

Anticipated Fieldwork Schedule¹ - May 2012 -

Resource Area	Study Name	Anticipated Field Schedule for Month	Running List of Variances to FERC-Approved Studies	Technical Memorandum Due Date
Geology & Soils	Channel Morphology Upstream of Englebright Reservoir (1.1)	5/3-5: Tracer rock placement in Oregon Creek and Middle Yuba River. 5/11-12: Channel morphology measurements in Middle Yuba below Our House. 5/18-19: Channel morphology measurements in North Yuba above Middle/North junction.	--	September 30, 2012
	Channel Morphology Downstream of Englebright Dam (1.2)	TBD: If needed, complete LWM surveys. YCWA, in conformance with FERC's September 30, 2011 Study Determination, filed with FERC a modified study plan, including evidence of agency consultation, on March 8, 2012. YCWA will initiate the study when approved by FERC.	--	September 30, 2012 (date subject to revision based on modification of study plan)
Water Resources	Hydrologic Alteration (2.1)	No fieldwork scheduled this month.	--	September 30, 2012
	Water Balance/Operations Model (2.2)	No fieldwork scheduled this month.	--	September 30, 2012
	Water Quality (2.3)	No fieldwork scheduled this month.	--	September 30, 2013
	Bioaccumulation (2.4)	Fieldwork complete.	Variance # 1 ¹	September 30, 2012
	Water Temperature Monitoring (2.5)	5/1-5/31: Collect water temperature profiles in New Bullards Bar and Englebright reservoirs and check (e.g., monitor and download) continuous water temperature recorders.	--	February 28, 2013
	Water Temperature Model (2.6)	No fieldwork scheduled this month.	--	September 30, 2012
Aquatic Resources	Aquatic Macroinvertebrates Upstream of Englebright Reservoir (3.1)	No fieldwork scheduled this month.	--	September 30, 2012
	Aquatic Macroinvertebrates Downstream of Englebright Dam (3.2)	No fieldwork scheduled this month.	--	September 30, 2012
	Special-Status Aquatic Mollusks (3.3)	No fieldwork scheduled this month.	--	September 30, 2012
	Special-Status Amphibians – Foothill Yellow-Legged Frog Surveys (3.4)	5/2: FYLF surveys in Oregon Creek above and below Log Cabin Dam (in support of Study 3.10).	--	September 30, 2012
	Special-Status Amphibians – Foothill Yellow-Legged Frog Habitat Modeling (3.5)	No fieldwork scheduled this month.	Variance # 1 ²	September 30, 2013

¹ This fieldwork schedule is YCWA's best estimate at this time and is subject to modification by YCWA or HDR/DTA without prior notice. Any Relicensing Participant interested in observing fieldwork listed above should contact Jim Lynch at least one week in advance of the scheduled fieldwork at (916) 564-4214 Extension 581 or james.lynch@hdrinc.com, who will coordinate with the participant to the extent possible.

Anticipated Fieldwork Schedule (continued)

Resource Area	Study Name	Anticipated Field Schedule for Month	Running List of Variances to FERC-Approved Studies	Technical Memorandum Due Date
Aquatic Resources (continued)	Special-Status Turtles – Western Pond Turtle (3.6)	5/3: Basking platform deployment at Log Cabin Dam and Our House Dam impoundments. TBD: First basking surveys on Log Cabin Dam and Our House Dam impoundments. TBD: Basking platform deployment on New Bullards Bar Reservoir. 5/29-6/1: Basking surveys on New Bullards Bar Reservoir, Log Cabin Dam, and Our House Dam impoundments.	--	September 30, 2012
	Reservoir Fish Populations (3.7)	5/7-5/11: Fish surveys of tributaries.	--	September 30, 2012
	Stream Fish Populations Upstream of Englebright Reservoir (3.8)	5/1-5/2, 5/15-5/16, 5/30-5/31: Fry emergence sampling.	--	September 30, 2013
	Non-ESA-Listed Fish Populations Downstream of Englebright Dam (3.9)	No fieldwork scheduled this month.	--	September 30, 2012
	Instream Flow Upstream of Englebright Reservoir (3.10)	5/1 – 4: Mid Calibration Flow data collection on Middle Yuba below Our House Diversion Dam. 5/8-10: High Calibration Flow data collection on Oregon Creek below Log Cabin Dam. 5/15-17: Mid Calibration Flow data collection on Oregon Creek below Log Cabin Dam. 5/22-24: Low Calibration Flow data collection on Oregon Creek below Log Cabin Dam.	Variance # 1 ³ Variance # 2 ⁴	February 2013
	Fish Entrainment (3.11)	Study on hold. YCWA, in conformance with FERC’s September 30, 2011 Study Determination, filed with FERC a modified study plan, including evidence of agency consultation, on December 29, 2011. YCWA will initiate the study when approved by FERC.	--	September 30, 2012 (date subject to revision based on when FERC approves the modified study plan)
	New Colgate Powerhouse Ramping (3.12)	Study on hold. YCWA, in conformance with FERC’s September 30, 2011 Study Determination, filed with FERC a modified study plan, including evidence of agency consultation, on March 8, 2012. YCWA will initiate the study when approved by FERC.	--	To be Determined
Wildlife Resources	Special-Status Wildlife – California Wildlife Habitat Relationships (4.1)	No fieldwork scheduled this month.	--	September 30, 2012
	Special-Status Wildlife – Bats (4.2)	4/30-5/1: Install Long-term acoustic monitoring (LTAM) equipment at Comptonville tunnel outlet and download remaining units.	Variance # 1 ⁵	October 30, 2012
Botanical Resources	Special-Status Plants (5.1)	5/1–5/11 & 5/22-5/31: Fieldwork anticipated to continue through May.	Variance # 1 ⁶	September 30, 2012

Anticipated Fieldwork Schedule (continued)

Resource Area	Study Name	Anticipated Field Schedule for Month	Running List of Variances to FERC-Approved Studies	Technical Memorandum Due Date
Wetlands, Riparian & Littoral Habitats	Riparian Habitat Upstream of Englebright Reservoir (6.1)	<u>5/22-5/31</u> : Riparian habitat and LWM surveys. YCWA, in conformance with FERC's September 30, 2011 Study Determination, filed with FERC a modified study plan, including evidence of agency consultation, on February 14, 2012. YCWA will initiate the study when approved by FERC.	--	September 30, 2012 (date subject to revision based on when FERC approves the modified study plan)
	Riparian Habitat Downstream of Englebright Dam (6.2)	<u>5/13-5/18</u> : Cottonwood inventory. YCWA, in conformance with FERC's September 30, 2011 Study Determination, filed with FERC a modified study plan, including evidence of agency consultation, on March 8, 2012. YCWA will initiate the study when approved by FERC.	--	February 2013 (date subject to revision based on modification of study plan)
	Wetlands (6.3)	No fieldwork scheduled in May.	--	September 30, 2012
Threatened, Endangered & Fully Protected Species	ESA-Listed Plants (7.1)	<u>5/1-5/11 & 5/22-5/31</u> : Botanical surveys.	Variance # 1 ⁶	September 30, 2012
	Narrows 2 Powerhouse Intake (7.2)	No fieldwork scheduled this month.	--	September 30, 2013
	ESA-Listed Amphibians – California Red-Legged Frog (7.3)	No fieldwork scheduled this month.	--	March 31, 2013 ⁷
	ESA-Listed Wildlife – Valley Elderberry Longhorn Beetle (7.4)	<u>5/1-5/11 & 5/22-5/31</u> : Botanical surveys.	Variance # 1 ⁶	September 30, 2012
	CESA-Listed Plants (7.5)	<u>5/1-5/11 & 5/22-5/31</u> : Botanical surveys.	Variance # 1 ⁶	September 30, 2012
	CESA-Listed and Fully Protected Wildlife – California Wildlife Habitat Relationships (7.6)	No fieldwork scheduled this month.	--	September 30, 2012
	CESA-Listed and Fully Protected Wildlife – Bald Eagle (7.7)	No fieldwork scheduled this month.	--	September 30, 2012
	ESA/CESA-Listed Salmonids Downstream of Englebright Dam (7.8)	No fieldwork scheduled this month.	--	September 30, 2012
	North American Green Sturgeon Downstream of Englebright Dam (7.9)	No fieldwork scheduled this month.	--	September 30, 2012
	Instream Flow Downstream of Englebright Dam (7.10)	No fieldwork scheduled this month.	--	September 30, 2012
	Fish Behavior and Hydraulics Near Narrows 2 Powerhouse (7.11)	TBD: Possible snorkel survey - day of survey to be determined. On April 17, 2012, YCWA provided to USFWS, NMFS, SWRCB and CDFG a draft Study plan for 30-day review. YCWA will file the modified study plan, including evidence of consultation, with FERC. YCWA will initiate the study when approved by FERC.	--	To be Determined

Anticipated Fieldwork Schedule (continued)

Resource Area	Study Name	Anticipated Field Schedule for Month	Running List of Variances to FERC-Approved Studies	Technical Memorandum Due Date
Threatened, Endangered & Fully Protected Species (continued)	Evaluation of Project Effects on Daguerre Point Dam and Hallwood-Cordua Fish Facilities (7.12)	Study on hold. YCWA, in conformance with FERC's 9/30/11 Study Determination and 12/8/11 Study Modification, modified the study plan and on 1/19/12 distributed it to Forest Service, USFWS, NMFS, SWRCB and CDFG for 30-day review (i.e., written comments due by COB on 2/20). YCWA will file the modified study plan, including evidence of consultation, with FERC by March 8, 2012. YCWA will initiate the study when approved by FERC.	--	To be Determined
Recreation Resources	Recreation Use and Visitor Surveys (8.1)	5/5, 5/7, 5/13, 5/26 & 5/31: Recreational use and visitor surveys at New Bullards Bar Reservoir and diversion dams. 5/20-5/25: Recreation facility inventory, condition and accessibility evaluations. 5/16: Camptonville resident focus group.	--	March 31, 2013
	Recreational Flow (8.2)	TBD: Oregon Creek whitewater feasibility assessment site visit.	--	September 30, 2013
Land Use	Primary Project Roads and Trails (9.1)	No fieldwork scheduled this month.	--	September 30, 2012
Aesthetic Resources	Visual Quality (10.1)	No fieldwork scheduled this month.	--	September 30, 2012
Cultural Resources	Historic Properties Study (12.1)	No fieldwork scheduled this month.	--	September 30, 2012
Tribal Interests	Native American Traditional Cultural Properties (12.2)	No fieldwork scheduled this month.	--	September 30, 2012

¹ The FERC-approved *Bioaccumulation Study* (Study 2.4) required, among other things, that YCWA collect 9 brown trout and 9 rainbow trout from each of Our House and Log Cabin diversion dam impoundments and analyze each for methylmercury bioaccumulation. CDFG's Moss Landing lab visited the impoundments during the week of September 19, 2011 and collected the target number of rainbow trout at each impoundment, but did not find any brown trout, and suggested an additional effort would not be worthwhile. YCWA consulted with SWRCB on September 26, 2011 and it was agreed an additional effort was not needed, but if YCWA collected brown trout in the impoundments during the relicensing Fish Populations Upstream of Englebright Reservoir Study (Study 3.8), up to 9 brown trout from each reservoir would be preserved and analyzed for methylmercury bioaccumulation and the results included in the Bioaccumulation Technical Memorandum.

² The FERC-approved *Special Status Amphibians – Foothill Yellow-Legged Frog Habitat Modeling Study* (Study 3.5) included, among other things, that YCWA develop the hydraulic model using a High-High calibration flow of 600 cfs in the Middle Yuba and 150 cfs in Oregon Creek. In a Relicensing Participant meeting on April 12, 2012, the Forest Service, USFWS, CDFG, SWRCB, and YCWA agreed to remove these High-High target calibration flows from Study 3.5.

³ The FERC-approved *Instream Flow Upstream of Englebright Reservoir Study* (Study 3.5) included, among other things, that YCWA develop the hydraulic model using a High-High calibration flow of 600 cfs in the Middle Yuba and 150 cfs in Oregon Creek. In a Relicensing Participant meeting on April 12, 2012, the Forest Service, USFWS, CDFG, SWRCB, and YCWA agreed to remove the High-High target calibration flows from Study 3.10.

⁴ The FERC-approved *Instream Flow Upstream of Englebright Reservoir Study* (Study 3.5) included a completion schedule of September 2012. In a Relicensing Participant meeting on April 12, 2012, the Forest Service, USFWS, CDFG and SWRCB requested that YCWA schedule the High target calibration flows for Study 3.10 from late spring 2012 to fall 2012. Postponement of data collection as requested will necessitate a Study variance for Study completion from the end of September 2012 to the end of February 2013.

⁵ The FERC-approved *Special-Status Wildlife – Bats Study* (Study 4.2) requires that all Long Term Acoustic Monitoring (LTAM) Sites be monitored from early April through the end of October. Upon review of the New Bullards Bar Dam LTAM data recorded in April 2012, it appeared that the SD card used to store the files was corrupt, which resulted in the loss of some data. New SD cards were ordered for all LTAM equipment and are expected to arrive between May 8-10, 2012. On May 11, 2012, YCWA expects to replace all SD cards that are currently in use to avoid similar problems.

⁶ The FERC-approved *Special-Status Plants Study* (Study 5.1), *ESA-Listed Plants Study* (Study 7.1), *ESA-Listed Wildlife – Valley Elderberry Longhorn Beetle Study* (Study 7.4), and *CESA-Listed Plants Study* (Study 7.5) required, among other things, that YCWA perform botanical surveys within the FERC Project Boundary. After consultation with the Forest Service, it was agreed YCWA

would not enter within 330 feet of a known bald eagle nesting site on New Bullard Bar Reservoir, in conformance with the National Bald Eagle Management Plan (2007). It was agreed this portion of the FERC Project Boundary would not be surveyed for plants.

⁷ The FERC-approved *ESA-Listed Amphibians – California Red-Legged Frog Study* (Study 7.3) includes a Site Assessment Report scheduled for completion in June 2012. A supplemental report will be completed in October 2014 if Step 2 of the Study is warranted.

**Anticipated Target Flows To Perform Studies If Different Than Normal Flows
 - May 2012 –**

Resource Area	Study Name	Anticipated Flow Schedule If Different Than Normal Flows
Aquatic Resources	Instream Flow Upstream of Englebright Reservoir (3.10)	<u>5/1-4</u> : Middle Calibration Target Flow data collection Middle Yuba River Below Our House Diversion Dam – 150 cfs <u>5/8-10</u> : High Calibration Target Flow data collection on Oregon Creek below Log Cabin Dam – 100 cfs <u>5/15-17</u> : Mid Calibration Target Flow data collection on Oregon Creek below Log Cabin Dam – 50 cfs <u>5/22-24</u> : Low Calibration Target Flow data collection on Oregon Creek below Log Cabin Dam - 20 cfs

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