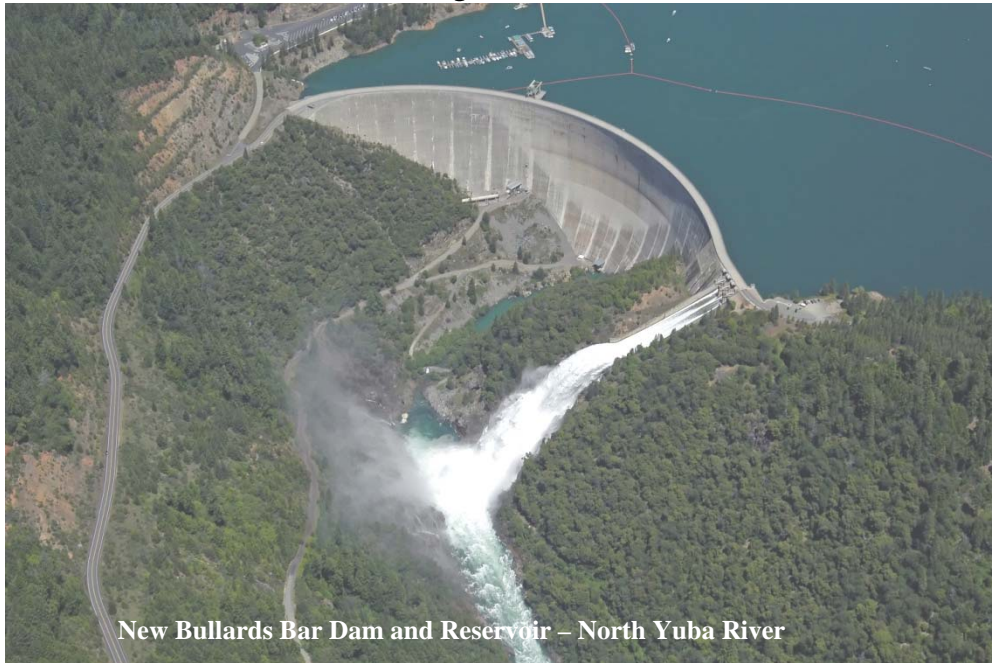


YUBA COUNTY WATER AGENCY

Yuba River Development Project FERC Project No. 2246



Initial Study Report

- Period from Study Initiation through November 30, 2012 -

[SECURITY LEVEL: PUBLIC]

December 2012



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YUBA COUNTY WATER AGENCY

Yuba River Development Project
FERC Project No. 2246

Initial Study Report
- Period from Study Initiation through November 30, 2012 -

[SECURITY LEVEL: PUBLIC]

December 2012



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INITIAL STUDY REPORT
EXECUTIVE SUMMARY

Pursuant to 18 CFR § 5.15(c) of the Federal Energy Regulatory Commission’s (FERC or Commission) regulations, this Initial Study Report provides the status of studies being performed by the Yuba County Water Agency (YCWA or Licensee) in support of its relicensing of the Yuba River Development Project, Federal Energy Regulatory Commission (FERC) Project Number 2246 (Project).

This Initial Study Report covers the period from initiation of the various relicensing studies through November 30, 2012.

FERC’s September 30, 2011 Study Plan Determination, as amended on December 8, 2011, December 28, 2011, May 14, 2012 and July 24, 2012, required YCWA to perform 44 studies. YCWA has completed 21 of the FERC-approved studies. For each of these studies, a final technical memorandum, which includes the study goals and objectives, methods, results, discussion and any variances to the FERC-approved study has been posted to YCWA’s Relicensing Website (www.ycwa-relicensing.com).

The remaining 23 FERC-approved studies are in progress. For each of these studies, YCWA has posted to the Relicensing Website an interim technical memorandum that provides key findings and any variances to the FERC-approved study through November 30, 2012. Table ES-1 provides the date that YCWA expects to complete each study that is in progress.

Table ES-1. Studies in progress and the date, in chronological order, that YCWA expects each study will be complete.

Study Number	Study Name	Date YCWA Forecasts the Study Will be Complete
BEFORE YCWA FILES ITS INITIAL STUDY REPORT MEETING SUMMARY		
3.9	Non-ESA-Listed Fish Populations Downstream of Englebright Dam	December 20, 2012 ¹
3.12	New Colgate Powerhouse Ramping	December 20, 2012 ¹
7.1	ESA-Listed Plants	December 20, 2012 ¹
7.3	ESA-Listed Amphibians – California Red-Legged Frog	December 20, 2012 ¹
13.1	Native American Traditional Cultural Properties	December 20, 2012 ¹
AFTER YCWA FILES ITS INITIAL STUDY REPORT MEETING SUMMARY		
7.12	Evaluation of Project Effects on Daguerre Point Dam and Hallwood-Cordua Fish Facilities	January 31, 2013 ²
7.10	Instream Flow Downstream of Englebright Dam	January 31, 2013 ¹
6.1	Riparian Habitat Upstream of Englebright Reservoir	February 28, 2013 ¹
7.8	ESA/CESA-Listed Salmonids Downstream of Englebright Dam	February 28, 2013 ¹
7.9	Green Sturgeon Downstream of Englebright Dam	February 28, 2013 ¹
2.6	Water Temperature Model	March 31, 2013 ¹
7.11	Fish Behavior and Hydraulics Near Narrows 2 Powerhouse	March 31, 2013 ²
8.1	Recreation Use and Visitor Surveys	March 31, 2013 ²
12.1	Historic Properties	March 31, 2013 ¹
1.1	Channel Morphology Upstream of Englebright Reservoir	April 15, 2013 ¹
3.10	Instream Flow Upstream of Englebright Reservoir	April 15, 2013 ¹
6.2	Riparian Habitat Downstream of Englebright Dam	August 31, 2013 ²
2.3	Water Quality	September 30, 2013 ²
3.5	Special-Status Amphibians – Foothill Yellow-Legged Frog Habitat Modeling	September 30, 2013 ²
3.8	Stream Fish Populations Upstream of Englebright Reservoir	September 30, 2013 ²

Table ES-1. (continued)

Study Number	Study Name	Date YCWA Forecasts the Study Will be Complete
7.2	Narrows 2 Powerhouse Intake Extension	September 30, 2013 ²
8.2	Recreational Flow	September 30, 2013 ²
3.11	Entrainment	October 31, 2013 ²
Total		23

¹ This date is later than the completion date in the FERC-approved study.

² This date is the same as the completion date in the FERC-approved study.

YCWA proposed a modification to one ongoing study: Study 2.5, *Water Temperature Monitoring*. YCWA proposed to extend continuous water temperature monitoring through July 2013 at four locations where margin water temperature monitors were installed in July 2012. If FERC approves the modification, YCWA expects to complete this study by August 31, 2013.

YCWA proposed two new studies. YCWA's proposed new Study 3.13, *Special-Status Amphibians – Focused 2013 Foothill Yellow-Legged Frog Surveys*, would require YCWA to perform five visual encounter surveys (VES). One survey would occur in July 2013 and one in August-early September 2013 for foothill yellow-legged frog (FYLF) tadpoles and metamorphosed young-of-year in the Yuba River just downstream of the confluence of the North Yuba River. The other three surveys would occur in May (i.e., two of the surveys) and August 2013 in Yellowjacket Creek, a tributary of the Middle Yuba River. The first two creek surveys would be for FYLF egg masses, and the third would be for late stage FYLF tadpoles and metamorphosed young-of-year. If FERC approves the new study, YCWA expects to complete the study by September 30, 2013.

YCWA's proposed new Study 3.14, *Special-Status Turtles – Focused 2013 Western Pond Turtle Surveys*, would require YCWA to conduct two surveys, one in May or June 2013 and one in July or August 2013, for western pond turtle in the upstream end of Our House Diversion Dam impoundment and in pools upstream of the impoundment on the Middle Yuba River. If FERC approves the new study, YCWA expects to complete the study by October 31, 2013.

YCWA, in consultation with Relicensing Participants, has scheduled an Initial Study Report meeting for December 12, 2012 in Marysville, California. YCWA will file with FERC an Initial Study Report meeting summary on December 27, 2012.

At this time, YCWA advises FERC that YCWA intends to file for the Yuba River Development Project a draft license application, which will include the contents of a license application, rather than a Preliminary Licensing Proposal.

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None.

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SECTION 1

INTRODUCTION

In accordance with 18 CFR § 5.15(c) of the Federal Energy Regulatory Commission's (FERC or Commission) regulations, this Initial Study Report provides the status of studies being performed by the Yuba County Water Agency (YCWA or Licensee) in support of its relicensing of the Yuba River Development Project, FERC Project Number (No.) 2246 (Project). This Initial Study Report covers the period from initiation of the various relicensing studies through November 30, 2012. In addition, the report describes any modifications to ongoing studies or new studies proposed by YCWA, and advises FERC that YCWA and Relicensing Participants¹ have scheduled a December 12, 2012 Initial Study Report meeting, and that YCWA intends to file a draft license application instead of a preliminary license proposal.

1.1 Background

YCWA owns and operates the Project. The initial license for the Project was issued by the Federal Power Commission, FERC's predecessor, to YCWA on May 16, 1963, effective on May 1, 1963. The Federal Power Commission's May 6, 1966, Order Amending License changed the license's effective date to May 1, 1966, for a term ending on April 30, 2016.

YCWA intends to apply to FERC for a new license for the Project. To this end, YCWA filed with FERC the following documents:

- *Notice of Intent to File an Application for a New License* (NOI) filed on November 5, 2010
- *Pre-Application Document* (PAD) filed on November 5, 2010
- *Proposed Study Plan* filed on April 19, 2011
- *Revised Study Plan* filed on August 17, 2011

On January 4, 2011, FERC issued a *Notice of Intent to File License Application, Filing of Pre-Application Document (PAD), Commencement of Pre-Filing Process, and Scoping; Request for Comments on the PAD and Scoping Document, and Identification of Issues and Associated Study Requests*. FERC issued a National Environmental Policy Act (NEPA) *Scoping Document 1 for the Yuba River Hydroelectric Project, P-2246 (SD1)* on January 2, 2011; conducted a site visit to the Project on February 1, 2011; held afternoon and evening *Project Scoping Meetings* on February 2, 2011 in Marysville, California; and issued *Scoping Document 2 for the Yuba River Hydroelectric Project (SD2)* on April 18, 2011.

¹ A Relicensing Participant is considered an agency, organization or individual that actively participates in the Project Relicensing. This designation is not intended to exclude any stakeholder from participating in the relicensing at whatever level is comfortable and appropriate for that stakeholder, but to acknowledge that some stakeholders have routinely participated in relicensing meetings and filed comments with FERC.

On June 22, 2012, FERC granted YCWA's April 24, 2012, request to postpone filing its Initial Study Report from September 30, 2012, to December 3, 2012.

1.2 Description of the Project

The Project, which was constructed in the mid 1960s and put into service in 1970, replaced three older facilities: 1) the Colgate Diversion Dam, Flume and Powerhouse, which originally were constructed in 1899 by the Yuba Electric Power Company, and which were replaced by the Colgate Tunnel and second Colgate Powerhouse, constructed by the Pacific Gas and Electric Company (PG&E) in 1940 and 1949, respectively; 2) the Bullards Bar Dam and Reservoir, which were constructed in 1923-1924 by a group of private investors led by Harry Payne Whitney and purchased by PG&E a few years later; and 3) the Bullards Bar Powerhouse, which was constructed by PG&E in 1949.

The existing Project is located in Yuba, Sierra, and Nevada counties, California, on the main stems of the Yuba River, the North Yuba River, and the Middle Yuba River, and on Oregon Creek, a tributary to the Middle Yuba River. A portion of the FERC Project Boundary² is located on federal land managed by the United States Department of Agriculture, Forest Service, as either the Plumas National Forest (PNF) or Tahoe National Forest (TNF).

The existing Project consists of three developments, New Colgate, New Bullards Minimum Flow, and Narrows 2, which range in elevation from 280 feet to 2,049 feet.³ The Project's principal works include:

- 1 dam and associated storage reservoir - New Bullards Bar
- 2 diversion dams - Our House and Log Cabin
- 2 diversion tunnels - Lohman Ridge and Camptonville
- 2 underground power tunnels - New Colgate and Narrows 2
- 1 above ground penstock - New Colgate
- 3 powerhouses - New Colgate, New Bullards Minimum Flow, and Narrows 2
- 7 recreation areas - Emerald Cove Marina, Hornswoggle Group Camp, Schoolhouse Family Camp, Dark Day Campground, Dark Day Boat Ramp, Garden Point Campground, and Madrone Cove Campground, all of which are located at New Bullards Bar Reservoir

² The existing FERC Project Boundary encompasses all Project facilities and features as well as all land needed by YCWA for the normal operation and maintenance of the Project. The boundary is shown in Exhibit J and K, Project Maps, of the existing FERC license for the Project.

³ All elevation data are in United States Department of Commerce (USDOC), National Oceanic and Atmospheric Association (NOAA), National Geodetic Survey (NGS) Vertical Datum of 1983 (NAVD 83).

- Associated stream flow and reservoir gages
- Associated streamflow gages and roads

The Project does not include any aboveground water conduits (e.g., canals or flumes) or transmission lines.^{4,5} The Project does not include any active spoil piles, but does include one active borrow area, which is located within the FERC Project Boundary on YCWA-owned land near the New Colgate Powerhouse.

YCWA operates New Bullards Bar Reservoir by capturing winter and spring runoff from rain and snowmelt. Consequently, New Bullards Bar Reservoir normally reaches its annual peak storage at the end of the spring runoff season, and then is gradually drawn down until its lowest elevation is reached in mid-winter. The reservoir does not undergo substantial daily changes in elevation due to Project operations. Storage in wetter water years can also be affected by New Bullards Bar Reservoir mandatory flood pool criteria established by the United States Army Corps of Engineers (USACE) from October through April.⁶

Our House and Log Cabin diversion dam impoundments do not store water and YCWA operates them to divert water to New Bullards Bar Reservoir in spring during high flow periods.

One of the primary benefits of the Project is Pacific Gas and Electric Company's (PG&E) dispatching of New Colgate Powerhouse through the California Independent System Operator (ISO) to balance the northern California Transmission System through regulation up and down. The powerhouse is under ISO Automatic Generator Control, so the ISO has the ability to vary New Colgate Powerhouse generation on a real-time basis to meet energy needs. YCWA operates New Bullards Minimum Flow and Narrows 2 powerhouses as base-load facilities.

The existing Project passes water through the federally-owned Englebright Reservoir, which is located on the Yuba River near the City of Marysville and managed by the USACE. Englebright Dam is not part of the FERC-licensed Project, nor is it under FERC's jurisdiction. None of the Yuba River Development Project facilities are integral parts of Englebright Dam; the Project's Narrows 2 Power Conduit and Narrows 2 Powerhouse, the lowermost elevation Project facilities,

⁴ Project powerhouse switchyards are connected to the California Transmission Grid via non-Project transmission lines. Of note, the 60 kilovolt (kv) transmission line that extends from the Project's Narrows 2 Powerhouse Switchyard to the grid is owned and operated by PG&E. The portion of the transmission line is part of PG&E's Narrows 2 Substation 60 kV Transmission Line Project, for which PG&E holds a Minor-Part License (FERC Project No. 2678) from FERC. PG&E's license for Project 2678 expires on April 30, 2016. On July 6, 2011, PG&E filed with FERC a Notice of Intent to relicense the Narrows 2 Substation 60 kV Transmission Line Project.

⁵ The Project does not include the Narrows 1 Powerhouse, which is located on the south side of the Yuba River, about 0.5 mile downstream of the USACE's Englebright Dam. Narrows 1 Powerhouse is part of PG&E's Narrows Project (FERC Project No. 1403). PG&E's license for Project No. 1403 expires on January 31, 2023.

⁶ The USACE contributed \$12 million to the construction of New Bullards Bar Dam in exchange for flood control space the reservoir would provide.

are not connected or attached to Englebright Dam in any way, nor do they intersect the dam in any way (e.g., the powerhouse power tunnel and penstock does not pass through the dam).⁷

A uniquely important set of agreements regarding Project operations is the Lower Yuba River Accord (Yuba Accord). In 2005, YCWA and 16 other interested parties signed memoranda of understanding (MOU) that specified terms of the Yuba Accord. The Yuba Accord is a comprehensive, consensus-based program to protect and enhance aquatic habitat in the Yuba River downstream of Englebright Dam. Following environmental review, YCWA executed four agreements in 2007, which together comprise the Yuba Accord. The four agreements are: 1) the Lower Yuba River Fisheries Agreement, which specifies the Yuba Accord's Lower Yuba River minimum streamflows and creates a detailed fisheries monitoring and evaluation program; 2) the Water Purchase Agreement, under which the California Department of Water Resources (CDWR) purchases water, some of which is provided by the Yuba Accord's minimum streamflows, from YCWA for CALFED's Environmental Water Account⁸ and for State Water Project and Central Valley Project contractors; 3) the Conjunctive Use Agreements with seven of YCWA's member units, which specify the terms of the Yuba Accord's groundwater conjunctive use program; and 4) amendments to the 1966 Power Purchase Contract between YCWA and PG&E.⁹

The Yuba Accord was developed by a multi-agency resource team, including representatives from United States Department of Interior, Fish and Wildlife Service (USFWS); United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS); California Department of Fish and Game (CDFG); and a group of non-governmental organizations (NGO).

The Yuba Accord flow schedules were developed to essentially optimize fisheries habitat conditions during a majority¹⁰ of years for this regulated river system. Subsequently, additional flow schedules were developed by the resources team for drier conditions which included a "balancing of resources" approach. Together, this package of agreements commits more water to minimum instream flows and provides greater reliability for both instream and consumptive uses than would be possible without the agreements.

⁷ Englebright Dam, which is about 260 feet high and forms Englebright Reservoir, was constructed by the California Debris Commission in 1941, 18 years before YCWA was formed and 22 years before the Federal Power Commission issued the initial Project license. The dam is owned by the United States. When the California Debris Commission was decommissioned in 1986, administration of Englebright Dam and Reservoir passed to the USACE. The primary purpose of the dam is to trap and contain sediment derived from extensive historic hydraulic mining operations in the Yuba River watershed. Englebright Reservoir is about 9 miles long with a surface area of 815 acres. Englebright Reservoir when first constructed had a gross storage capacity of 70,000 ac-ft; however, due to sediment capture, the gross storage capacity today is approximately 50,000 ac-ft (USGS 2003).

⁸ The purchase of water through the Yuba Accord Water Purchase Agreement was the first long-term acquisition of water by the California Department of Water Resources that protects San Francisco Bay/Delta fish and wildlife.

⁹ The 1966 Power Purchase Agreement between YCWA and PG&E expires on April 30, 2016, the same day the existing FERC license for the Yuba River Development Project expires.

¹⁰ The Yuba Accord establishes minimum streamflows in the Yuba River downstream of Englebright Dam for six water year types ranging from wet water years (Schedule 1) to dry water years (Schedule 6). Conferences with agencies are scheduled in very dry years to set minimum streamflows. Water years in Schedule 1 and 2 were designed to optimize fisheries habitat and are expected to occur approximately 78 percent of the time.

The Yuba Accord also provided a \$6 million River Management Fund for monitoring and evaluation of anadromous fish and their habitat in the Yuba River downstream of Englebright Dam. The fund is administered by the River Management Team (RMT), which is comprised of representatives of YCWA, USFWS, NMFS, CDFG, PG&E, CDWR, South Yuba River Citizens League (SYRCL), Trout Unlimited, Friends of the River, and The Bay Institute - all of whom are signatories to the Lower Yuba River Fisheries Agreement. The RMT, in collaboration with representatives from University of California, Davis (UC Davis) and the Pacific States Marine Fisheries Commission, has developed a Monitoring and Evaluation Program (M&E Program) to guide the efficient expenditure of the River Management Fund to evaluate the effects of implementation of the Yuba Accord on the aquatic resources of the lower Yuba River over the period extending from 2008 to 2016. The M&E Program embraces a monitoring-based adaptive management approach to increase the effectiveness of, and to address the scientific uncertainty associated with, specific monitoring and study activities, and restoration actions.

The primary purpose of the M&E Program is to provide the monitoring data necessary to evaluate whether implementation of the Yuba Accord will maintain fish resources (i.e., the fish community including native fish and non-native fish) of the lower Yuba River in good condition, and will support viable anadromous salmonid populations. The RMT has developed an M&E Program framework document that identifies data collection needs, analytic approaches and thresholds or other metrics for comparison or evaluation. The RMT developed and deployed study plans (i.e., Protocols, which should not be confused with the relicensing study proposals) for:

- Flow and Water Temperature Monitoring
- Topographic Mapping (Digital Elevation Model, or DEM)
- Substrate and Cover Mapping
- 2D Hydrodynamic Modeling
- Morphologic Unit Classification
- Mesohabitat Classification
- Riparian Vegetation Mapping
- Acoustic Tagging and Tracking
- VAKI™ Riverwatcher Fish Counter Monitoring
- Redd Surveys
- Fish Carcass Surveys
- Snorkel Surveys
- Rotary Screw Trap (RST) Fish Collection
- Genetic Sampling and Characterization
- Otolith Sampling and Characterization

The RMT monitors data collection activities, reviews analytic techniques, performs quality assurance/quality control (QA/QC) reviews of data and products, and compiles annual data reports. Monitoring observations, data and annual reports are made available on the RMT website (www.yubaaccordrmt.com) as they become available. Additionally, the RMT provides data upon request to various other study efforts including those of RMT member entities. The RMT routinely coordinates and shares data with several other Sacramento River Valley monitoring or scientific programs, and data-shares with CDWR's Feather River monitoring programs, various CDFG monitoring programs, and research projects based at UC Davis, University of South Carolina, State University of New York, and the University of Idaho.

The results of the ongoing RMT Protocols and annual data reports, in addition to the results of YCWA's relicensing studies and other information that may become available, may inform the development of YCWA's relicensing proposal.

The RMT is compiling an Interim Monitoring and Evaluation (M&E) Report that is expected to be available in January 2013. The Interim M&E Report will summarize, synthesize and present results of the first 6 years of the RMT's studies.

YCWA has been operating the Project in conformance with the Yuba Accord since 2006.¹¹ On May 20, 2008, the State Water Resources Control Board (SWRCB) adopted its Corrected Order WR 2008-0014, which approved long-term amendments to YCWA's water-right permits that were necessary so that YCWA may continue to implement the Yuba Accord.

1.3 The Relicensing Studies

Beginning in July 2009, over a year prior to filing its Revised Study Plan with FERC, YCWA began to meet with Relicensing Participants to familiarize them with the Project and its operations; discuss process; identify issues; and, most importantly, to collaboratively develop study proposals. After over 70 meetings, YCWA filed its Revised Study Plan, which included 42 individual studies, with FERC on August 17, 2011 (Column A in Table 1.3-1). The studies were proposed to gather pertinent information for environmental analysis of YCWA's proposed Project and alternatives, which information would not be otherwise reasonably available. Through July 2012, FERC modified, amended and revised YCWA's proposed studies and added two new studies, so that the total number of studies to be performed by YCWA is now 44 (Columns B through J in Table 1.3-1). The most current version of each FERC-approved study plan is available on YCWA's Relicensing Website (www.ycwa-relicensing.com).¹²

¹¹ The 2006, 2007, and early 2008 operations were under 1-year pilot programs that were approved by the SWRCB.

¹² Open the Website and click on "FERC-approved Studies" in the Quick Launch bar.

Table 1.3-1. Studies proposed by YCWA in its Revised Study Plan and subsequently modified, revised or amended by FERC, and two new studies ordered by FERC.

Column A			Columns B, C and D			Column E	Columns F and G		Columns H and I		Column J
Study Number	Study Description	Proposed in YCWA's August 17, 2011 Revised Study Plan	Approved, Modified or Added by FERC's September 30, 2011 Study Plan Determination			Modified by FERC's December 8, 2011 Study Plan Modification	Amended or Revised by FERC's December 28, 2011 Formal Study Dispute Resolution Determination		Approved or Modified by FERC's May 14, 2012 Modified Studies Determination		Modified by FERC's July 24, 2012 Study Plan Determination
			Approved	Modified	Added	Modified	Amended	Revised	Approved	Modified	Modified
GEOLOGY AND SOILS											
1.1	Channel Morphology Upstream of Englebright Reservoir ¹	X	X	--	--	X	--	--	--	--	--
1.2	Channel Morphology Downstream of Englebright Dam	X	--	X	--	--	--	--	X	--	--
WATER RESOURCES											
2.1	Hydrologic Alteration	X	--	X	--	--	X	--	--	--	--
2.2	Water Balance/Operations Model	X	X	--	--	--	--	--	--	--	--
2.3	Water Quality	X	--	X	--	--	--	--	--	--	--
2.4	Bioaccumulation ¹	X	X	--	--	--	--	--	--	--	--
2.5	Water Temperature Monitoring ¹	X	X	--	--	--	X	--	--	--	--
2.6	Water Temperature Model	X	X	--	--	--	--	--	--	--	--
AQUATIC RESOURCES											
3.1	Aquatic Macroinvertebrates Upstream of Englebright Reservoir	X	--	X	--	--	--	--	--	--	--
3.2	Aquatic Macroinvertebrates Downstream of Englebright Dam	X	--	X	--	--	--	--	--	--	--
3.3	Special-Status Aquatic Mollusks	X	X	--	--	--	--	--	--	--	--
3.4	Special-Status Amphibians – Foothill Yellow-Legged Frog Surveys ¹	X	X	--	--	--	--	--	--	--	--
3.5	Special-Status Amphibians – Foothill Yellow-Legged Frog Habitat Modeling	X	X	--	--	--	--	--	--	--	--
3.6	Special-Status Turtles – Western Pond Turtle	X	X	--	--	--	--	--	--	--	--
3.7	Reservoir Fish Populations	X	X	--	--	--	--	--	--	--	--
3.8	Stream Fish Populations Upstream of Englebright Reservoir	X	X	--	--	--	--	--	--	--	--

Table 1.3-1. (continued)

Column A			Columns B, C and D			Column E	Columns F and G		Columns H and I		Column J
Study Number	Study Description	Proposed in YCWA's August 17, 2011 Revised Study Plan	Approved, Modified or Added by FERC's September 30, 2011 Study Plan Determination			Modified by FERC's December 8, 2011 Study Plan Modification	Amended or Revised by FERC's December 28, 2011 Formal Study Dispute Resolution Determination		Approved or Modified by FERC's May 14, 2012 Modified Studies Determination		Modified by FERC's July 24, 2012 Study Plan Determination
			Approved	Modified	Added	Modified	Amended	Revised	Approved	Modified	Modified
AQUATIC RESOURCES (continued)											
3.9	Non-ESA-Listed Fish Populations Downstream of Englebright Dam	X	X	--	--	--	--	--	--	--	--
3.10	Instream Flow Upstream of Englebright Reservoir	X	X	--	--	--	--	--	--	--	--
3.11	Entrainment	X	--	X	--	--	--	--	--	X	--
3.12	New Colgate Powerhouse Ramping	--	--	--	X	--	--	--	X	--	--
WILDLIFE RESOURCES											
4.1	Special-Status Wildlife – California Wildlife Habitat Relationships	X	--	X	--	--	--	--	--	--	--
4.2	Special-Status Wildlife – Bats	X	X	--	--	--	--	--	--	--	--
BOTANICAL RESOURCES											
5.1	Special-Status Plants	X	X	--	--	--	--	--	--	--	--
RIPARIAN, WETLANDS AND LITTORAL HABITAT											
6.1	Riparian Habitat Upstream of Englebright Reservoir ¹	X	--	X	--	X	--	--	X	--	--
6.2	Riparian Habitat Downstream of Englebright Dam	X	--	X	--	--	--	--	X	--	--
6.3	Wetlands	X	X	--	--	--	--	--	--	--	--
THREATENED, ENDANGERED AND FULLY PROTECTED SPECIES											
7.1	ESA-Listed Plants	X	X	--	--	--	--	--	--	--	--
7.2	Narrows 2 Powerhouse Intake	X	X	--	--	--	--	--	--	--	--
7.3	ESA-Listed Amphibians – California Red-Legged Frog	X	X	--	--	--	--	--	--	--	--
7.4	ESA-Listed Wildlife – Valley Elderberry Longhorn Beetle	X	X	--	--	--	--	--	--	--	--
7.5	CESA-Listed Plants	X	X	--	--	--	--	--	--	--	--

Table 1.3-1. (continued)

Column A			Columns B, C and D			Column E	Columns F and G		Columns H and I		Column J
Study Number	Study Description	Proposed in YCWA's August 17, 2011 Revised Study Plan	Approved, Modified or Added by FERC's September 30, 2011 Study Plan Determination			Modified by FERC's December 8, 2011 Study Plan Modification	Amended or Revised by FERC's December 28, 2011 Formal Study Dispute Resolution Determination		Approved or Modified by FERC's May 14, 2012 Modified Studies Determination		Modified by FERC's July 24, 2012 Study Plan Determination
			Approved	Modified	Added	Modified	Amended	Revised	Approved	Modified	Modified
THREATENED, ENDANGERED AND FULLY PROTECTED SPECIES (continued)											
7.6	CESA-Listed and Fully Protected Wildlife – California Wildlife Habitat Relationships	X	X	--	--	--	--	--	--	--	--
7.7	CESA-Listed and Fully Protected Wildlife – Bald Eagle	X	X	--	--	--	--	--	--	--	--
7.8	ESA/CESA-Listed Salmonids Downstream of Englebright Dam	X	X	--	--	--	X	--	--	--	--
7.9	North American Green Sturgeon Downstream of Englebright Dam	X	X	--	--	--	--	--	--	--	--
7.10	Instream Flow Downstream of Englebright Dam	X	--	X	--	--	X	--	--	--	--
7.11	Fish Behavior and Hydraulics Near Narrows 2 Powerhouse ²	X	--	X	--	--	--	X	--	--	X
7.12	Evaluation of Project Effects on Daguerre Point Dam and Hallwood-Cordua Fish Facilities	--	--	--	X	--	--	--	--	X	--
RECREATIONAL RESOURCES											
8.1	Recreation Use and Visitor Surveys	X	X	--	--	--	--	--	--	--	--
8.2	Recreational Flow ¹	X	X	--	--	--	--	--	--	--	--
LAND USE											
9.1	Primary Project Roads and Trails	X	X	--	--	--	--	--	--	--	--
AESTHETIC RESOURCES											
10.1	Visual Quality	X	X	--	--	--	--	--	--	--	--
SOCIO-ECONOMIC RESOURCES											
11	None										
CULTURAL RESOURCES											
12.1	Historic Properties ¹	X	X	--	--	--	--	--	--	--	--

Table 1.3-1. (continued)

Column A			Columns B, C and D			Column E	Columns F and G		Columns H and I		Column J
Study Number	Study Description	Proposed in YCWA's August 17, 2011 Revised Study Plan	Approved, Modified or Added by FERC's September 30, 2011 Study Plan Determination			Modified by FERC's December 8, 2011 Study Plan Modification	Amended or Revised by FERC's December 28, 2011 Formal Study Dispute Resolution Determination		Approved or Modified by FERC's May 14, 2012 Modified Studies Determination		Modified by FERC's July 24, 2012 Study Plan Determination
			Approved	Modified	Added	Modified	Amended	Revised	Approved	Modified	Modified
TRIBAL RESOURCES											
13.1	Native American Traditional Cultural Properties ¹	X	X	--	--	--	--	--	--	--	--
<i>Subtotal</i>		42	31	11	2	2	4	1	4	2	1
Total		44									

¹ YCWA, at its own risk, initiated this study prior to FERC's September 30, 2011 Study Determination.

² In the Revised Study Plan, this study was named *Assessment of Narrows 2 Powerhouse as Barrier to Anadromous Fish Upstream Migration*. It was subsequently renamed to *Fish Behavior and Hydraulics Near Narrows 2 Powerhouse* reflect the changed focus of the study.

1.4 Use of Technical Memoranda

Each of the studies in FERC's Determination requires, as a step in the study, preparation of a report. For the purpose of this relicensing, YCWA refers to these reports as "technical memoranda," and has, or will, prepare a single technical memorandum for each study. Each technical memorandum presents, or will present, the results of the study. For example, the Water Quality Technical Memorandum, which is numbered Technical Memorandum 2-3, presents the results of YCWA's Water Quality Study (Study 2.3). Therefore, for a total of 44 studies, YCWA prepared 44 technical memoranda.

Each technical memorandum includes an executive summary and eight major sections. The sections include: 1) Goals and Objectives; 2) Methods; 3) Results; 4) Discussion, if appropriate; 5) Study-Specific Collaboration and Consultation; 6) Variances to FERC-Approved Study; 7) Attachments to the Technical Memorandum; and 8) References Cited. The attachments include items such as maps, background information and data. The section on Attachments to the technical memorandum includes a description of the contents of the attachment (e.g., tables, figures, photos and number of each), the format (e.g., Microsoft® Word, Microsoft® Excel, or *.PDF) and size in megabytes if the attachment is in an electronic file.

With FERC's approval, YCWA posted its technical memoranda, as they became available, on YCWA's Relicensing Websites (www.ycwa-relicensing.com): click on "Technical Memoranda" in the Quick Launch bar. Posted technical memoranda are included in this Initial Study Report by reference, and YCWA will file with FERC each technical memorandum when YCWA files its final license application.

1.5 Study Completion

In this Initial Study Report, YCWA states that it considers some FERC-approved studies "complete." By this, YCWA means that it has completed all the steps required in the FERC-approved study, and a final technical memorandum for the study has been posted on YCWA's Relicensing Website.

1.6 Content of This Initial Study Report and Other Considerations

This ISR includes the following sections:

- Section 1. Introduction. This section describes the background and content of this Initial Study Report.
- Section 2. Status of Each Study. This section provides YCWA's progress implementing each of the studies included in FERC's Determination, as amended, from initiation of the study through November 30, 2012, and summarizes data collected to date and variances to the FERC-approved study. For those studies that YCWA has posted a technical memorandum on the Relicensing Website, those technical memoranda, which include data collected during the performance of the study, are included here by reference (i.e., not repeated in the Initial Study Report).

- Section 3. YCWA’s Proposed Modifications to FERC-Approved Studies and New Studies. This section includes any YCWA-proposed modifications to studies included in FERC’s Determination, as amended, or new studies, including a description of the need for the study.
- Section 4. Initial Study Report Meeting. This section describes YCWA’s plans to hold a public meeting to discuss this Initial Study Report.
- Section 5. Election to File a Draft License Application. This section advises FERC that YCWA plans to file a draft license application, rather than a preliminary licensing proposal, at least 150 days in advance of filing its license application.
- Section 6. References Cited. This section includes a list of references cited in the Initial Study Report.

Other considerations for this Initial Study Report are:

- This is a *progress* report - some, though not all, studies are complete.
- For studies that have not been completed, YCWA considers all data collected to date for those studies “*Preliminary and Subject to Change*” because YCWA is in the process of performing quality assurance and quality control (QA/QC) of the data. A reader of this Initial Study Report should assume this is true for each study that is not identified as complete, even if it is not explicitly stated in the interim technical memorandum for that study.
- This Initial Study Report does not modify FERC’s Determination, as amended by FERC.

SECTION 2

STATUS OF EACH STUDY

As described in Section 1.4, YCWA plans to include in its final application for a new license 44 technical memoranda for the 44 studies included in FERC’s Determination, as amended: one technical memorandum for each of the 44 studies. As of November 30, 2012, YCWA posted to its Relicensing Website a technical memorandum for each of the 44 studies.

The posted technical memoranda can be divided into two types, which are described below and listed on Columns A and B on Table 2.0-1:

- Study Completed. Study is complete. See Column A in Table 2.0-1.¹³
- Study in Progress with Some Data Reported. For these studies, YCWA posted an interim technical memorandum to the Relicensing Website. These studies are in progress and YCWA considers the posted technical memoranda to be progress reports only. See Column B in Table 2.0-1.

Column C of Table 2.0-1 sets forth YCWA’s forecasted date by which the “Studies in Progress” (Column B) are estimated to be completed.

Table 2.0-1. Status of studies.

Study No.	Study Description/ Technical Memorandum	Column A	Column B	Column C
		Study Complete (Date YCWA Posted the Technical Memorandum to the Relicensing Website) ¹	Study in Progress (Date YCWA Posted an Interim Technical Memorandum to Relicensing Website) ¹	Study in Progress (Date YCWA Forecasts the Study Will be Complete)
GEOLOGY AND SOILS				
1.1	Channel Morphology Upstream of Englebright Reservoir	--	November 28, 2012	April 15, 2013 ²
1.2	Channel Morphology Downstream of Englebright Dam	November 27, 2012	--	--
WATER RESOURCES				
2.1	Hydrologic Alteration	November 16, 2012	--	--
2.2	Water Balance/Operations Model	November 17, 2012	--	--
2.3	Water Quality	--	November 17, 2012	September 30, 2013 ⁴
2.4	Bioaccumulation	September 25, 2012	--	--
2.5	Water Temperature Monitoring	November 17, 2012 ³	--	--
2.6	Water Temperature Model	--	December 1, 2012	March 31, 2013 ²
AQUATIC RESOURCES				
3.1	Aquatic Macroinvertebrates Upstream of Englebright Reservoir	November 26, 2012	--	--

¹³ YCWA does not plan to modify data from “completed studies” unless YCWA determines that there was a mistake in the reporting of such data, in which case YCWA will revise the technical memorandum to correct the error and advise Relicensing Participates of the correction. YCWA, may, however, reorganize or change the presentation or format of such data in the technical memorandum if YCWA concludes such changes would improve the clarity of the technical memorandum or consistency with other relicensing technical memoranda.

Table 2.0-1. (continued)

Study No.	Study Description/ Technical Memorandum	Column A	Column B	Column C
		Study Complete (Date YCWA Posted the Technical Memorandum to the Relicensing Website)	Study in Progress (Date YCWA Posted an Interim Technical Memorandum to Relicensing Website) ¹	Study in Progress (Date YCWA Forecasts the Study Will be Complete)
AQUATIC RESOURCES (continued)				
3.2	Aquatic Macroinvertebrates Downstream of Englebright Dam	October 31, 2012	--	--
3.3	Special-Status Aquatic Mollusks	September 18, 2012	--	--
3.4	Special-Status Amphibians – Foothill Yellow-Legged Frog Surveys	December 1, 2012 ³	--	--
3.5	Special-Status Amphibians – Foothill Yellow-Legged Frog Habitat Modeling	--	November 27, 2012	September 30, 2013 ⁴
3.6	Special-Status Turtles – Western Pond Turtle	December 1, 2012 ³	--	--
3.7	Reservoir Fish Populations	September 28, 2012	--	--
3.8	Stream Fish Populations Upstream of Englebright Reservoir	--	December 1, 2012	September 30, 2013 ⁴
3.9	Non-ESA-Listed Fish Populations Downstream of Englebright Dam	--	October 15, 2012	December 20, 2012 ^{2,5}
3.10	Instream Flow Upstream of Englebright Reservoir	--	November 28, 2012	April 15, 2013 ²
3.11	Entrainment	--	November 27, 2012	October 31, 2013 ⁴
3.12	New Colgate Powerhouse Ramping	--	December 3, 2012	December 20, 2012 ²
WILDLIFE RESOURCES				
4.1	Special-Status Wildlife – California Wildlife Habitat Relationships	September 18, 2012	--	--
4.2	Special-Status Wildlife – Bats	November 27, 2012	--	--
BOTANICAL RESOURCES				
5.1	Special-Status Plants	October 29, 2012	--	--
RIPARIAN, WETLANDS AND LITTORAL HABITATS				
6.1	Riparian Habitat Upstream of Englebright Reservoir	--	December 1, 2012	February 28, 2013 ²
6.2	Riparian Habitat Downstream of Englebright Dam	--	December 2, 2012	August 31, 2013 ⁴
6.3	Wetlands	September 29, 2012	--	--
THREATENED, ENDANGERED AND FULLY PROTECTED SPECIES				
7.1	ESA-Listed Plants	--	November 20, 2012	December 20, 2012 ^{2,6}
7.2	Narrows 2 Powerhouse Intake Extension	--	November 20, 2012	September 30, 2013 ⁴
7.3	ESA-Listed Amphibians – California Red-Legged Frog	--	November 21, 2012	December 20, 2012 ^{2,6}
7.4	ESA-Listed Wildlife – Valley Elderberry Longhorn Beetle	November 19, 2012	--	--
7.5	CESA-Listed Plants	September 21, 2012	--	--
7.6	CESA-Listed and Fully Protected Wildlife – California Wildlife Habitat Relationships	September 27, 2012	--	--
7.7	CESA-Listed and Fully Protected Wildlife – Bald Eagle	October 12, 2012	--	--
7.8	ESA/CESA-Listed Salmonids Downstream of Englebright Dam	--	December 2, 2012	February 28, 2013 ²
7.9	Green Sturgeon Downstream of Englebright Dam	--	November 19, 2012	February 28, 2013 ^{2,5}
7.10	Instream Flow Downstream of Englebright Dam	--	December 2, 2012	January 31, 2013 ²

Table 2.0-1. (continued)

Study No.	Study Description/ Technical Memorandum	Column A	Column B	Column C
		Study Complete (Date YCWA Posted the Technical Memorandum to the Relicensing Website) ¹	Study in Progress (Date YCWA Posted an Interim Technical Memorandum to Relicensing Website) ¹	Study in Progress (Date YCWA Forecasts the Study Will be Complete)
THREATENED, ENDANGERED AND FULLY PROTECTED SPECIES (continued)				
7.11	Fish Behavior and Hydraulics Near Narrows 2 Powerhouse	--	December 2, 2012	March 31, 2013 ⁴
7.12	Evaluation of Project Effects on Daguerre Point Dam and Hallwood-Cordua Fish Facilities	--	December 3, 2012	January 31, 2013 ⁴
RECREATION RESOURCES				
8.1	Recreation Use and Visitor Surveys	--	December 2, 2012	March 31, 2013 ⁴
8.2	Recreational Flow	--	October 29, 2012	September 30, 2013 ⁴
LAND USE				
9.1	Primary Project Roads and Trails	September 30, 2012	--	--
AESTHETIC RESOURCES				
10.1	Visual Quality	September 18, 2012	--	--
SOCIO-ECONOMIC RESOURCES				
11	None			
CULTURAL RESOURCES				
12.1	Historic Properties	--	December 1, 2012	March 31, 2013 ²
TRIBAL RESOURCES				
13.1	Native American Traditional Cultural Properties	--	October 31, 2012	December 20, 2012 ^{2,7}
<i>Subtotal</i>		21	23	23
<i>Completed</i>		21		
<i>In Progress and On Schedule</i>		10		
<i>In Progress and Behind Schedule – But Expected to be Complete by December 20, 2012 (i.e., Before Initial Study Report Meeting Summary is Filed with FERC)</i>		5		
<i>In Progress and Behind Schedule – Expected to be Complete in 2013</i>		8		
Total		44		

¹ Although in some instances, YCWA may have posted data or an interim technical memorandum earlier than the date listed in Columns A or B, this column reflects the date that the current version of the technical memorandum, including attachments, was posted to the Relicensing Website as of November 30, 2012.

² YCWA forecasts completing the tasks in the FERC-approved study by this date, which is later than the completion date in the FERC-approved study.

³ The study is complete. However, YCWA has proposed a study modification or new study related to this resource area. Refer to Section 3 for a description of YCWA proposed study modification or new study.

⁴ YCWA forecasts completing the tasks in the FERC-approved study by this date, which is the same completion date in the FERC-approved study.

⁵ All tasks in the FERC-approved study are complete with the exception of collaborating with Relicensing Participants regarding the need for any additional data gathering. The results of the consultation will be summarized in the final technical memorandum.

⁶ All tasks in the FERC-approved study are complete, with the exception of, as FERC's designated non-federal representative for Section 7 consultation, completing consultation with USFWS regarding any additional data collection, potential Project effects and appropriate measures. YCWA assumes that consultation regarding additional data gathering will be completed no later than December 20, 2012.

⁷ All tasks in the FERC-approved study are complete with the exception of the tribes, Forest Service and other interested parties providing written comments on the interim technical memorandum by December 1, 2012. YCWA will address the comments in the final technical memorandum.

Provided below is a description of the status of each study.

2.1 Geology and Soils Studies

FERC's Determination, as amended, included two studies related to Geology and Soils. The status of each of these studies is provided below.

2.1.1 Channel Morphology Upstream of Englebright Reservoir (Study 1.1)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) measure and analyze tracer rocks, which were placed in the streams in 2012, for movement; 2) use the hydraulic model, which is being developed as part of Study 3.10, *Instream Flow Upstream of Englebright Reservoir*, to provide stage/discharge relationship; 3) analyze sediment transport; 4) review sediment transport models; 5) summarize the riparian habitat analysis, which is being performed as part of Study 6.1, *Riparian Habitat Upstream of Englebright Reservoir*; 6) consult with Relicensing Participants regarding the sediment transport models; and 7) issue a final technical memorandum.

Refer to Interim Technical Memorandum 1-1, *Channel Morphology Upstream of Englebright Reservoir*, which was posted to YCWA's Relicensing Website on November 28, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012

YCWA expects to complete the study by April 15, 2013.

2.1.2 Channel Morphology Downstream of Englebright Dam (Study 1.2)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 1-2, *Channel Morphology Downstream of Englebright Dam*, which was posted to YCWA's Relicensing Website on November 27, 2012 for a description of the study results and any variances from the FERC-approved study.

2.2 Water Resources Studies

FERC's Determination, as amended, included six studies related to Water Resources. The status of each of these studies is provided below.

2.2.1 Hydrologic Alteration (Study 2.1)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 2-1, *Hydrologic Alteration*, which was posted to YCWA's Relicensing Website on November 16, 2012 for a description of the study results and any variances from the FERC-approved study.

2.2.2 Water Balance/Operations Model (Study 2.2)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 2-2, *Water Balance/Operations Model*, which was posted to YCWA's Relicensing Website on November 17, 2012 for a description of the study results and any variances from the FERC-approved study.

2.2.3 Water Quality (Study 2.3)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) process water quality data collected in fall 2012; 2) consult with Relicensing Participants in January 2013, when the fall 2012 data area available, regarding the need for focused second year studies; and 3) issue a final technical memorandum.

Refer to Interim Technical Memorandum 2-3, *Water Quality*, which was posted to YCWA's Relicensing Website on November 17, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

The study is on schedule to be completed by September 30, 2013, as stated in the FERC-approved study.

2.2.4 Bioaccumulation (Study 2.4)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 2-4, *Bioaccumulation*, which was posted to YCWA's Relicensing Website on September 25, 2012 for a description of the study results and any variances from the FERC-approved study.

2.2.5 Water Temperature Monitoring (Study 2.5)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 2-5, *Water Temperature Monitoring*, which was posted to YCWA's Relicensing Website on November 17, 2012 for a description of the study results and any variances from the FERC-approved study.¹⁴

2.2.6 Water Temperature Model (Study 2.6)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) complete the development and calibration of the models of the Project upstream from Englebright Reservoir and for Englebright Reservoir; 2) complete the validation of the models of the Project upstream from Englebright Reservoir and for Englebright

¹⁴ YCWA and Relicensing Participants collaboratively agreed that YCWA would request in its Initial Study Report that FERC modify Study 2.5. Refer to Section 3.1.1 of this Initial Study Report for a description of YCWA's proposed study modification.

Reservoir, and provide the Relicensing Participants with a Draft Validation Report for their review; 3) complete the Base Case; 4) complete the Model Development and Model Validation reports; and 5) issue a final technical memorandum.

Refer to Interim Technical Memorandum 2-6, *Water Temperature Model*, which was posted to YCWA's Relicensing Website on December 1, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

YCWA expects to complete the study by March 31, 2013.

2.3 Aquatic Resources Studies

FERC's Determination, as amended, included 12 studies related to Aquatic Resources. The status of each of these studies is provided below.

2.3.1 Aquatic Macroinvertebrates Upstream of Englebright Reservoir (Study 3.1)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 3-1, *Aquatic Macroinvertebrates Upstream of Englebright Dam*, which was posted to YCWA's Relicensing Website on November 26, 2012, for a description of the study results and any variances from the FERC-approved study.

2.3.2 Aquatic Macroinvertebrates Downstream of Englebright Dam (Study 3.2)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 3-2, *Aquatic Macroinvertebrates Downstream of Englebright Dam*, which was posted to YCWA's Relicensing Website on October 31, 2012, for a description of the study results and any variances from the FERC-approved study.

2.3.3 Special-Status Aquatic Mollusks (Study 3.3)

This study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 3-3, *Special-Status Aquatic Mollusks*, which was posted to YCWA's Relicensing Website on September 18, 2012, for a description of the study results and any variances from the FERC-approved study.

2.3.4 Special-Status Amphibians – Foothill Yellow-Legged Frog Surveys (Study 3.4)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 3-4, *Special-Status Amphibians – Foothill Yellow-Legged Frog*

Surveys, which was posted to YCWA's Relicensing Website on December 1, 2012 for a description of the study results and any variances from the FERC-approved study.¹⁵

2.3.5 Special-Status Amphibians – Foothill Yellow-Legged Frog Habitat Modeling (Study 3.5)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) survey channel geometry and map substrate; 2) collect hydraulic measurements; 3) conduct hydraulic and habitat modeling; 4) consult with the Relicensing Participants during hydraulic and habitat modeling; and 5) issue a final technical memorandum.

Refer to Interim Technical Memorandum 3-5, *Special-Status Amphibians – Foothill Yellow-Legged Frog Habitat Modeling*, which was posted to YCWA's Relicensing Website on November 27, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

The study is on schedule to be completed by September 30, 2013, as stated in the FERC-approved study.

2.3.6 Special-Status Turtles – Western Pond Turtle (Study 3.6)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 3-6, *Special-Status Turtles – Western Pond Turtle*, which was posted to YCWA's Relicensing Website on December 1, 2012 for a description of the study results and any variances from the FERC-approved study.¹⁶

2.3.7 Reservoir Fish Populations (Study 3.7)

This study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 3-7, *Reservoir Fish Populations*, which was posted to YCWA's Relicensing Website on September 28, 2012, for a description of the study results and any variances from the FERC-approved study.

2.3.8 Stream Fish Populations Upstream of Englebright Reservoir (Study 3.8)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) conduct second year sampling; and 2) issue a final technical memorandum.

¹⁵ YCWA and the Forest Service, USFWS, CDFG and the SWRCB collaboratively agreed that YCWA would request in its Initial Study Report that FERC approve a new study related to foothill yellow-legged frog. Refer to Section 3.2.1 of this Initial Study Report for a description of YCWA's proposed new foothill yellow-legged frog study.

¹⁶ YCWA and the Forest Service, USFWS, CDFG and the SWRCB collaboratively agreed that YCWA would request in its Initial Study Report that FERC approve a new study related to western pond turtle. Refer to Section 3.2.2 of this Initial Study Report for a description of YCWA's proposed new western pond turtle study.

Refer to Interim Technical Memorandum 3-8, *Stream Fish Populations Upstream of Englebright Reservoir*, which was posted to YCWA's Relicensing Website on December 1, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

The study is on schedule to be completed by September 30, 2013, as stated in the FERC-approved study.

2.3.9 Non-ESA-Listed Fish Populations Downstream of Englebright Dam (Study 3.9)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) consult with Relicensing Participants, which is scheduled to occur on December 3, 2012, regarding the need for additional data collection; and 2) issue a final technical memorandum.

Refer to Interim Technical Memorandum 3-9, *Non-ESA-Listed Fish Populations Downstream of Englebright Dam*, which was posted to YCWA's Relicensing Website on October 15, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

YCWA expects to complete the study by December 20, 2012.

2.3.10 Instream Flow Upstream of Englebright Reservoir (Study 3.10)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) complete data collection in the New Bullards Bar Dam Reach and the Middle/North Yuba River Reach; 2) perform hydraulic modeling; 3) consult with Relicensing Participants regarding hydraulic modeling; 4) develop flow-habitat models, including habitat time series and duration analyses; 5) consult with Relicensing Participants regarding all habitat duration analysis input parameters, scenario assumptions, and desired output; and 6) issue a final technical memorandum.

Refer to Interim Technical Memorandum 3-10, *Instream Flow Upstream of Englebright Reservoir*, which was posted to YCWA's Relicensing Website on November 28, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

YCWA expects to complete the study by April 15, 2013.

2.3.11 Entrainment (Study 3.11)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) continue entrainment monitoring at the Lohman Ridge and Camptonville diversion tunnels until diversions cease in spring/summer 2013; 2) collaborate

with Relicensing Participants regarding the results of power tunnel intake sampling to determine if additional data gathering is needed; and 3) issue a final technical memorandum.

Refer to Interim Technical Memorandum 3-11, *Entrainment*, which was posted to YCWA's Relicensing Website on November 27, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

The study is on schedule to be completed by October 31, 2013, as stated in the FERC-approved study.

2.3.12 New Colgate Powerhouse Ramping (Study 3.12)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) complete quality control and analysis on visual observation surveys for fish stranding; 2) consult with Relicensing Participants regarding hydraulic modeling; 3) develop travel time calculations for down ramping and up ramping events; and 3) issue a final technical memorandum.

Refer to Interim Technical Memorandum 3-12, *New Colgate Powerhouse Ramping*, which was posted to YCWA's Relicensing Website on December 3, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

YCWA expects to complete the study by December 20, 2012.

2.4 Wildlife Resources Studies

FERC's Determination, as amended, included two studies related to Wildlife Resources. The status of each of these studies is provided below.

2.4.1 Special-Status Wildlife – California Wildlife Habitat Relationships (Study 4.1)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 4-1, *Special-Status Wildlife – California Wildlife Habitat Relationships*, which was posted to YCWA's Relicensing Website on September 18, 2012, for a description of the study results and any variances from the FERC-approved study.

2.4.2 Special-Status Wildlife – Bats (Study 4.2)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 4-2, *Special-Status Wildlife - Bats*, which was posted to YCWA's Relicensing Website on November 27, 2012, for a description of the study results and any variances from the FERC-approved study.

2.5 Botanical Resources Studies

FERC's Determination, as amended, included one study related to Botanical Resources. The status of the study is provided below.

2.5.1 Special-Status Plants (Study 5.1)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 5-1, *Special-Status Plants*, which was posted to YCWA's Relicensing Website on October 29, 2012, for a description of the study results and any variances from the FERC-approved study.

2.6 Wetlands, Riparian and Littoral Habitats Studies

FERC's Determination, as amended, included three studies related to Wetlands, Riparian and Littoral Habitats. The status of each of these studies is provided below.

2.6.1 Riparian Habitat Upstream of Englebright Reservoir (Study 6.1)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) quantify large woody material (LWM) material at the LWM assessment sites; 2) develop a LWM budget; 3) develop a stage/discharge and flow frequency analyses for with-Project and without-Project conditions; 4) complete analysis; and 2) issue a final technical memorandum.

Refer to Interim Technical Memorandum 6-1, *Riparian Habitat Upstream of Englebright Reservoir*, which was posted to YCWA's Relicensing Website on December 1, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

YCWA expects to complete the study by February 28, 2013.

2.6.2 Riparian Habitat Downstream of Englebright Dam (Study 6.2)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) assess project affects on riparian habitat; and 2) issue a final technical memorandum.

Refer to Interim Technical Memorandum 6-2, *Riparian Habitat Downstream of Englebright Reservoir*, which was posted to YCWA's Relicensing Website on December 2, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

The study is on schedule to be completed by August 31, 2013, as stated in the FERC-approved study.

2.6.3 Wetlands (Study 6.3)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 6-3, *Wetlands*, which was posted to YCWA's Relicensing Website on September 29, 2012, for a description of the study results and any variances from the FERC-approved study.

2.7 Threatened, Endangered and Fully Protected Species Studies¹⁷

FERC's Determination, as amended, included 11 studies related to Threatened, Endangered and Fully Protected Species. The status of each of these studies is provided below.

2.7.1 ESA-Listed Plants (Study 7.1)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) complete consultation with USFWS regarding the need for any additional data gathering; and 2) issue a final technical memorandum.

Refer to Interim Technical Memorandum 7-1, *ESA-Listed Plants*, which was posted to YCWA's Relicensing Website on November 20, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

YCWA expects to complete the study by December 20, 2012.

2.7.2 Narrows 2 Powerhouse Intake Extension (Study 7.2)

The study was begun, but will begin in earnest when both YCWA's Studies 2.2, *Water Balance/Operations Model*, and 2.5, *Water Temperature Modeling*, are complete.

Refer to Interim Technical Memorandum 7-2, *Narrows 2 Powerhouse Intake Extension*, which was posted to YCWA's Relicensing Website on November 20, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

The study is on schedule to be completed by September 30, 2013, as stated in the FERC-approved study.

2.7.3 ESA-Listed Amphibians – California Red-Legged Frog (Study 7.3)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) complete consultation with USFWS regarding the need for any additional data gathering; and 2) issue a final technical memorandum.

¹⁷ FERC designated YCWA as FERC's non-federal representative for § 7 consultation under the ESA.

Refer to Interim Technical Memorandum 7-3, *ESA-Listed Amphibians – California Red-Legged Frog*, which was posted to YCWA’s Relicensing Website on November 21, 2012, for a description of the study results and any variances from the FERC-approved study as of September 26, 2012.

YCWA expects to complete the study by December 20, 2012.

2.7.4 ESA-Listed Wildlife – Valley Elderberry Longhorn Beetle (Study 7.4)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 7-4, *ESA-Listed Wildlife – Valley Elderberry Longhorn Beetle*, which was posted to YCWA’s Relicensing Website on November 19, 2012, for a description of the study results and any variances from the FERC-approved study.

2.7.5 CESA-Listed Plants (Study 7.5)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 7-5, *CESA-Listed Plants*, which was posted to YCWA’s Relicensing Website on September 21, 2012, for a description of the study results and any variances from the FERC-approved study.

2.7.6 CESA-Listed and Fully Protected Wildlife – California Wildlife Habitat Relationships (Study 7.6)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 7-6, *CESA-Listed and Fully Protected Wildlife - California Wildlife Habitat Relationships*, which was posted to YCWA’s Relicensing Website on September 27, 2012, for a description of the study results and any variances from the FERC-approved study.

2.7.7 CESA-Listed and Fully Protected Wildlife – Bald Eagle (Study 7.7)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 7-7, *CESA-Listed and Fully Protected Wildlife – Bald Eagle*, which was posted to YCWA’s Relicensing Website on October 12, 2012, for a description of the study results and any variances from the FERC-approved study.

2.7.8 ESA/CESA-Listed Salmonids Downstream of Englebright Dam (Study 7.8)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) incorporate relevant information from the Lower Yuba River Accord, River Management Team’s Monitoring and Evaluation (M&E) Program Interim Report, into the study results; 2) incorporate results from other relevant relicensing studies into the study results; 3) attach the M&E Interim Report, M&E annual reports, and M&E program study databases to the technical memorandum; 4) consult with Relicensing Participants to finalize a study matrix to facilitate the comparison of NMFS’ information requests for Study NMFS-1, Element 4, to the studies proposed in the approved study plan and relevant studies

planned or already completed outside of the licensing process; and 5) issue a final technical memorandum.

Refer to Interim Technical Memorandum 7-8, *ESA/CESA-Listed Salmonids Downstream of Englebright Dam*, which was posted to YCWA's Relicensing Website on December 2, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

YCWA expects to complete the study by February 28, 2013.

2.7.9 Green Sturgeon Downstream of Englebright Dam (Study 7.9)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) incorporate results from Study 2.5, *Water Temperature Modeling*, as they pertain to water temperature suitability for North American green sturgeon in the Yuba River; 2) incorporate flow and habitat modeling results from Study 7.10, *Instream Flow Downstream of Englebright Dam*; 3) share the information with Relicensing Participants; and 4) issue a final technical memorandum.

Refer to Interim Technical Memorandum 7-9, *North American Green Sturgeon Downstream of Englebright Dam*, which was posted to YCWA's Relicensing Website on November 19, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

YCWA expects to complete the study by February 28, 2013.

2.7.10 Instream Flow Downstream of Englebright Dam (Study 7.10)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) make habitat model runs; 2) make floodplain inundation model runs; 3) make habitat duration model runs; and 4) complete a final technical memorandum.

Refer to Interim Technical Memorandum 7-10, *Instream Flow Downstream of Englebright Dam*, which was posted to YCWA's Relicensing Website on December 2, 2012, for a description of study tasks completed to date and any variances from the FERC-approved study as of November 30, 2012.

YCWA expects the study to be complete by January 31, 2013.

2.7.11 Fish Behavior and Hydraulics Near Narrows 2 Powerhouse (Study 7.11)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) complete twice-monthly snorkel surveys through December 15; 2) complete field velocity measurements in early December; 3) complete measurements necessary for pressure calculations; and 4) complete DIDSON™ camera footage

review, and include any additional pertinent historical data; and 5) complete a final technical memorandum.

Refer to Interim Technical Memorandum 7-11, *Fish Behavior and Hydraulics Near Narrows 2 Powerhouse*, which was posted to YCWA's Relicensing Website on December 2, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

The study is on schedule to be completed by March 31, 2013, as stated in the FERC-approved study.

2.7.12 Evaluation of Project Effects on Daguerre Point Dam and Hallwood-Cordua Fish Facilities (Study 7.12)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining are for YCWA to: 1) complete assessment of Project effects on the fish facilities; 2) collaborate with Relicensing Participants regarding the need for and scope of phase 2 work; and 3) complete a final technical memorandum.

Refer to Interim Technical Memorandum 7-12, *Evaluation of Project Effects on Daguerre Point Dam and Hallwood-Cordua Fish Facilities*, which was posted to YCWA's Relicensing Website on December 3, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

The study is on schedule to be completed by January 31, 2013, as stated in the FERC-approved study.

2.8 Recreation Resources Studies

FERC's Determination, as amended, included two studies related to Recreation Resources. The status of each of these studies is provided below.

2.8.1 Recreational Use and Visitor Surveys (Study 8.1)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining for YCWA are to: 1) develop a basic schematic of the underground water and septic systems; 2) receive mailback questionnaires; 3) perform data analysis of visitor surveys and houseboat surveys to identify recreation uses and visitor attitudes, beliefs, and preferences at Project recreation resource areas; 4) perform analysis of observation surveys to estimate current and future recreation use at Project recreation resource areas; 5) identifying future use and demand opportunities; and 6) issue a final technical memorandum.

Refer to Interim Technical Memorandum 8-1, *Recreation Use and Visitor Surveys*, which was posted to YCWA's Relicensing Website on December 2, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

The study is on schedule to be completed by March 31, 2013, as stated in the FERC-approved study.

2.8.2 Recreational Flow (Study 8.2)

The study was partially completed during the period covered by this Initial Study Report. The task remaining for YCWA are to: 1) perform a controlled flow whitewater boating study in the Middle Yuba River and Yuba River from the Highway 49 Bridge to Englebright Reservoir in spring 2013; 2) once the controlled flow study is complete, estimate the number of whitewater boating days in the reach under With-Project and Without Project conditions; and 3) issue a final technical memorandum.

Refer to Interim Technical Memorandum 8-2, *Recreation Flow*, which was posted to YCWA's Relicensing Website on October 29, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

The study is on schedule to be completed by September 30, 2013, as stated in the FERC-approved study.

2.9 Land Use Studies

FERC's Determination, as amended, included one study related to Land Use. The status of the study is provided below.

2.9.1 Primary Project Roads and Trails (Study 9.1)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 9-1, *Primary Project Roads and Trails*, which was posted to YCWA's Relicensing Website on September 30, 2012, for a description of the study results and any variances from the FERC-approved study.

2.10 Aesthetic Resources Studies

FERC's Determination, as amended, included one study related to Aesthetic Resources. The status of the study is provided below.

2.10.1 Visual Quality (Study 10.1)

The study was completed during the period covered by this Initial Study Report. Refer to Technical Memorandum 11-1, *Visual Quality*, which was posted to YCWA's Relicensing Website on September 18, 2012, for a description of the study results and any variances from the FERC-approved study.

2.11 Socio-Economic Resources Studies

FERC's Determination, as amended, did not include any study plans related to socio-economics resource.

2.12 Cultural Resources Studies¹⁸

FERC's Determination, as amended, included one study related to Cultural Resources. The status of the study is provided below.

2.12.1 Historic Properties (Study 12.1)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining for YCWA are to: 1) incorporate and evaluate new cultural resources identified during the November 2012 surveys; 2) submit a revised APE map to the SHPO for concurrence on the adequacy of the APE; 3) provide an interim technical memorandum and evaluation plan to tribes, Forest Service, and other interested parties for review and comment; and 4) issue a final technical memorandum.

Refer to Interim Technical Memorandum 8-1, *Historic Properties*, which was posted to YCWA's Relicensing Website on December 1, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

YCWA expects to complete the study by March 31, 2013.

2.13 Tribal Resources Studies¹⁹

FERC's Determination, as amended, included one study related to Tribal Resources. The status of the study is provided below.

2.13.1 Native American Traditional Cultural Properties (Study 13.1)

The study was partially completed during the period covered by this Initial Study Report. The tasks remaining for YCWA are to: 1) address any comments received from tribes, the Forest Service or other interested parties on the interim technical memorandum (written comments are due by December 1, 2012); and 2) issue a final technical memorandum.

Refer to Interim Technical Memorandum 13-1, *Native American Traditional Cultural Properties*, which was posted to YCWA's Relicensing Website on October 31, 2012, for a description of the study results and any variances from the FERC-approved study as of November 30, 2012.

¹⁸ FERC designated YCWA as FERC's non-federal representative for § 106 consultation under the NHPA.

¹⁹ FERC designated YCWA as FERC's non-federal representative for § 106 consultation under the NHPA.

YCWA expects to complete the study by December 20, 2012.

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SECTION 3

YCWA'S PROPOSED STUDY MODIFICATIONS AND NEW STUDIES

This section describes YCWA's proposed study modifications and new studies.

3.1 YCWA's Proposed Study Modifications

Provided below are YCWA's proposed modifications to current studies in FERC's Determination, as amended.

3.1.1 Water Temperature Monitoring (Study 2.5)

3.1.1.1 Background

The FERC-approved study requires that, after the first Study 3.4, *Special-Status Amphibians – Foothill Yellow-Legged Frog*, survey effort for egg masses occurred in 2012, YCWA install three to four continuous water temperature recorders at each of up to four locations upstream of Englebright Reservoir. The purpose of the recorders was to provide information regarding margin (e.g., edge of runs, pool tailouts, and backwater pools/eddies at the top or bottom of lateral and median cobble bars) at potential or known occupied foothill yellow-legged frog (FYLF) habitats. The recorders were to be installed in series at each location with one recorder near the water's edge (shallow) one in somewhat deeper (mid depth), and one in deeper water (deep). In addition, a pressure transducer was to be installed at the deep water recorder. The target depth of the shallow recorder was 12 to 44 centimeters (cm). The recorders were to be left in place into October 2012.

Study 3.4 FYLF egg mass surveys were completed in late June 2012, YCWA and Relicensing Participants collaboratively selected sites to install the margin water temperature recorders in early July 2012, and the recorders were installed on July 17 and 18. Table 3.2.1-1 provides information regarding the four margin water temperature recorders.

Table 3.2.1-1. Margin water temperature recorders installed in July 2012.

Site Location	Coordinates		Logger Location							
	Latitude	Longitude	Micro habitat	Install Depth (ft)	Micro habitat	Install Depth (ft)	Micro habitat	Install Depth (ft)	Micro habitat	Install Depth (ft)
Middle Yuba River below Our House Diversion Dam	39.409195	-121.000992	RB, Edgewater	0.7	RB, Backwater	0.7	Thalweg, Pool	6.8	LB, Edgewater	0.9
Middle Yuba River above Oregon Creek Confluence	39.393987	-121.082559	RB, Backwater	0.8	Thalweg, Run	2.8	LB, Run	1.8	LB, Edgewater	0.35
Middle Yuba River below Oregon Creek Confluence	39.390960	-121.085380	RB, Edgewater w/ shade	0.55	RB, Edgewater w/o shade	0.52	Thalweg, Run	1.0	LB, Edgewater	0.42
Oregon Creek near Celestial Valley	39.413796	-121.068437	RB, Edgewater	0.6	Thalweg, Pool	1.8	LB, Run	0.55	LB, Backwater	0.75

Key: LB = left bank RB = right bank

On September 12, 2012, YCWA proposed to Relicensing Participants that YCWA would maintain and continue monitoring the margin water temperature recorders through July 2013. The reason to continue monitoring the margin recorders was to provide 1 full year of monitoring, and especially in the spring runoff period.

YCWA's proposal was discussed again on October 10 and November 8, 2012, at which time Relicensing Participants agreed to YCWA's proposal.

At the November 8, 2012 meeting, it was further agreed that: 1) YCWA and Relicensing Participants would meet on July 23, 2013 to review the margin water temperature data available at that time and discuss leaving some or all of the four margin water temperature recorders in place through the end of September 2013; 2) that maintaining the margin recorders in place through July 15, 2013 would complete Study 2.5, *Water Temperature Monitoring* (unless otherwise modified by FERC) and YCWA would issue a final technical memorandum after July 15, 2013; 3) if it is agreed at the July 23, 2013 meeting to keep some or all of the margin water temperature recorders in place from July 16 through the end of September 2013, YCWA would provide the data to Relicensing Participants outside of Study 2.5, and the data would be incorporated into the draft and final license applications, as appropriate.

3.1.1.2 Proposed Study Modifications

YCWA proposes the following two modifications Study 2.5:

1. YCWA will maintain the four margin water temperature recorders described in Table 3.2.1-1 in place through July 15, 2013.

2. YCWA will issue a final technical memorandum for Study 2.5 no later than August 31, 2013. The final technical memorandum will include the data through July 15, 2013 for the four margin water temperature recorders.
3. YCWA will implement the study modification as directed by FERC.

If the study modification is approved by FERC, YCWA anticipates the study will be completed by August 31, 2013.

3.2 YCWA's Proposed New Studies

Provided below are YCWA's proposed new studies.

3.2.1 Special-Status Amphibians – Focused 2013 Foothill Yellow-Legged Frog Surveys (New Study 3.13)

3.2.1.1 Background

The FERC-approved Study 3.4, *Special-Status Amphibians – Foothill Yellow-Legged Frog Surveys*, included visual encounter surveys (VES) for foothill yellow-legged frogs (FYLF) at 10 sites on stream reaches that may be affected by Project flows, and at two sites on non-Project-affected stream reaches upstream of the Project. The completed study did not detect FYLF at either site on the Yuba River, and FYLF is scarce on the Middle Yuba River downstream of the confluence of Oregon Creek (i.e., Middle Yuba River, Oregon Creek Reach). Because the FERC-approved study required that survey sites be based on accessibility during the spring period when FYLF breeding occurs, one of the Yuba River survey sites (Site YR-2) located just below the confluence of the Middle Yuba and North Yuba River was only about 100 meters (m) in length, encompassing accessible suitable habitat associated with lateral bars. Two FYLF were incidentally observed in the Middle Yuba River, Oregon Creek Reach, at RM 1.0 near the tributary, Yellowjacket Creek, within the boundaries of survey Site MYR-2, although no evidence of FYLF breeding or other detections were made during surveys of Site MYR-2.

Study 3.4 specified that YCWA would meet with interested and available Relicensing Participants to review the study results and discuss the need for and scope of additional limited scope studies. If YCWA and Relicensing Participants collaboratively agreed focused studies were needed in a second year, YCWA and Relicensing Participants would collaboratively develop a new study proposal and file it with FERC as part of its Initial Study Report.

YCWA met this study obligation by meeting with interested and available Relicensing Participants on September 16, November 8, and November 14, 2012 to review available results of this study and discuss the need for and nature of additional limited scope studies. Based on these discussions, YCWA and the Forest Service, USFWS, CDFG and State Water Resources Control Board (SWRCB) collaboratively agreed that YCWA would include in its Initial Study Report the new study proposal described below. As part of this agreement, the Forest Service, USFWS, CDFG and SWRCB agreed that they would not make additional study requests to

FERC related to FYLF in response to the Initial Study Report and Initial Study Report meeting summary.

3.2.1.2 Proposed New FYLF Focused Study

YCWA proposes the following new study:

1. YCWA will conduct VES for FYLF during two visits to the Yuba River just downstream of the confluence of the North Yuba River. The proposed survey length is about 250 m, more than twice the length of the area surveyed as Site YR-2, which was constrained by limited accessibility during high flows that occur in spring. Access is reportedly feasible under lower flows. The two surveys will be timed to document FYLF tadpoles and metamorphosed young-of-year, if they occur. If access is safe, the two surveys will be performed sometime in July or August-early September 2013. The surveys will follow methods used in Study 3-4 and include documentation of American bullfrog and other incidental species. If YCWA field staff determines that the expanded survey area cannot be safely accessed, YCWA will notify Relicensing Participants of this within 1 week of any attempted site survey visit, and include a detailed description, reasoning, and photographs for any final determination regarding unsafe access in the technical memorandum for the study.
2. YCWA will conduct VES for FYLF during three visits to Yellowjacket Creek, a tributary of the Middle Yuba River about 3 miles downstream of Oregon Creek. The first two surveys will be timed to document egg masses and the third survey will be timed for late stage tadpoles and metamorphosed young-of-year. It is estimated that the egg mass surveys may begin in May and the third survey may occur in August 2013. Yellowjacket Creek will be surveyed up to 1 mile upstream of the confluence with the Middle Yuba River unless constrained by access or lack of habitat. Because the site is situated on private property, the surveys will be contingent on YCWA obtaining permission for access from the landowner(s). YCWA will document and provide a detailed description and photographs of any access issues or lack of habitat in the technical memorandum for the study. The surveys will follow methods used in Study 3-4.
3. YCWA will implement the new study as directed by FERC.

If the new study proposal is approved by FERC, YCWA anticipates the new study will be completed by October 30, 2013.

3.2.2 Special-Status Turtles – Focused 2013 Western Pond Turtle Surveys (New Study 3.14)

3.2.2.1 Background

The FERC-approved Study 3.6, *Special-Status Turtles – Western Pond Turtle*, included visual surveys for basking western pond turtle (WPT) at Our House Diversion Dam impoundment, as well as other locations. Surveys were performed at the impoundment from four viewing

locations on three dates in 2012. No WPT were observed, and no incidental observations of WPT were recorded during any of YCWA's Relicensing studies.

Study 3.6 specified that YCWA would meet with interested and available Relicensing Participants to review the results of the study and discuss the need for and scope of additional limited scope WPT studies. If YCWA and Relicensing Participants collaboratively agreed focused studies were needed in a second year, YCWA and Relicensing Participants would collaboratively develop a new study proposal and file it with FERC as part of its Initial Study Report.

On September 16, November 8, and November 14, 2012, YCWA met with interested and available Relicensing Participants to review the results of Study 3.6 and discuss the need for and nature of additional focused studies regarding WPT. Based on these discussions, YCWA and the Forest Service, USFWS, CDFG and SWRCB collaboratively agreed that YCWA would include in its Initial Study Report the new study proposal described below. As part of this agreement, the Forest Service, USFWS, CDFG and SWRCB agreed that they would not make additional study requests to FERC related to WPT in response to the Initial Study Report and Initial Study Report meeting summary.

3.2.2.2 Proposed New Focused WPT Study

YCWA proposes the following new study:

- YCWA will conduct surveys for WPT using a snorkeling search method in the upstream end of Our House Diversion Dam impoundment and in pools upstream of the impoundment on the Middle Yuba River. Surveys will employ one or two snorkelers examining potential underwater hiding areas. It is anticipated that surveys will encompass at least the first two suitable pools upstream of the impoundment, or as many as can be surveyed within 1 day of field work. Snorkeling surveys will be performed twice under safe conditions, with one survey during the period of May or June 2013 when YCWA is operating the diversion at the Lohman Ridge Diversion Tunnel Intake. The second survey will be performed under lower flow conditions in July or August 2013. Any WPT found during the surveys will be documented as described in Study 3-6.
- YCWA will implement the new study as directed by FERC.

If the new study proposal is approved by FERC, YCWA anticipates the new study will be completed by September 30, 2013.

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SECTION 4

INITIAL STUDY REPORT MEETING

FERC's ILP regulations require that within 15 days following the filing of the Initial Study Report, an applicant for a new license hold a meeting with interested parties and FERC staff to discuss the study results and the applicant's and/or other parties' proposals, if any, to modify FERC-approved studies or proposed new studies. Further, within 15 days following the meeting, the applicant must file with FERC a meeting summary. The summary must identify any changes the applicant proposes to the proposed study modifications and new studies the applicant proposed in its Initial Study Report.

During a September 12, 2012, conference call, Relicensing Participants agreed YCWA will hold the Initial Study Report meeting as follows:

- DATE: December 12, 2012 (Wednesday)
- TIME: 9:30 AM to Noon
- LOCATION: YCWA, 1220 F Street, Marysville, CA

A meeting agenda is provided below.

- Introductions
- Purpose of Meeting
- Review of Relicensing Schedule
- Brief Overview of Study Progress
- Discussion by Resource Area of Study Status, YCWA's Proposed Study Modifications/New Studies by Resource Area, and Relicensing Participant's Proposals Regarding Study Modifications/New Studies:
 - Geology and Soils
 - Water Resources
 - Aquatic Resources
 - Wildlife Resources
 - Botanical Resources
 - Riparian, Wetland and Littoral Habitats
 - Threatened, Endangered and Fully Protected Species
 - Recreational Resources
 - Land Use
 - Aesthetic Resources

- Cultural Resources
- Tribal Resources
- YCWA's Plan to Prepare and File an Initial Study Report Meeting Summary
- Adjourn

YCWA anticipates filing with FERC the Initial Study Report meeting summary by December 27, 2012. The letter will provide a summary of the meeting and any changes proposed by YCWA to the study modification and new studies proposed by YCWA in its Initial Study Report.

SECTION 5

**ELECTION TO FILE A DRAFT LICENSE
APPLICATION**

As provided in 18 CFR § 5.16(c), at this time YCWA advises FERC that YCWA intends to file for the Yuba River Development Project a draft license application, which will include the contents of a license application, rather than a Preliminary Licensing Proposal. The draft license application will be filed with FERC by December 3, 2013.

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SECTION 6

REFERENCES CITED

Federal Energy Regulatory Commission (FERC). 2011. Notice of Intent to File License Application, Filing of Pre-Application Document (PAD), Commencement of Pre-Filing Process, and Scoping; Request for Comments on the PAD and Scoping Document, and Identification of Issues and Associated Study Requests.

_____. 2011. Scoping Document 1 for the Yuba River Hydroelectric Project, P-2246.

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Yuba County Water Agency (YCWA). 2010. Notice of Intent to File an Application for a New License for the Yuba River Development Project.

_____. 2010. Pre-Application Document for Relicensing of the Yuba River Development Project.

_____. 2011. Proposed Study Plan for Relicensing of the Yuba River Development Project.

_____. 2011. Revised Study Plan for Relicensing of the Yuba River Development Project.

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