SECTION 2.0

BACKGROUND

2.1 Consultation History for the Proposed Action

Beginning in mid-2009, over 12 months prior to filing its Notice of Intent (NOI) and Pre-Application Document (PAD), YCWA began to meet with Relicensing Participants[1] to familiarize them with the Project and its operations, discuss process, identify issues and most importantly, to collaboratively develop study proposals, including those for species listed as threatened or endangered under the ESA.

On January 4, 2011, FERC initiated informal consultation with NMFS as required under Section 7 of the ESA and the interagency cooperation regulations in 50 C.F.R. § 402, and designated YCWA as FERC's non-federal representative for purposes of informal consultation.

YCWA has held over 200 meetings with Relicensing Participants to discuss process and study methods and results. NMFS was specifically notified of and invited to each Relicensing Participants' meeting and NMFS has participated in some of the meetings during which ESA fish-related items were discussed. Some of the meetings in which NMFS staff participated are listed below.[2]

1. July 15, 2009. Larry Thompson (NMFS) was present for YCWA's initial meeting between agencies and non-governmental organizations (NGOs) to describe the Project, relicensing plan, process and items suggested by Foothill Water Network (FWN).
2. August 31, 2009. Larry Thompson (NMFS) was present for the communication guidelines meeting held by YCWA where agencies and NGOs agreed to meeting to discuss relicensing communication guidelines.
3. October 1, 2009. YCWA offered a Project Tour to familiarize agencies, tribes and NGOs with the Project on the ground. Larry Thompson (NMFS) was present for the tour.
4. May 24, 2010. Rick Wantuck (NMFS) attended the third study proposal development meeting regarding anadromous fishes, ESA/CESA Species and non-ESA-listed fish below Englebright Dam.
5. May 4, 2011. Larry Thompson and John Wooster (NMFS) participated by phone in the Relicensing Participants meeting regarding the new studies proposed by USFWS and FWN.
6. May 11, 2011. Larry Thompson and John Wooster (NMFS) attended the Relicensing Participants Meeting regarding FERC required proposed study plan meeting.

[1] For the purposes of this Applicant-Prepared Draft BA, "Relicensing Participants" means federal and state agencies, local governments, Indian tribes, non-governmental organizations, businesses and unaffiliated members of the public that have participated in the Yuba River Development Project relicensing.

[2] YCWA has prepared this list using the sign-in sheets form each meeting. Therefore, the list does not include any NMFS staff that participated in one or more meetings but did not sign the sign-in sheets.

7. May 19, 2011. Section 7 Consultation Meeting. The following NMFS representatives participated in this meeting: Maria Rea, Rod McInnis, Rick Wantuck, Larry Thompson, Howard Brown, Steve Edmondson, and Gary Sprague.
8. June 3, 2011. John Wooster (NMFS) was present for the Relicensing Participants Meeting to continue the May 11, 2011 discussion of channel morphology study proposals.
9. June 17, 2011. Larry Thompson, Rick Wantuck, and John Wooster (NMFS) participated in the Relicensing Participants Meeting to discuss NMFS' Study Requests and FWN's Anadromous Fish Passage Study Request.
10. July 21, 2011. NMFS was not present for the NMFS/FERC/YCWA Section 7 Informal Consultation Meeting.
11. July 27, 2011. Larry Thompson and John Wooster (NMFS) participated in the Relicensing Participants meeting regarding the general Lower Yuba River 2-D Hydraulic Model.
12. August 5, 2011. NMFS/FERC/YCWA Section 7 Informal Consultation Meeting.
13. August 12, 2011. NMFS/FERC/YCWA Section 7 Informal Consultation Meeting.
14. October 20, 2011. NMFS filed with FERC a dispute regarding the Commission's study plan determination. NMFS identified as "*in dispute*" seven studies that were requested by NMFS and not adopted by the Commission in its determination. Each of the studies included "*elements*," which were in effect separate studies. In total, the seven studies include 54 elements. The NMFS-requested studies in dispute are: 1) Effects of the Project and Related Activities of Fish Passage for Anadromous Fish (12 elements); 2) Effects of the Project and Related Activities on Hydrology for Anadromous Fish (8 elements); 3) Effects of the Project and Related Activities on Water Temperature for Anadromous Fish, Migration Holding, Spawning, and Rearing Needs (3 elements); 4) Effects of the Project and Related Activities on Coarse Substrate for Anadromous Fish: Sediment Supply, Transport, and Storage (6 elements); 5) Effects of the Project and Related Activities on Large Wood and Riparian Habitat for Anadromous Fish (4 elements); 6) Effects of the Project and Related Activities on the Loss of Marine-Derived Nutrients in the Yuba River (7 elements) and 7) Anadromous Fish Ecosystems Effects: Synthesis of the Direct, Indirect, and Cumulative Effects of the Project and Related Facilities on Anadromous Fish (14 elements).
15. November 23, 2011. Licensee filed with FERC Study 6.1, *Riparian Habitat Upstream of Englebright Reservoir Study Large Woody Debris Survey Sites*, in response to NMFS' October 20, 2011 notice to initiate a formal study dispute resolution process regarding FERC's Determination.
16. December 13, 2011. YCWA and NMFS participated in a conference call with FERC in an effort to resolve some of the NMFS' disputes.
17. March 21, 2012. Licensee held a follow-up conference call with FERC, NMFS, USFWS, Cal Fish and Wildlife and the SWRCB and believed that general agreement on the

approach to Study 7.11, *Fish Behavior and Hydraulics Near Narrows 2 Powerhouse*, was reached.

18. April 17, 2012. Licensee provided the draft modified Study 7.11, *Fish Behavior and Hydraulics Near Narrows 2 Powerhouse,* and provided to USACE, USFWS, NMFS, Cal Fish and Wildlife, and the SWRCB for 30-day review and comment. Cal Fish and Wildlife provided written comments in an email dated May 15, 2012. SWRCB provided comments on May 17, 2012. NMFS did not provide written comments to the Licensee, but filed a letter with FERC dated May 25, 2012 which included comments on the Study. USACE and USFWS did not provide written comments.

19. June 1, 2012. Licensee filed with FERC the Modified Study 7.11, *Fish Behavior and Hydraulics Near Narrows 2 Powerhouse,* and included the *Lower Yuba River Accord Planning Team Acoustic Telemetry Annual Report 2009,* License's request for comments on the draft modified Study; written comments received from Cal Fish and Wildlife, SWRCB, and NMFS, and YCWA's reply to the written comments.

20. June 14, 2012. Tom Holley, Hydrologist and Larry Thompson (NMFS) were present for the Relicensing Participants Meeting to discuss the Study 2.2, *Water Balance/Operations Model - Consultation Meetings*.

21. December 12, 2013. Licensee held an Initial Study Report meeting for the Yuba River Development Project at their office in Marysville, California.

22. January 8, 2013. John Wooster (NMFS) was present for the Relicensing Participants Meeting to discuss consultation for Study 6.1, *Riparian Habitat Upstream of Englebright Reservoir,* and Study 6.2, *Riparian Habitat Downstream of Englebright Dam.*

23. January 28, 2013. Close of the comment period for the Licensee's Initial Study Report and meeting summary. Six letters were filed with FERC by the deadline. Letters were received from: 1) Forest Service; 2) National Park Service; 3) USFWS; 4) NMFS; 5) Cal Fish and Wildlife; and 6) FWN.

24. January 30, 2013. John Wooster (NMFS) was present for the Relicensing Participants meeting to discuss consultation for Study 1.1, *Channel Morphology Upstream of Englebright Reservoir,* and Study 2.3, *Water Quality*.

25. April 17, 2013. Licensee provided the Draft Study Plan 7.13, *Fish Stranding Associated with the Shutdown of Narrows 2 Powerhouse Partial Bypass,* to the NMFS, USFWS and Cal Fish and Wildlife. Licensee did not receive written comments from NMFS, USFWS and Cal Fish and Wildlife by May 7, 2013. Licensee confirmed with NMFS, USFWS and Cal Fish and Wildlife that each agency did not have any comments on the draft study plan.

26. July 3, 2013. Licensee provided Draft Study 7.11a, *Radio Telemetry Study of Spring-and Fall-run Chinook Salmon Migratory Behavior Downstream of Narrows 2 Powerhouse*, to NMFS, USFWS, and Cal Fish and Wildlife for review and written comment. Licensee received written comments from NMFS and USFWS.

27. August 14, 2013. Licensee filed with FERC the Transmittal of Plan for Study 7.11a, *Radio Telemetry Study of Spring- and Fall-run Chinook Salmon Migratory Behavior*

Downstream of Narrows 2 Powerhouse, and included written comments from NMFS and USFWS.

28. September 20, 2013. Licensee filed with FERC additional work to be performed for Study 3.8, *Stream Fish Populations Upstream of Englebright Reservoir*, and Study 3.11, *Entrainment*. The following Relicensing Participants agreed with additional work at the September 16, 2013 meeting: Forest Service, USFWS, SWRCB, Cal Fish and Wildlife, FWN and the South Yuba River Citizens League (SYRCL).
29. September 26, 2013. Tom Holley, Larry Thompson and John Wooster (NMFS) were present for the YCWA Relicensing Study 7.11a, *Telemetry Technical Review*.
30. January 14, 2014. Larry Thompson (NMFS) was present for a discussion of Study 6.2, Riparian Habitat below Englebright Dam.
31. August 26, 2014. Tom Holley (NMFS) was present for a discussion of model runs for flow below Englebright Dam.

2.1.1 Informal ESA-Consultation Meetings

In addition to the Relicensing Participants meetings, YCWA, as FERC's non-federal representative, held ESA-consultation meetings with NMFS and FERC.

1. June 1, 2011. Participants included Alan Mitchnick and Ken Hogan (FERC), Gary Sprague (NMFS), Curt Aikens, Geoff Rabone, Alan Lilly, Tom Johnson and Jim Lynch (YCWA). The meeting participants discussed defining terms that are used in both ESA-related documents and National Environmental Policy Act (NEPA)-related documents, potential information gaps, new and altered studies requested by NMFS, and schedule and topics for future meetings.

2. June 6, 2011. Meeting participants included Alan Mitchnick, Ken Hogan (FERC), Gary Sprague (NMFS), Geoff Rabone, Alan Lilly and Jim Lynch (YCWA). Meeting participants discussed revisions to the June 1, 2011 meeting summary, action items from that June 1, 2011 meeting, ESA and FERC's NEPA process, potential information gaps, the schedule for meetings in July and August 2011.

3. June 17, 2011. Meeting participants included Alan Mitchnick, Ken Hogan (FERC), Gary Sprague, Richard Wantuck, Larry Thompson, John Wooster, Tom Holley (NMFS), Curt Aikens, Geoff Rabone, Alan Lilly, Tom Johnson, Paul Bratovich and Jim Lynch (YCWA). The meeting participants discussed potential information gaps for ESA consultation, and fish passage.

4. July 12, 2011. Meeting participants included Alan Mitchnick, Ken Hogan (FERC), Gary Sprague, Richard Wantuck (NMFS), Curt Aikens, Geoff Rabone, Alan Lilly, and Jim Lynch (YCWA). The meeting participants discussed potential information gaps for ESA consultation, new and altered studies requested by NMFS, and schedule and topics for future meetings.

5. April 20, 2012. Meeting participants included Alan Mitchnick, Ken Hogan (FERC), Gary Sprague, Richard Wantuck (NMFS), Geoff Rabone, Alan Lilly, Paul Bratovich, Bill Snider and Jim Lynch (YCWA). The meeting participants discussed the organization and schedule for preparation of the Applicant-Prepared Draft BA and Applicant-Prepared Draft EFH Assessment, and topics for future meetings.

YCWA has attempted to schedule additional consultation meetings with NMFS, but NMFS staff has been unavailable due to their heavy workload.

2.2 Key Consultation Considerations

2.2.1 NMFS 2005 Biological Opinion (Yuba River Development Project License Amendment)

In October 2003, FERC requested initiation of early consultation on the proposed amendment to the license for the Project to authorize YCWA to construct and operate a Full Bypass at its Narrows 2 Powerhouse, and to revise the flow reduction and fluctuation criteria in the FERC license. The construction of the Full Bypass and the revised flow reduction and fluctuation criteria were designed to minimize the possibility that emergencies and other events requiring that the Narrows 2 Powerhouse be taken offline would cause significant flow fluctuations in the Yuba River, and thereby minimize the possibility that such fluctuations would strand juvenile spring-run Chinook salmon and steelhead, or dewater redds of those species (NMFS 2005a).

Before the Full Bypass was completed, flow reductions resulting from emergency and accidental shutdowns of the Narrows 2 Powerhouse were a major concern due to potentially adverse flow and water temperature effects on listed spring-run Chinook salmon and steelhead. The ability to manage releases from Narrows 2 Powerhouse during maintenance and emergency operations was limited by the design of Englebright Dam and the Partial Bypass capability of the Narrows 2 Powerhouse, which was previously only able to bypass 650 cubic feet per second (cfs) (or approximately 20 percent) of the 3,400 cfs capacity of the powerhouse. In the past, uncontrolled flow reductions due to unexpected outages at Narrows 2 Powerhouse adversely affected spawning redds and fry and juvenile rearing areas (FERC 2001). However, with the completion of the Full Bypass in 2006, adverse effects to listed species due to emergencies, maintenance, and accidental shut-downs of the powerhouse have been virtually eliminated.

On January 26, 2005, NMFS issued a preliminary BO to FERC analyzing the potential effects of YCWA's license amendment on spring-run Chinook salmon and steelhead. Subsequent to the completion of the preliminary 2005 BO, the Action Area for the Project was proposed for designation as critical habitat for these two species (NMFS 2005a). In addition, the southern DPS of North American green sturgeon was proposed for listing as threatened throughout its range within the Sacramento/San Joaquin river systems, which included the lower Yuba River (NMFS 2005a).

NMFS' (2005b) Final BO, issued on November 4, 2005, concluded that the effects of the proposed license amendment is not likely to jeopardize the continued existence of the Central

Valley spring-run Chinook salmon ESU or the Central Valley steelhead DPS, or destroy or adversely modify designated critical habitat for these species. NMFS (2005b) also concluded that the effects of the Project are not likely to jeopardize the continued existence of the southern DPS of North American green sturgeon.

2.2.2 NMFS 2014 Biological Opinion (USACE's Operation and Maintenance of Daguerre Point Dam)

USACE's Sacramento District reinitiated formal consultation with NMFS on USACE's ongoing O&M of Daguerre Point Dam and associated facilities in February 2013. During April 2013, NMFS responded to the USACE's request with a letter stating that the re-initiated consultation would begin after NMFS received the final BA from the USACE that contained a description of the proposed Project and addressed all of the information necessary to evaluate the effects of the action on listed species and critical habitat.

The USACE completed a BA for its activities at Daguerre Point Dam, and delivered it to NMFS on October 22, 2013. The BA (referred to herein as the USACE 2013 BA) was prepared to, among other things, describes the USACE's Proposed Action and analyzes the effects of that action on listed species and designated critical habitat (USACE 2013a).

As discussed in the USACE 2013 BA, USACE's responsibilities, as well as its ability to conduct O&M-related actions at Daguerre Point Dam, are primarily governed by the facility's' authorized purposes. Consequently, USACE's actions that were proposed and evaluated in the USACE 2013 BA, which could potentially affect listed fish species in the lower Yuba River, were somewhat limited.

Several actions affected listed species and their critical habitats in the lower Yuba River prior to the 2013 re-initiation of consultation between the USACE and NMFS, including:

- March 2008. The SWRCB approved the petitions to change the water right permits of YCWA that were necessary to implement the Yuba Accord.

- June 2009. YCWA entered into a Settlement Agreement with Plaintiffs SYRCL and Friends of the River in their lawsuit against NMFS et al., which resulted in improvements to the maintenance and operations of the South Yuba/Brophy diversion channel and facilities.

- June 2009. NMFS issued its BO and Conference Opinion on the Long-term Operations of the Central Valley Project (CVP) and State Water Project (SWP).

- October 2009. NMFS issued the Draft Recovery Plan for the Sacramento River winter-run Chinook salmon and Central Valley Spring-run Chinook Salmon ESUs, and the Central Valley steelhead DPS.

- October 2009. NMFS issued its final rulemaking to designate critical habitat for the threatened Southern DPS of North American green sturgeon.

- December 2010. NMFS released its Federal Recovery Outline for the North American Green Sturgeon Southern DPS.

NMFS issued its Final BO on May 12, 2014 regarding the effects of Daguerre Point Dam on the Central Valley spring-run Chinook salmon ESU, Central Valley steelhead DPS, and the Southern DPS of North American green sturgeon, and their respective designated critical habitats.

The BO concluded that the O&M of Daguerre Point Dam, as proposed by the USACE, would not likely jeopardize the continued existence of spring-run Chinook salmon, steelhead, and green sturgeon, and would not result in the adverse modification of critical habitat for each of these species. The BO included Reasonable and Prudent Measures (RPMs) and discretionary terms and conditions to minimize incidental take associated with the USACE's Proposed Action.

NMFS determined that the following RPMs were necessary and appropriate to minimize take of spring-run Chinook salmon, steelhead and green sturgeon in the lower Yuba River and, therefore, should be implemented by the USACE.

- RPM-1. Measures shall be taken by the USACE to minimize the effects of sediment removal at Daguerre Point Dam.

- RPM-2. Measures shall be taken by the USACE to minimize the effects of debris maintenance and removal at the Daguerre Point Dam fish ladders.

- RPM-3. Measures shall be taken by the USACE to minimize the effects of gravel injections downstream from Englebright Dam.

- RPM-4. Measures shall be taken by the USACE to minimize the effects of the large wood placement downstream of Englebright Dam.

- RPM-5. Prepare and provide NMFS with plan(s) and report(s) describing how listed species in the action area would be protected and/or monitored and to document the effects of the action on listed species in the action area.

To minimize or avoid adverse effects of the USACE's Proposed Action on listed species or critical habitat, NMFS also provided the following conservation recommendations that should be implemented by the USACE.

- (1) The following recommendations should be implemented by the USACE with respect to dam flashboard management at Daguerre Point Dam.

  (a) The USACE should submit a Flashboard Management Plan to NMFS within 60 days of issuance of the BO.

  (b) Any proposed variance to the implementation of the Flashboard Management Plan should be provided to NMFS.

(c) The USACE should notify NMFS within 24 to 48 hours of any debris accumulation on the flashboards on the face of Daguerre Point Dam.

(d) Measures to remove flashboard blockage should be in compliance with the USACE's Flashboard Management Plan.

(e) The USACE should notify NMFS within 24 hours of any debris accumulation at the Daguerre Point Dam flashboards.

(f) Measures to remove flashboard blockage should be in compliance with the Flashboard Management Plan.

(g) The USACE, should within five years, develop the flow-based trigger for installation of the Daguerre Point Dam flashboards.

(h) The USACE should provide notification after the first week of flashboard installation confirming that the flashboard installation meets the objectives of the Flashboard Management Plan. If the installation is not found to meet objectives, the USACE should coordinate with NMFS to develop alternative actions.

(i) The USACE should, by January 31 of each year, report to NMFS an update on previous year's flashboard management actions.

- (2) The USACE should continue their efforts to complete the Yuba River reconnaissance study by September 30, 2015, in accordance with applicable Engineer Regulations and policies.

- (3) The USACE should coordinate with NMFS and other Yuba watershed stakeholders[3] regarding the reconnaissance study and any subsequent feasibility study if approved.

- (4) The USACE should consider predator removal at Daguerre Point Dam.

2.2.3 NMFS 2014 Letter of Concurrence (USACE's Operation and Maintenance of Englebright Dam)

During February 2013, the USACE also notified NMFS of its intent to reinitiate consultation to address the impacts of the USACE's discretionary activities associated with operation and maintenance of Englebright Dam and Reservoir on spring-run Chinook salmon, steelhead, green sturgeon and their associated critical habitats.

Previous ESA consultations between the USACE and NMFS regarding projects on the Yuba River encompassed activities at both Englebright and Daguerre Point dams. However, for the

[3] Yuba River watershed stakeholders include, but are not limited to; the Federal Energy Regulatory Commission, National Marine Fisheries Service, U.S. Bureau of Reclamation, U.S. Forest Service, U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, California Department of Water Resources, American Rivers, Friends of the River, Nevada Irrigation District, Pacific Gas & Electric, South Yuba River Citizens League, Yuba County Water Agency, South County Diverters, and participants in the Yuba River Management Team and Yuba Salmon Forum.

2013 ESA consultation, the USACE determined that it was appropriate to evaluate the two projects separately in two BAs because "*each dam has a separate authorization and appropriation, and because the actions at Englebright and Daguerre are wholly separate and are not dependent upon each other to operate*." On October 22, 2013, NMFS received a request for a written concurrence that the USACE's ongoing operation and maintenance of Englebright Dam and Reservoir may affect, but is not likely to adversely affect, spring-run Chinook salmon, steelhead, green sturgeon, and the designated critical habitat for those listed species.

In a May 12, 2014 letter to the USACE, NMFS concurred with the USACE's determination that the USACE's discretionary actions regarding Englebright Dam and Reservoir are not likely to adversely affect spring-run Chinook salmon, steelhead, or green sturgeon in the Yuba River, or their designated critical habitats in the Yuba River.

2.2.3.1 Litigation Regarding the NMFS 2014 BO on Daguerre Point Dam and NMFS 2014 Letter of Concurrence on Englebright Dam and Reservoir

On April 20, 2016, the Friends of the River (FOR) filed a complaint for declaratory and injunctive relief in the United States District Court, Eastern District of California (Case 2:16-cv-00818-JAM-EFB). FOR's original complaint against the USACE, NMFS and the Bureau of Land Management (BLM) alleged that the three federal agencies failed to comply with the Administrative Procedure Act and ESA requirements regarding threatened spring-run Chinook salmon, steelhead and green sturgeon in the lower Yuba River. YCWA moved to intervene as a party in the litigation on October 7, 2016, which the court granted on October 13, 2016.

On November 29, 2016, the court approved a stipulation by the parties in which FOR agreed to dismiss various claims and to dismiss BLM as a defendant. The amended FOR complaint still disagrees with the conclusions of the 2013-14 ESA consultations that the USCAE's discretionary actions on the lower Yuba River will not jeopardize the ESA-listed fish species or adversely modify their critical habitats. FOR's amended complaint includes nine claims for relief, which challenge the adequacy of the USACE's 2013 biological assessments, NMFS' 2014 BO for Daguerre Point Dam and NMFS' 2014 concurrence letter regarding Englebright Dam and Reservoir, and asks the court to require the USACE to re-initiate ESA consultation with NMFS. The litigation is pending.

2.3 Other Activities

2.3.1 Lower Yuba River Accord

In 2005, YCWA and 16 other interested parties signed memoranda of understanding that specify the terms of the Yuba Accord, a comprehensive, consensus-based program to protect and enhance aquatic habitat in the Yuba River downstream of Englebright Dam. Following environmental review, YCWA and parties executed the following four agreements in 2007, which together comprise the Yuba Accord: 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 California Department of Water Resources (DWR) purchases water, some of which is provided by the Yuba Accord's minimum streamflows, from YCWA for CALFED's[4] Environmental Water Account and SWP and CVP 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 the Pacific Gas & Electric Company (PG&E).

The Yuba Accord was developed by a multi-agency resource team, including representatives from NMFS, USFWS, Cal Fish and Wildlife, YCWA and a group of NGOs (i.e., Cal Trout, SYRCL and The Bay Institute). The Yuba Accord flow schedules 1 and 2 were developed to essentially optimize habitat conditions for anadromous fish during high flow years for this highly regulated river system. Subsequently, flow schedules 3, 4, 5 and 6 and Conference Year provisions were developed by the resources team for drier conditions.

YCWA has been operating the Project in conformance with the Yuba Accord since 2006. The 2006, 2007, and early 2008 operations were under 1-year pilot programs that were approved by the SWRCB.

The Yuba Accord includes a specific set of flow schedules for the Yuba River. The flow schedule that is in effect at any particular time is determined by the North Yuba Index (NYI), a hydrologic index that was developed as a part of the Yuba Accord. The flow schedules are listed in Table 2.3-1. The relationship between Yuba Accord flow schedules and the NYI is shown in Figure 2.3-1.

Table 2.3-1. Yuba Accord flow schedules.

Schedule	Oct 1-15	Oct 16-30	Nov 1-30	Dec 1-31	Jan 1-31	Feb 1-29	Mar 1-31	Apr 1-15	Apr 16-30	May 1-15	May 16-31	Jun 1-15	Jun 16-30	Jul 1-31	Aug 1-31	Sep 1-30	Total Annual Vol. (ac-ft)
MARYSVILLE GAGE (cfs)																	
1	500	500	500	500	500	500	700	1,000	1,000	2,000	2,000	1,500	1,500	700	600	500	574,200
2	500	500	500	500	500	500	700	700	800	1,000	1,00	800	500	500	500	500	429,066
3	500	500	500	500	500	500	500	700	700	900	900	500	500	500	500	500	398,722
4	400	400	500	500	500	500	500	600	900	900	600	400	400	400	400	400	361, 944
5	400	400	500	500	500	500	500	500	600	600	400	400	400	400	400	400	334,818
6	350	350	350	350	350	350	350	350	500	500	400	300	150	150	150	350	232,155
SMARTSVILLE GAGE (cfs)																	
A	700	700	700	700	700	700	700	700	--	--	--	--	--	--	--	700	--
B	600	600	600	550	550	550	550	600	--	--	--	--	--	--	--	500	--

Notes:
ac-ft = acre-feet
Marysville gage flows represent average volumes for the specified period. Actual flows may vary from the indicated flows according to established criteria.
Marysville gage Schedule 6 flows do not include an additional 30,000 ac-ft that SWRCB Corrected Order WR 2008-0014 requires YCWA to make available through groundwater substitution transfers. These additional flows will be allocated during Schedule 6 years.
Smartsville gage Schedule A is used with Marysville Schedules 1, 2, 3, and 4.
Smartsville gage Schedule B is used with Marysville Schedules 5 and 6.

[4] Interagency committee with management and regulatory responsibility for Bay-Delta Estuary.

FLOW SCHEDULE YEAR TYPES
BASED ON THE NORTH YUBA INDEX
FOR ESTABLISHING REQUIRED FLOWS IN THE LOWER YUBA RIVER FISHERIES AGREEMENT

The water year hydrologic classification for the Yuba River to determine the flow requirements of Yuba County Water Agency's water right permits shall be based on the North Yuba Index. Determinations of a year's flow schedule year type shall be made in February, March, April, and May and for any subsequent updates.

Flow Schedule Year Type	North Yuba Index Thousand Acre-Ft (TAF)
Schedule 1	Equal to or greater than 1400
Schedule 2	Equal to or greater than 1040 and less than 1400
Schedule 3	Equal to or greater than 920 and less than 1040
Schedule 4	Equal to or greater than 820 and less than 920
Schedule 5	Equal to or greater than 693 and less than 820
Schedule 6	Equal to or greater than 500 and less than 693
Conference Year	Less than 500

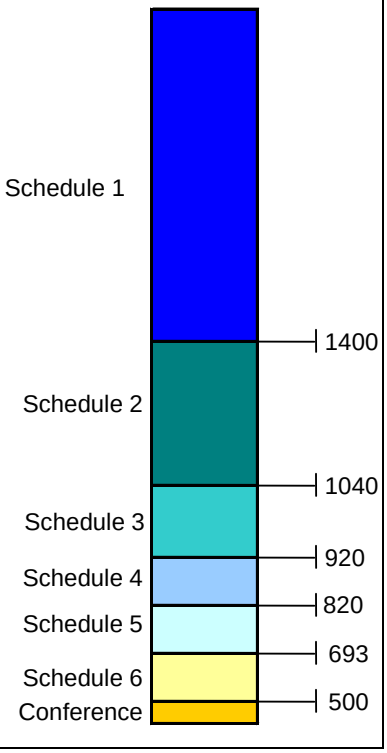

Figure 2.3-1. Yuba Accord North Yuba Index.

During Conference Years, which are years when the NYI is less than 500,000 acre-feet (ac-ft), and which are expected to occur approximately 1 percent of the time, YCWA is required: 1) to maintain minimum instream flows in the Yuba River at the levels specified in Article 33 of YCWA's existing FERC license without the reductions authorized by subsections (c) and (d) of that article; 2) to release any supplemental flows recommended by the Yuba Accord River Management Team (RMT) and approved by the SWRCB's Deputy Director for Water Rights or, if no such recommended flows are effective by April 11 of such a Conference Year, then to release any supplemental flows ordered by the SWRCB, after a hearing under California Code of Regulations, title 23, § 767; and 3) to limit total water supply diversions at Daguerre Point Dam to 250,000 ac-ft.

2.3.2 NMFS Recovery Planning

Section 4(f) of the ESA (16 U.S.C. § 1533(f)) directs NMFS to develop and implement recovery plans for the conservation and survival of ESA-listed species under NMFS' authority. On July 22, 2014, NMFS published in the Federal Register (79 FR 42504) its adoption of a Final

Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-Run Chinook Salmon and Central Valley Spring-Run Chinook Salmon and the Distinct Population Segment of Central Valley Steelhead (NMFS 2014 - Recovery Plan).

The NMFS Recovery Plan states in part:

> "*Recovery plans are not regulatory documents and successful implementation and recovery of listed species will require the support, efforts and resources of many entities, from Federal and state agencies to individual members of the public. Another goal will be to encourage and support effective partnerships with regional stakeholders to meet the objectives and criteria of the Recovery Plan.*"

The recommended recovery actions under the NMFS Recovery Plan on the Yuba River include: 1) conducting feasibility studies, habitat evaluations, pilot testing programs and implementing long-term fish passage programs for a phased approach to salmon reintroduction planning to recolonize historical habitats upstream of Englebright Dam; and 2) improving spawning habitat in the Yuba River below Englebright Dam.

2.3.3 Yuba Salmon Forum

The Yuba Salmon Forum (YSF) is comprised of a stakeholder group including YCWA, NMFS, USACE, Cal Fish and Wildlife, USFWS, SWRCB, Placer County Water Agency (PCWA), PG&E, Forest Service, and NGOs, including American Rivers, American Whitewater, California Sportfishing Protection Alliance, FWN, Sierra Club, SYRCL, and Trout Unlimited. According to the YSF Final Charter (April 2011) the purpose of the YSF is "… *to identify, evaluate, recommend, and seek to achieve implementation of effective near-term and long-term actions to achieve viable salmonid populations in the Yuba River watershed to contribute to recovery goals, while also considering other beneficial uses of water resources and habitat values in neighboring watersheds, as part of Central Valley salmonid recovery actions.*" The YSF process is ongoing.

2.3.4 Yuba Salmon Partnership

Originating in 2014, the Yuba Salmon Partnership (YSP) comprises a group of stakeholders that include YCWA, NMFS, Cal Fish and Wildlife, American Rivers and the California Sportfishing Protection Alliance. The goal of the YSP is to collaboratively develop, fund and implement a cost-effective program that continues to expand the Yuba River watershed's contribution to recovery of anadromous salmonids in the Central Valley. The YSP goal would be accomplished through implementation of: 1) anadromous salmonid habitat actions in the lower Yuba River; and 2) collect and transport actions for anadromous salmonid reintroduction to historical habitat in the North Yuba River upstream of New Bullards Bar Dam.

Preliminary salmonid reintroduction actions currently under consideration include a spring-run Chinook salmon collect and transport project from the lower Yuba River to the North Yuba

River upstream of New Bullards Bar Dam, possibly subsequently accompanied by a similar steelhead collect and transport program once various technical challenges have been addressed. The reintroduction program includes long-term operation and maintenance of the project, potentially including the following project elements, which will be informed by additional technical studies, pilot programs and the feasibility-level design process.

- Adult Chinook salmon collection facility on the lower Yuba River.
- Potential spring-run Chinook salmon spawning sanctuary on the lower Yuba River.
- Adult spring-run Chinook salmon release location(s) on the North Yuba River upstream of New Bullards Bar Reservoir.
- Juvenile Chinook salmon collection facility comprising an on-river collector on the North Yuba River upstream of New Bullards Bar Reservoir.
- Juvenile spring-run Chinook salmon release facility on the lower Yuba River.
- Upstream and downstream transportation.
- Other elements, as deemed appropriate.

The YSP Program continues to build upon about 5-years (2010-2014) of technical investigations conducted by the YSF. On May 7, 2015, the YSP signatories approved a "Term Sheet" that was accompanied by a Concept Plan (YSPI 2015) and, thus, committed to a series of collaborative steps to implement the YSP Program. Since approval of the Term Sheet, the YSP Parties have been developing a Settlement Agreement that identifies roles, responsibilities, and obligations of the parties in implementation of the YSP Program. As an exhibit to the Settlement Agreement, an Action Plan is being developed to describe the process for making technical and implementation decisions for the YSP Program.

During 2016, the YSP also convened a Technical Advisory Group (TAG) to consider potential reintroduction alternatives and begin refining proposed facility locations, designs and costs specifically for the YSP Program. The TAG was charged with undertaking the following two overall tasks:

- Develop recommendations for the general location and configuration of facilities to collect and transport anadromous salmonids to and from the North Yuba River upstream of New Bullards Bar Dam.
- Provide the recommendations in writing, with basic justification for the recommendations, including operational considerations necessary for project description refinement.

Following development of the recommendations for project refinement, including preliminary cost projections, the TAG recently completed a report titled, *Yuba Salmon Partnership Technical Advisory Group Project Description Refinement Technical Memorandum* (Bratovich et al. 2016)

to inform the YSP Parties. The refined project description and associated costs from the TAG's 2016 report serve as the basis for the information related to the North Yuba River reintroduction presented in the Action Plan. Additionally, the Action Plan describes the types of habitat actions, and the process by which the YSP parties will evaluate potential lower Yuba River habitat actions and identify priority projects to implement or support. It is anticipated that the Action Plan and the Settlement Agreement will be completed during 2017.

2.3.5 Yuba Accord Monitoring and Evaluation Program

The Yuba Accord consists of a Fisheries Agreement and several other elements including Conjunctive Use Agreements with seven of YCWA's member units, a Water Purchase Agreement and amendments to the 1966 Power Purchase Contract between YCWA and PG&E. Sections of the Fisheries Agreement most pertinent to the RMT, the River Management Fund (RMF), and the Monitoring and Evaluation Program (M&E Program) are described below. The Fisheries Agreement in its entirety can be found as Exhibit YCWA-9 on the SWRCB website,[5] and is effective until issuance of a new FERC license for the Project.

The Fisheries Agreement enables the RMT to address operational, monitoring, and enhancement actions through fisheries monitoring, studies, and enhancement programs, with the use of RMF expenditures. The Fisheries Agreement provides that to ensure reasonable and prudent disbursement of funds, the RMT will adopt a structure for fund allocation based on specific prioritized goals for monitoring studies, actions, and activities. Money from the RMF may be spent for any of the following actions:

- Monitoring and evaluating the effectiveness of the implementation of the lower Yuba River Accord, including flow schedules, Conference Year flows, and the Water Purchase Agreement.
- Evaluating the condition of fish resources in the lower Yuba River.
- Evaluating the viability of lower Yuba River fall-run Chinook salmon and any subpopulations of the Central Valley steelhead and spring-run Chinook salmon ESUs that may exist in the lower Yuba River.

The RMT developed the M&E Program (RMT 2010a) to guide the efficient expenditure of RMF funds to evaluate the biological provisions of the Fisheries Agreement of the Yuba Accord. In addition, the parties to the Fisheries Agreement intended that the monitoring and data collection activities implemented via the M&E Program will produce a useful database for YCWA's relicensing.

The primary purpose of the M&E Program is to provide the monitoring data necessary to evaluate whether implementation of the Yuba Accord flow schedules are "*protective*" of the fish and aquatic habitat resources of the lower Yuba River. The RMT (2013a) released a draft M&E Program Interim Report (Interim Report) to compile and display the results of multiple years of RMT-led monitoring efforts, and discuss the results of these efforts within a comprehensive

[5] http://www.waterboards.ca.gov/waterrights/water_issues/programs/hearings/lower_yuba_accord/exhibits.shtml

context. Although a substantial amount of data has been collected, monitoring is ongoing. Thus, the Interim Report was intended to facilitate adaptive management and refinement of the monitoring program, as appropriate. The Interim Report describes results of monitoring conducted to date and evaluates the efficacy of the Yuba Accord flow schedules. The RMT continues to meet on a regular basis, and lower Yuba River monitoring activities are ongoing.

2.3.6 Habitat Expansion Plan

DWR and PG&E prepared a Final Habitat Expansion Plan (HEP) as part of the Oroville FERC relicensing process. They submitted the HEP to NMFS for approval on November 19, 2010. The recommended actions in the Final HEP (DWR and PG&E 2010) consisted of the following three components, collectively referred to as the Lower Yuba River Actions:

- Expansion of spawning habitat at Sinoro Bar in the Englebright Dam Reach above the Deer Creek confluence.
- Expansion of spawning habitat at Narrows Gateway in the Narrows Reach below the Deer Creek confluence.
- The option of planning for and installing a seasonally operated segregation weir on the Yuba River below the outlet of the Narrows Pool to segregate spring-run and fall-run Chinook salmon, if deemed necessary by the resource agencies (NMFS, USFWS, and Cal Fish and Wildlife).

The Lower Yuba River Actions would achieve the goals of the Habitat Expansion Agreement (HEA) by expanding habitat in the Yuba River below Englebright Dam to support spawning, rearing, and adult holding of spring-run Chinook salmon and steelhead (DWR and PG&E 2010). On January 9, 2014, NMFS filed its Response to the Final HEP submitted by the DWR and PG&E. In that filing, NMFS stated that the Final HEP did not meet its approval criteria. NMFS determined that alternative or modified habitat expansion actions should be developed that will fulfill the purpose, goal, and approval criteria of the Amended HEA.

On December 6, 2016, NMFS issued a BO for FERC's relicensing of the Oroville Facilities Hydroelectric Project (FERC Project No. 2100-134), which concluded that the effects of the Oroville Project are not likely to jeopardize the continued existence of winter-run Chinook salmon, spring-run Chinook salmon, steelhead, or green sturgeon, or destroy or adversely modify designated critical habitat for these listed species. However, because NMFS determined that incidental take will occur, the BO included an incidental take statement with non-discretionary terms and conditions.

The HEA was not part of FERC's proposed action for purposes of NMFS' BO, but it was considered by NMFS to be interrelated to the proposed action, and the effects of the action were analyzed as such for purposes of the BO, to the extent that NMFS had available information on those effects (NMFS 2016a). Any specific effects of the selected habitat expansion actions will be analyzed in applicable regulatory proceedings when the action is selected and specific effects can be determined (NMFS 2016a). NMFS, DWR, and PG&E are continuing discussions about measures needed to implement the HEA. Although the exact actions and locations have not been

finally determined, the long-term implementation of the HEA would increase the spatial distribution and abundance of spring-run Chinook salmon and reduce the risks to the ESU related to catastrophic events. As described in NMFS (2016b), NMFS reserves its authority under FPA Section 18 to prescribe the construction, operation, and maintenance of fishways for the Oroville Facilities and other hydroelectric projects in the Feather River Basin during the terms of the licenses as provided in the HEA. If the HEP does not meet the requirements of the agreement and there is no agreement on an alternative habitat expansion plan that would meet the requirements of the HEA, the HEA would be terminated, and NMFS could choose to exercise its authority under FPA Section 18 in connection with the Oroville Project (NMFS 2016a).

2.3.7 Other Yuba River Basin FERC Relicensing Efforts

In addition to the Yuba River Development Project relicensing process, there are three other ongoing FERC relicensing proceedings for hydroelectric power projects within the Yuba River watershed. The first is South Feather Water and Power Agency's (SFWPA) 117.5-megawatt (MW) South Feather Power Project, FERC Project No. 2088. This water supply/power project was constructed in the late 1950s/early 1960s. None of the project facilities or features is located in the Yuba River watershed except for the Slate Creek Diversion Dam, which is located on a tributary to the North Yuba River. Slate Creek Diversion Dam and the associated tunnel have the capacity to divert up to 848 cfs of water out of Slate Creek, and to convey it to Sly Creek Reservoir on Lost Creek, a tributary to the South Fork Feather River. SFWPA's water rights limit Slate Creek diversions to 600 cfs during January 1 through July I and to 300 cfs during July 2 through December 31. At times, diversions are physically limited to 500 cfs due to high water elevations in Sly Creek Reservoir. In anticipation of the expiration of the initial license, on March 31, 2009, SFWPA filed with FERC an application for a new license on March 6, 2007. A Final Environmental Impact Statement (EIS) was completed in June 2009, and FERC submitted a request to NMFS for informal consultation on June 9, 2009. The Final EIS was filed with NMFS as FERC's BA for the proposed licensing on spring-run Chinook salmon and steelhead. Following the address of NMFS' concerns regarding water temperature effects associated with the Kelly Ridge powerhouse, and the completion of an operations agreement in October 2012 to resolve the water temperature issues, NMFS issued a letter of concurrence to FERC on May 11, 2016. NMFS concurred with FERC's determination that the South Feather Power Project is not likely to adversely affect the listed fish species spring-run Chinook salmon and steelhead, and their critical habitats. Since the initial license expired, SFWPA has operated the project under annual licenses from FERC and will continue to do so until a new license is issued.

The second ongoing relicensing is Nevada Irrigation District's (NID) 79.3-MW Yuba-Bear Hydroelectric Project, FERC Project No. 2266. This is a water supply/power project constructed in the mid-1960s, although some project facilities were initially constructed in the late 1800s. The project includes a storage reservoir on the Middle Yuba River (i.e., Jackson Meadows Reservoir) with a gross storage capacity of 69,205 ac-ft, and five storage reservoirs on Canyon Creek (i.e., Jackson, French, Faucherie, Sawmill and Bowman) with a combined gross storage capacity of 90,790 ac-ft). The project also includes a diversion with a maximum capacity of about 450 cfs via the Milton-Bowman Diversion Dam from the Middle Yuba River to Bowman Lake on Canyon Creek, and a diversion with a maximum capacity of about 300 cfs via the Bowman-Spaulding Canal from Bowman Lake on Canyon Creek to PG&E's Spaulding

Reservoir on the South Yuba River. In anticipation of the expiration of the initial license on April 30, 2013, NID filed with FERC an application for a new license on April 15, 2011. A Final EIS was completed in December 2014. In the Final EIS, FERC concluded that the interbasin transfer of flows associated with the Upper Drum-Spaulding, Lower Drum, Deer Creek, and Yuba-Bear Projects may adversely affect spring-run Chinook salmon, steelhead, and green sturgeon downstream of Englebright Dam (FERC 2014). FERC also recognized that diversions on the Middle and South Yuba rivers, in combination with operations of YCWA's Yuba River Development Project, have the potential to cumulatively affect listed species. Consequently, FERC (2014) stated that it will initiate formal ESA consultation on the Upper Drum-Spaulding, Lower Drum, Deer Creek, and Yuba-Bear Projects after FERC completes the evaluation of recommended measures, including flow releases, associated with relicensing of the Yuba River Development Project. Since the initial license expired, NID has operated the project under annual licenses from FERC and will continue to do so until a new license is issued.

The third ongoing relicensing in the watershed is PG&E's 190-MW Drum-Spaulding Project, FERC Project No. 2310, which is located on the South Yuba River, Bear River, North Fork of the North Fork American River and tributaries to the Sacramento River Basin in Nevada and Placer counties, California. Major reservoirs of the project include Lake Spaulding (74,773 ac-ft) on the South Yuba River and Fordyce Lake (49,903 ac-ft) on Fordyce Creek upstream of Lake Spaulding. In addition, the Project includes numerous smaller reservoirs on tributaries to the South Yuba River, and diversions from the South Yuba River to Deer Creek via the South Yuba Canal (maximum capacity of ~126 cfs) and to the Bear River via the Drum Canal (~840 cfs). In anticipation of the expiration of the initial license on April 30, 2013, PG&E filed with FERC an application for a new license on April 12, 2011. As described in the paragraph above, a Final EIS (FERC 2014) was completed in December 2014, which stated that FERC will initiate formal ESA consultation on the Upper Drum-Spaulding, Lower Drum, and Deer Creek Projects after FERC completes the evaluation of recommended measures, including flow releases, associated with relicensing of the Yuba River Development Project. Since the initial license expired, PG&E has operated the Project under annual licenses from FERC and will continue to do so until a new license is issued.

2.4 Summary of Past and Ongoing Fisheries Studies on the Lower Yuba River

2.4.1 Spring-run Chinook Salmon

Information regarding salmonids in the Yuba River downstream of Englebright Dam was obtained from previously conducted studies. Specifically, 30 field studies and data collection reports, and 28 other relevant documents (e.g., plans, policies, historical accounts and regulatory compliance), were compiled and summarized by YCWA in its relicensing Technical Memorandum 7-8, *ESA CESA-Listed Salmonids Downstream of Englebright Dam*, which can be found on FERC's eLibrary as referenced by the FERC accession number provided in Table E6-2 of Appendix E6, of YCWA's Amended FLA. Previously collected information included life history strategy (e.g., anadromy vs. residency), size and growth, abundance, lifestage-specific spatial and temporal distributions, flow and water temperature relationships with lifestage-

specific distributions, physical habitat conditions, population age structure, habitat-flow relationships, and habitat utilization. Information from the field studies and reports were summarized according to the following themes: 1) life history and habitat requirements; 2) abundance, distribution and population characterization; and 3) flow and water temperature relationships.

In addition to previously conducted studies, YCWA's relicensing Technical Memorandum 7-8 compiled and summarized ongoing studies being conducted in the lower Yuba River. Data were obtained, to the extent that data were available, from the following ongoing programs: 1) Cal Fish and Wildlife's Scale Aging Program (Grover and Kormos 2007; 2006); 2) Cal Fish and Wildlife's angler surveys (Titus et al. 2010; 2009; 2008); 3) Cal Fish and Wildlife's *Steelhead Acoustic Tagging and Tracking Survey*; 4) YCWA's *Lower Yuba River Redd Dewatering and Fry Stranding Study* (JSA 2008; 2007; 2006; 2003; 2002; 2001; 2000) and 5) the RMT's M&E Program, with data obtained from 2006 through 2012 (RMT 2013a).

As part of its relicensing of the Project, from 2008 through 2015 YCWA performed studies that provide information relevant to listed fishes in the Yuba River downstream of Englebright Dam. For the detailed results of each of the studies, refer to the following technical memoranda, which can be found on FERC's eLibrary as referenced by the FERC accession number provided in Table E6-2 of Appendix E6 of YCWA's Amended FLA:

- Technical Memorandum 1-2, *Channel Morphology Downstream of Englebright Dam*
- Technical Memorandum 2-1, *Hydrologic Alteration*
- Technical Memorandum 2-2, *Water Balance/Operations Model*
- Interim Technical Memorandum 2-3, *Water Quality*
- Interim Technical Memorandum 2-5, *Water Temperature Monitoring*
- Technical Memorandum 2-6, *Water Temperature Model*
- Technical Memorandum 3-2, *Aquatic Macroinvertebrates Downstream of Englebright Dam*
- Technical Memorandum 3-9, *Non-ESA-Listed Fish Populations Downstream of Englebright Dam*
- Technical Memorandum 6-2, *Riparian Habitat Downstream of Englebright Dam*
- Technical Memorandum 7-2, *Narrows 2 Powerhouse Intake Extension*
- Technical Memorandum 7-8, *ESA/CESA-Listed Salmonids Downstream of Englebright Dam*
- Technical Memorandum 7-9, *Green Sturgeon Downstream of Englebright Dam*
- Technical Memorandum 7-10, *Instream Flow for Steelhead and Chinook Salmon Downstream of Englebright Dam*

- Technical Memoranda 7-11 and 7.11a, *Fish Behavior and Hydraulics Near Narrows 2 Powerhouse and Radio Telemetry Study of Spring- and Fall-run Chinook Salmon Downstream of Narrows 2 Powerhouse*
- Technical Memorandum 7-12, *Evaluation of Project Effects on Daguerre Point Dam and Hallwood-Cordua Fish Facilities*
- Technical Memorandum 7-13, *Fish Stranding Related to Shutdown of Narrows 2 Powerhouse Partial Bypass*

2.4.2 Steelhead

As described under spring-run Chinook salmon, above, previously collected and reported information regarding anadromous salmonids in the Yuba River downstream of Englebright Dam was obtained from previously conducted studies. Specifically, 30 field studies and data collection reports, and 28 other relevant documents (e.g., plans, policies, historical accounts and regulatory compliance), were compiled and summarized by YCWA in its Technical Memorandum 7-8.

2.4.3 Green Sturgeon

YCWA (Technical Memorandum 7-9, *Green Sturgeon Downstream of Englebright Dam*, which can be found on FERC's eLibrary as referenced by the FERC accession number provided in Table E6-2 of Appendix E6, of YCWA's Amended FLA) conducted a comprehensive review of recent and ongoing data collection efforts to determine whether any green sturgeon have been observed in the Yuba River other than previously confirmed observations of one individual during 2006 and 4 to 5 individuals in 2011. YCWA conducted the following activities: 1) compiled available information regarding the number and location of acoustically-tagged green sturgeon, in collaboration with the University of California, Davis' Biotelemetry Laboratory and the California Fish Tracking Consortium (CFTC); 2) contacted the CFTC to obtain records of the tag identification codes of acoustically-tagged green sturgeon in the Central Valley of California; 3) collaborated with DWR to review Feather River and Sacramento River green sturgeon tag identification codes to identify any detections of tagged green sturgeon in the Yuba River; 4) collaborated with the RMT to review data collected through the Yuba Accord M&E Program to report any observations of green sturgeon; 5) coordinated with Cal Fish and Wildlife – specifically, the Heritage and Wild Trout and the Steelhead Management and Recovery programs - on acoustic monitoring conducted in the Yuba River to identify if any detection of acoustically-tagged green sturgeon has occurred; and 6) summarized any additional recent information regarding green sturgeon surveys or observations in the Yuba River. Additionally, YCWA identified and quantified potential adult green sturgeon holding habitat in the Yuba River downstream of Daguerre Point Dam at various modeled flows, and identified and quantified flow-dependent green sturgeon spawning habitat availability downstream of Daguerre Point Dam (see Technical Memorandum 7-9 in Appendix E6 of YCWA's Amended FLA).

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