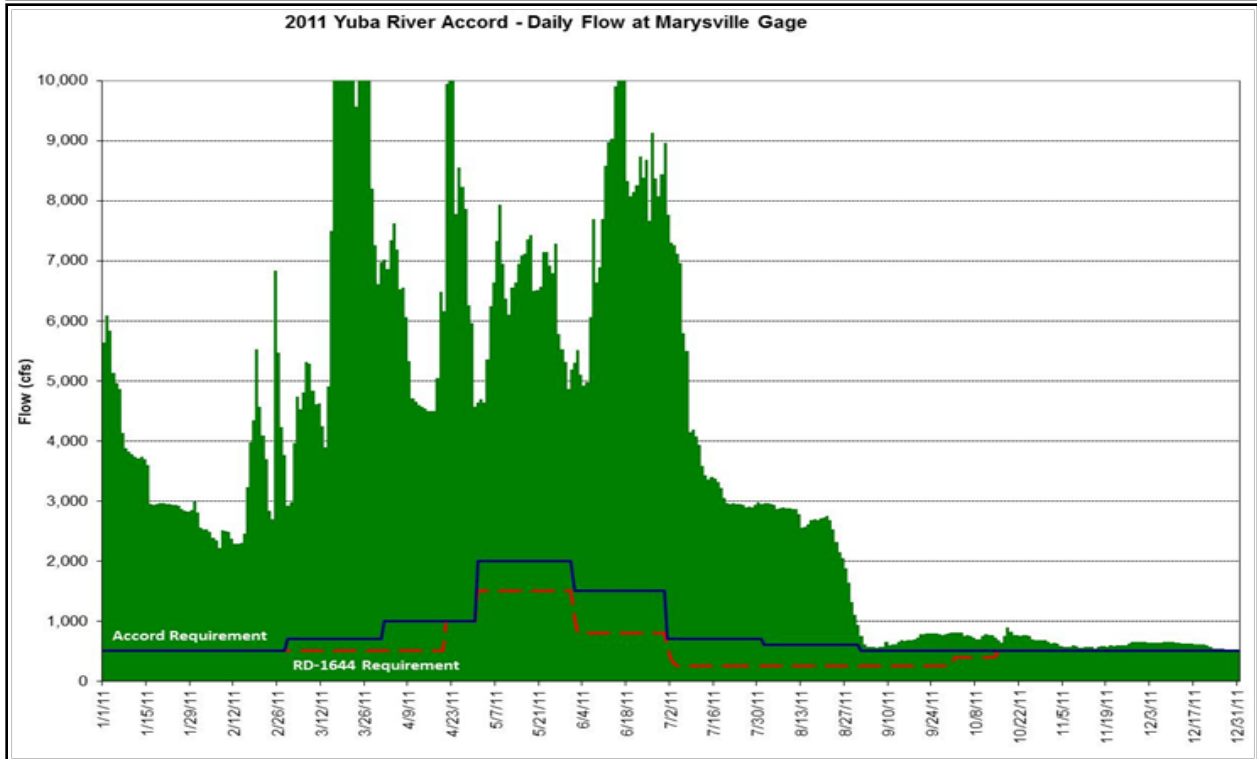
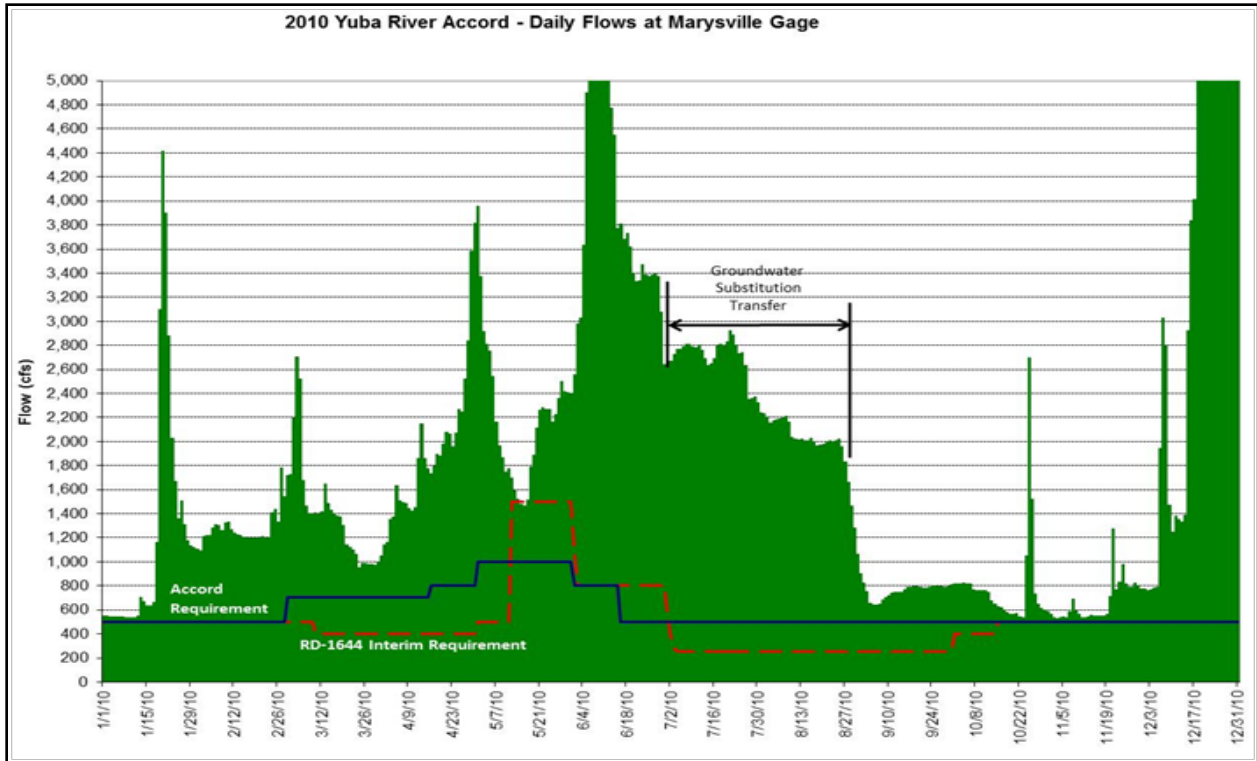
DLA, p. B-26. This phenomenon is represented in the graphs below that depict flows required by the SWRCB Revised Decision (RD)-1644 instream flow requirements and Yuba Accord flow requirements, as well as mean daily flows actually observed at the Marysville Gage from 2006 - 2012.<sup>37</sup> The green shaded area represents actual flows at Marysville.

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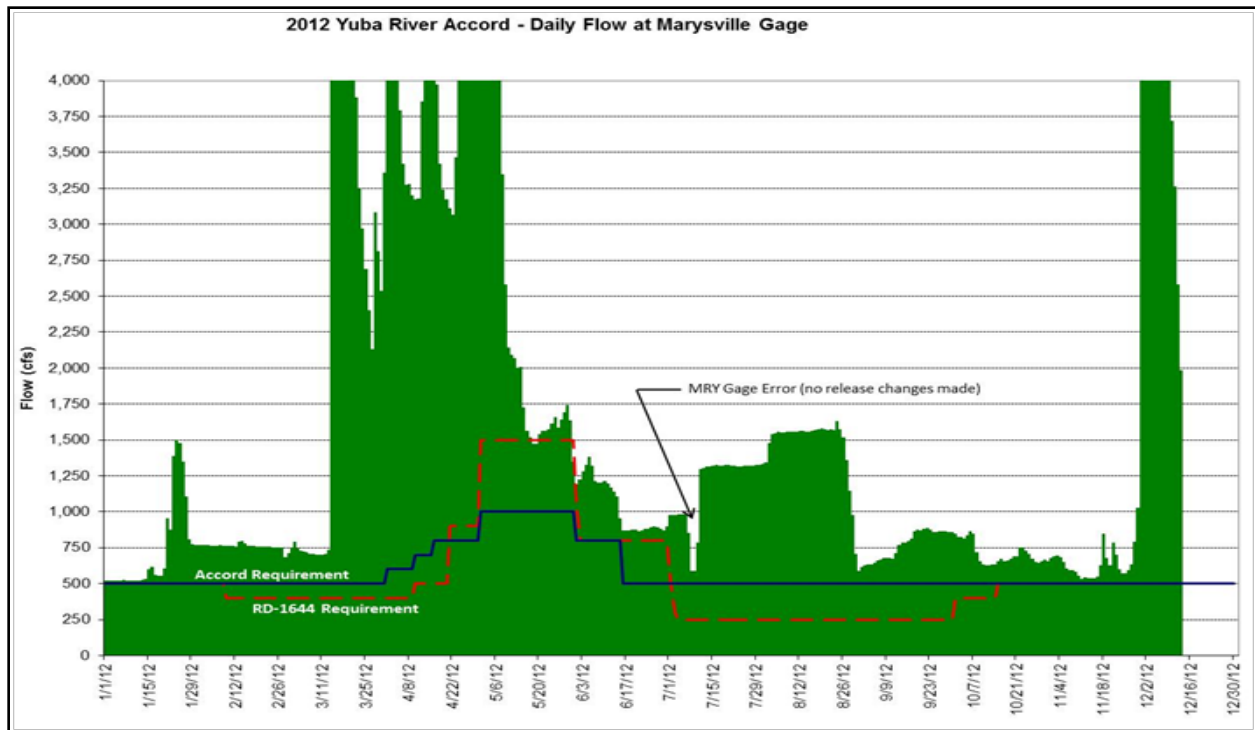
<sup>37</sup> Yuba Accord River Management Team's (RMT) 2013 Draft Interim Monitoring and Evaluation Program Report, Figure 7-1.











To allow the Commission and relicensing participants to understand the real effects of the Project and develop appropriate protective measures, the FLA should explain how the No-Action Alternative baseline flow requirements differ from flow conditions actually observed since the Yuba Accord took effect and disclose any resulting impacts to biological resources. For instance, the FLA should analyze the Project effects of high flows presenting in the summer instead of during the springtime. In addition, the FLA should consider the cumulative effects of high summer flows and low spring flows occurring on the lower Yuba River down to the Bay-Delta estuary.

## (2) Salmon and Steelhead Reintroduction Alternative

It is reasonable and foreseeable that Chinook salmon and steelhead will be reintroduced to stream reaches in the North Yuba, South Yuba and/or Middle Yuba rivers during the term of the new license. There are several efforts occurring in the watershed to assess and prioritize reintroduction actions. Despite this fact, the DLA does not consider an alternative that provides for this event. The FLA should include a Salmon and Steelhead Reintroduction Alternative that analyzes options for modifying Project facilities to enable fish to be reintroduced above Englebright Dam.

The most notable efforts to assess reintroduction actions are occurring in the Yuba Salmon Forum. To date, the Forum has produced several reports that identify suitable habitat for salmonids both upstream and downstream of Englebright Dam and assess the feasibility of fish passage at Englebright Dam. For instance, the Draft Summary Habitat Analysis Report quantifies salmonid habitat in the South Yuba River, Middle Yuba River, North Yuba River

upstream of New Bullards Bar Dam, the reach of the North Yuba River and Main Yuba River between New Bullards Bar Dam and Englebright Reservoir, and the lower Yuba River downstream of Englebright Dam. The Forum members plan to use the Habitat Reports, along with other reports that analyze fiscal and legal constraints, to identify and prioritize feasible recovery actions in the Yuba River watershed. The Forum members have committed “to seek to achieve implementation” of the recommended actions.<sup>38</sup>

The relevant information that has been generated from the Yuba Salmon Forum is readily available and should be utilized by Licensee to inform the development and analysis of this Alternative in the FLA. In addition, the Alternative should include information on costs of implementation of the identified fish passage options as well as potential effects on Project operations, water deliveries and resources. The Fish Passage Infrastructure Report developed by the Yuba Salmon Forum contains information useful to this analysis. The Alternative should analyze potential flow schedules for the Middle Yuba River that would support each lifestage of spring-run Chinook salmon and steelhead. In addition, it should identify potential impacts to power generation and water supply for YCWA from implementation of the flow schedules.

### **(3) Bay-Delta Water Quality Control Plan Alternative**

The Licensee should include an alternative that evaluates Project operations that release 40%, 50% or 75% of January through June unimpaired flow into the Yuba River as measured at the Marysville gage. Including this alternative in the FLA is reasonable given that the State Water Resources Control Board (State Board) is in the process of updating the Bay-Delta Water Quality Control Plan “to protect beneficial uses in the Bay-Delta...”<sup>39</sup> Surprisingly, the DLA contains no mention of this process despite the significant effect it may have on the Yuba watershed and Project storage and operations.

Phase II of the update includes considering “potential modifications to current objectives included in the 2006 Bay-Delta Plan, the potential establishment of new objectives and modifications to the program of implementation for those objectives”.<sup>40</sup> The State Board has suggested that it may establish new Delta outflow and Sacramento River flow requirements that are based on specified percentages of unimpaired flows.<sup>41</sup> The State Board’s August 2010 Delta Flow Criteria report suggested that in order to protect aquatic public trust resources in the Delta, 75% of unimpaired Delta outflow would be necessary from January through June, and that 75% of unimpaired Sacramento River flow would be needed for these months, as well as for November and December.<sup>42</sup> In addition, the SWRCB has analyzed various unimpaired flow

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<sup>38</sup> See Yuba Salmon Forum Charter, February 3, 2011, p.1. Forum members have committed “to seek to achieve implementation” of the recommended actions.

<sup>39</sup> See SWRCB, “Revised Notice of Preparation and Notice of Scoping Meeting for Environmental Documentation for the Update and Implementation of the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary: Comprehensive Review” *available at* [www.waterboards.ca.gov/waterrights/water\\_issues/programs/bay\\_delta\\_bay\\_delta\\_plan/environmental\\_review/docs](http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta_bay_delta_plan/environmental_review/docs)

<sup>40</sup> Id

<sup>41</sup> Id

<sup>42</sup> Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem, State Water Resources Control Board Staff Technical Report, August 2010.

requirement scenarios for the tributaries to the San Joaquin River as part of Phase 1 of its update to the Bay-Delta Plan.

This Alternative will facilitate an understanding of how Project operations will be modified in response to a State Board requirement that the Yuba River release 40%, 50% or 75% unimpaired flow from January through June; all scenarios within the realm of possibilities being considered by the State Board. As part of this analysis, Licensee should include information related to the effects to aquatic resources, cold-water pool levels, frequency of flood events, magnitude and frequency of water transfers and timing and quantity of water available for diversion to Licensee's customers as a result of modifying operations to meet the State Board requirements. In addition, the analysis should consider whether changes at the Project would likely be made in coordination with changes at in-basin non-Project facilities, e.g., Department of Water Resource's Oroville system.

The geographic scope of the analysis should extend to the Bay-Delta estuary consistent with Commission direction.

Downstream--the potential action area for the project extend through the lower Yuba River watershed to the confluence of the Feather River, the lower Feather River, the lower Sacramento River, and through the Sacramento-San Joaquin Delta to the San Francisco Bay."

Scoping Document 2, p. 15.<sup>43</sup> The DLA currently limits its water quantity and quality impacts analysis to the Yuba River at its confluence with the Feather River. (DLA, p. E3.3.2-129-134.)

We also recommend that the Licensee conduct an analysis for inclusion in the FLA that overlays percent-of-unimpaired flow requirements on the Yuba Accord flow requirements, both to compare approach and also to consider the aquatic benefits of combining the approaches. In addition, the FLA should evaluate operational off-ramps from the percent-of-unimpaired approach for multiple dry year sequences..

#### (4) Modified Feather River Operations Alternative

The Modified Feather River Operations Alternative will facilitate an understanding of how Oroville operations may be modified in response to a State Board requirement that the Feather River release 40%, 50% or 75% unimpaired flow from January through June. This alternative should consider how releases from the Project will be coordinated with releases from the Department of Water Resources' Oroville Facilities to meet State Board requirements, assuming there are compliance locations on the Yuba River above the confluence of the Feather, and on the Feather above the confluence with the Sacramento River.

The Yuba River is a tributary to the Feather River and both systems support runs of spring-run Chinook salmon and steelhead. The Yuba and Feather River spring-run and steelhead stock are part of the same meta-population which rely on both systems to provide adequate flow and habitat conditions. (BA, pp. E6-167, 174.) The RMT has documented both late seasonal

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<sup>43</sup> eLibrary no: 20110418-3027.

upstream migration of spring-run Chinook into both the Feather and the Yuba, and in 2010 documented over 60% straying of spring –run from the Feather River Fish Hatchery into the Yuba.<sup>44</sup> Population improvements will require higher spring releases from both systems to the Bay-Delta. The analysis should consider that higher carry-over storage requirements will be needed at Oroville Reservoir to facilitate the release of higher spring flows into the Feather River.

## Cumulative Effects

The FLA must explain the effects of the applicant’s proposal on resources and otherwise provide information necessary for the Commission to prepare the FEIS. *See* 18 C.F.R. §§ 5.18; 380.3. This includes information regarding cumulative effects, which are defined as

“The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”

40 C.F.R. § 1508.7.

The Commission’s policy is to “address and consider cumulative impact issues at original licensing and relicensing *to the fullest extent possible* consistent with the Commission’s statutory responsibility to avoid undue delay in the relicensing process and to avoid undue delay in the amelioration of individual project impacts at relicensing.” 18 C.F.R. § 2.23 (emphasis added).

The new licenses in conjunction with present water supply operations will cumulatively affect fish and wildlife and recreation resources. However, the DLA does not include sufficient information regarding other present and/or reasonably foreseeable future actions to evaluate the Project’s cumulative effects. For instance, the DLA does not include actions to restore fish passage above Englebright Dam, the update to the State Water Resources Control Board Water Quality Control Plan, the Bay-Delta Conservation Plan or foreseeable changed operations at Oroville Dam. The DLA is therefore insufficient, and we request that the Licensee clarify and/or supplement the cumulative effects discussion in the FLA consistent with the comments below.

### (1) Fish Passage

The DLA acknowledges that Englebright Dam is a complete barrier to fish migration.

“However, the USACE’s Englebright Dam at River Mile (RM) 24.3 on the Yuba River is currently a complete physical barrier to anadromous fish upstream migration....”

DLA, p. E1-26.

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<sup>44</sup> Draft Interim Monitoring and Evaluation Program Report, Chapter 4, Yuba Accord River Management Team. (2013).

However, the DLA does not propose to mitigate the Project's cumulative effects on fish passage because the presence of Englebright Dam is part of the existing condition and allegedly the Commission does not have the authority to regulate it.

“Past and present actions contribute to the current condition of the resources, and are intrinsically embedded in the base line (i.e., existing conditions), and are discussed where appropriate in the specific resource sections of this Exhibit E. These activities include harvesting, grazing, mining, operation of USACE's Englebright and Daguerre Point dams and water deliveries. These activities affect the resources identified for cumulative effects analysis in SD2, and are outside the Commission's authority to regulate.”

DLA, p. E3-27.

As previously addressed, Englebright Dam is appropriately part of Licensee's project and the Commission has the authority to condition its use. Additionally, the Licensee has an obligation to include information sufficient to inform an impacts analysis of the continuing and incremental impacts of the Project and to develop appropriate mitigation measures that reduce the impacts attributable to the existence and use of Englebright Dam. This includes an analysis of the incremental impact of the Project when added to other reasonably foreseeable future actions.

Given the significant progress and current trajectory of the Yuba Salmon Forum (*see* Salmon and Steelhead Reintroduction Alternative, *supra* at 33), it is reasonably foreseeable that salmon and/or steelhead will be reintroduced above Englebright Dam during the term of the new license. The FLA should include proposals for addressing the project's cumulative effects on fish passage.

## (2) Update of Bay-Delta Water Quality Control Plan

The DLA does not address the ongoing process to update the State Water Resources Control Board's Bay-Delta Water Quality Control Plan (*see* Bay-Delta Water Quality Control Plan Alternative, *supra* at 34). It is reasonably foreseeable that the State Board will adopt new flow objectives that will affect the Yuba River during the term of the new license. Therefore, it is also reasonably foreseeable that the State Board will take action, through its water rights or water quality certification authority, to ensure the implementation of objectives adopted in the Bay-Delta Plan. Thus, it should be considered in the cumulative effects analysis.

## (3) Feather River Operations

The Licensee's BA explains how flow releases from the Feather River can affect resources in the Yuba River. For instance, high spring releases and low temperatures from the Yuba River, particularly when combined with low flow releases from the Feather River, can attract Feather River fish to the Yuba.

“[T]he higher the Yuba River flows relative to Feather River flows, combined with the lower the Yuba River water temperatures relative to Feather River water temperatures, the higher the percentage of fin-clipped Chinook salmon passing upstream of Daguerre Point Dam four weeks later.”

Biological Assessment, p. 6-21. Despite the acknowledgment of the connection between the Feather River and Yuba River and their respective resources, the DLA does not discuss any reasonably foreseeable changes at Oroville Dam.

As discussed above, the State Board is updating its Bay-Delta Water Quality Control Plan. The FLA should consider how project operations at Oroville would be modified in response to a State Board requirement that the Yuba River and/or Feather River release 40%, 50% or 75% of unimpaired flow in January through June and November and December.

In addition, the FLA should analyze the effects of Feather River operations on the Yuba River/Feather River salmon and steelhead populations and associated mitigation measures. Spring flow and temperature conditions combined with physical and volitional upstream migration problems in Feather downstream of confluence with Yuba (especially at Shanghai Bend) negatively impact the fitness of anadromous fish populations. The FLA should analyze how flow releases from Oroville affect anadromous fish populations and should consider potential measures that would increase the fitness and resiliency of Yuba River salmon and steelhead from increased Feather River flows. For instance, measures that will decrease the straying of Feather River hatchery fish into the lower Yuba River should be considered.

The BA notes that it is questionable whether the Yuba River spring-run stock represents an independent population. However,

it may be possible to preserve some additional component of the ancestral Central Valley spring-run Chinook salmon genomic variation through careful management of this stock that can contribute to the recovery of the ESA-listed Central Valley spring-run Chinook salmon ESU....”

Biological Assessment, E5-55. To date, requirements for addressing limiting factors in the Yuba River have been developed and implemented without consideration of or coordination with Feather River operations. Such coordination is necessary to provide the careful management that will facilitate the preservation of spring-run genetic variety and minimize the straying of Feather River hatchery fish into the lower Yuba River.

#### (4) Bay-Delta Conservation Plan

The DLA does not reference the ongoing efforts to develop the Bay-Delta Conservation Plan (BDCP). If implemented, BDCP would increase the amount of water that could be reliably be conveyed through the Delta each year by the construction of three North Delta diversion with a capacity of 3000 cfs each. This would likely create a greater demand for Yuba River water for export south of Delta. It might also increase the value of export water in the spring, during which time current pumping restrictions in the South Delta restrict export capacity. BDCP might

create additional rearing habitat in the Delta or engineered floodplains or access to floodplains. On the other hand, BDCP might increase entrainment or otherwise reduce success of Yuba River and other Sacramento River watershed salmon and steelhead endeavoring to outmigrate past North Delta pumps.

## **COMPREHENSIVE PLANNING**

The DLA does not provide the Commission sufficient information to meet the comprehensive development standard articulated in section 10(a)(1) of the Federal Power Act (FPA). As stated above, the DLA omits reference to Yuba River fish passage planning efforts, the State Water Resources Control Board update to the Bay-Delta Water Quality Control Plan, foreseeable modifications to the operation of Oroville Dam, and the Bay-Delta Conservation Plan. The Network recommends that Licensee consider these actions in the FLA as separate alternatives or as part of the cumulative effects analysis consistent with our comments above. Such analysis must be completed to provide a sufficient basis for a Commission finding that the new license is in the public interest and best suited to a comprehensive plan of development for the river. 16 U.S.C. § 803(a)(1).

## **APPLICANT-PREPARED BIOLOGICAL ASSESSMENT (BA)**

The Draft Biological Assessment (Draft BA) draws on conclusions from the Yuba Accord River Management Team's (RMT) 2013 Draft Interim Monitoring and Evaluation Program Report and/or the Lower Yuba River Water Temperature Objectives Memorandum and Addendum. The Draft BA draws on these reports directly and by referencing conclusions from Technical Memorandum 7-8, *ESA CESA-Listed Salmonids Below Englebright Dam* which in turn draws on the RMT reports' conclusions. For instance, the Draft BA determines both for spring-run Chinook salmon and steelhead that "*stressors associated with instream flows and water temperatures in the lower Yuba River have been addressed, to the extent feasible within hydrological constraints, by the Yuba Accord.*" (Draft BA, p. E5-40.) This statement is accurate when considering it in the proper context; the evaluation of Yuba Accord flows by the RMT prior to completing its reports and based on information available to it at that time. The Network concurs that flows resulting from the Yuba Accord are an improvement from prior conditions with respect to stressors associated with flow and water temperature. However, the conclusion in the BA that stressors associated with flow and water temperature have been addressed to the extent feasible, is premature given the several incomplete and/or ongoing studies in this proceeding and the ongoing RMT studies and analyses more recent than the RMT's M&E Report. In particular, juvenile survivorship from the lower Yuba River is extremely low.<sup>45</sup> Neither the RMT nor YCWA have reached definitive conclusions about the possible factors that may be responsible for the extremely low levels of survival and return of juveniles that outmigrate from the lower Yuba River.<sup>46</sup>

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<sup>45</sup> Draft Interim Monitoring and Evaluation Program Report, Chapter 4, Yuba Accord River Management Team. (2013).

<sup>46</sup>Of 680,000 juvenile Chinook salmon captured in outmigrant traps and marked in 2004-2007, only three returned to the Yuba River as adults (See Tech Memo 7-8 Appendix Draft M&E Report, Chapter 4).

Information relevant to this issue and others is expected to be produced as a result of the completion of Commission-ordered studies and ongoing and future studies by the RMT, and this information may indicate that changes in flow or temperature management in the lower Yuba River are appropriate. Therefore, the Network recommends that conclusions in the biological assessment that draw on conclusions in the RMT reports and/or Technical Memorandum 7-8 be set aside pending more complete analysis.

In summary, the Commission should require the Licensee to complete a revised Biological Assessment *after* information is obtained from ongoing studies.

## **CONCLUSION**

Thank you for considering these comments. If you have comments or questions, please contact Traci Sheehan Van Thull, Coordinator, Foothills Water Network.

Respectfully submitted,



Foothills Water Network

A handwritten signature in black ink, appearing to read "T. Sheehan Van Thull".

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A handwritten signature in black ink, appearing to read "Chandra Ferrai".



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