

157 FERC ¶ 62,106  
 UNITED STATES OF AMERICA  
 FEDERAL ENERGY REGULATORY COMMISSION

Sacramento Municipal Utility District

Project No. 2101-096

ORDER AMENDING LICENSE, REVISING PROJECT DESCRIPTION, AND  
 APPROVING EXHIBIT F DRAWINGS

(Issued November 9, 2016)

1. On August 27, 2014 and supplemented April 20, 2015, and June 11, 2015, the Sacramento Municipal Utility District, licensee for the Upper American River Project No. 2101, filed an application to amend its license in order to install a minimum flow powerhouse and boating flow release valve below the existing Slab Creek dam.<sup>1</sup> The project is located on Silver Creek and the Rubicon and South Fork American Rivers in El Dorado and Sacramento counties, California. The project occupies federal lands administered by the U.S. Bureau of Land Management (BLM) and by the U.S. Forest Service (Forest Service) within the Eldorado National Forest.

**Background**

2. The license for the Upper American River Project was issued on July 23, 2014.<sup>2</sup> The project consists of seven developments and includes (from upstream to downstream): Loon Lake, Robbs Peak, Jones Fork, Union Valley, Jaybird, Camino, and Slab Creek/White Rock developments.<sup>3</sup> Only the Slab Creek/White Rock development is relevant to this application and consists of: (1) the double curvature, variable radius, 250-foot-high, 817-foot-long, concrete arch Slab Creek dam with a central uncontrolled spillway; (2) a 280-acre reservoir with a storage capacity of 16,600 acre-feet; (3) a 24-

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<sup>1</sup> On August 5, 2016, the licensee filed a request to name its proposed facilities the South Fork powerhouse and boating flow release valve. We will refer to the structures using these names throughout this order.

<sup>2</sup> *Sacramento Municipal Utility District*, 148 FERC ¶ 62,070 (2014).

<sup>3</sup> As licensed, the project consisted of eight developments. The Iowa Hill development was an unconstructed pumped storage system, authorized and added to the project in the license. Since that time, the licensee had announced that it would not be pursuing construction of the Iowa Hill development and requested that it be removed from the license. The Commission removed authorization for the Iowa Hills development by order dated October 14, 2016 (157 FERC ¶ 62,039).

inch-diameter, 40-foot-long penstock; (4) a 24-inch-diameter ring jet valve, (5) a powerhouse located at the base of the Slab Creek dam housing one turbine-generator unit with an installed capacity of 450 kilowatts (kW); (6) the 20 to 24-foot-diameter, 4.9-mile-long White Rock tunnel connecting the Slab Creek reservoir to the White Rock penstock; (7) the 9 to 15-foot-diameter, 1,584-foot-long White Rock penstock; (8) the White Rock powerhouse containing two turbine-generator units with a combined installed capacity of 230,488 kW; (9) two 21.8-mile-long, 230-kilovolt (kV) transmission lines and one 600-foot-long, 12-kV transmission line, and (10) appurtenant facilities.

3. Condition 1.K of the California State Water Resources Control Board's (California Water Board) water quality certificate (WQC) and Forest Service 4(e) condition 27, incorporated into the license through ordering paragraphs (D) and (E) of the license order, respectively, require the licensee to release a minimum flow into the South Fork American River below the Slab Creek dam. The minimum flows vary from 63 cubic feet per second (cfs) to 415 cfs depending upon the month and week and water year type. Condition 4 of the WQC and Forest Service 4(e) condition 50 also require the licensee to provide recreational boating flows of up to 1,500 cfs in the South Fork American River below the Slab Creek dam.

### **Proposed Action**

4. The licensee's existing valve and powerhouse at the Slab Creek dam have a combined maximum hydraulic capacity of approximately 270 cfs. Therefore, to comply with the new minimum flow release requirements and to make efficient use of those releases through generation, the licensee proposes to construct a new minimum flow powerhouse approximately 0.25 mile downstream from the Slab Creek dam. The new South Fork powerhouse would be an 80-foot-long, 30-foot-wide reinforced concrete structure located on the left bank of the South Fork American River. The powerhouse would contain a single Francis turbine-generator unit with a maximum hydraulic capacity of 156 cfs, and an authorized installed capacity of 2,700 kW.

5. To help supply the required boating flows, the licensee intends to install a fixed cone valve, also known as a Howell-Bunger valve, within a reinforced concrete vault, approximately 50 feet downstream from the new powerhouse. The vault would include a butterfly valve to isolate the boating release valve. The valve would have a maximum capacity exceeding 1,000 cfs and include energy dissipating baffles and other structures to reduce effects on passing boaters.

6. The licensee intends to supply water to the South Fork powerhouse and boating release valve through a new 8-foot-diameter, 400-foot-long, steel penstock drawing from the existing White Rock tunnel. The penstock would travel through the existing Adit No. 3, a 24-foot-diameter horseshoe shaped tunnel connecting the White Rock tunnel to the proposed powerhouse site. The penstock would be supported on concrete saddles for approximately 350 feet with the remainder entirely encased in concrete. The penstock

would bifurcate immediately where it exits the adit to connect with the proposed powerhouse and boating flow valve vault.

7. To distribute power from the South Fork powerhouse, the licensee proposes to construct a new, approximately 1,600-foot-long, 12-kV transmission line which would follow existing roads. The transmission line would interconnect with an existing distribution circuit owned and operated by Pacific Gas & Electric Company. The licensee proposes to design and construct the transmission line to reduce its impact on aesthetics and avian species.

8. The licensee intends to use all four release points, the ring jet valve and existing powerhouse at the base of Slab Creek dam as well as the South Fork powerhouse and boating release valve 0.25 mile downstream, to meet the minimum and boating flow requirements. For example, to meet the minimum flow requirement, the licensee intends to release between 15 and 36 cfs from the existing Slab Creek powerhouse depending on the month and water year type, and make up the balance with releases from the new South Fork powerhouse. When minimum flow requirements exceed the combined hydraulic capacity of both the existing and proposed powerhouses, the licensee states it would operate one of the two valves, in addition to the powerhouses, to satisfy the requirement. Furthermore, the licensee would release boating flows through a combination of the four available discharge points.

9. The licensee proposes a number of measures to protect water quality, wildlife, and the public and intends to prepare and file a number of plans to detail its protections efforts. We discuss these measures and plans below.

### **Consultation**

10. Prior to filing the license amendment application, the licensee consulted with federal and state agencies, Indian tribes likely to have an interest in the project, nongovernmental organizations, and individuals.<sup>4</sup> The licensee prepared an initial consultation document in October 2011 and held a joint agency and public meeting on December 1, 2011. The licensee held further meetings with interested stakeholders on January 17, 2012, January 18, 2012, February 1, 2012, April 25, 2012, and August 16, 2012. During the meetings, the licensee prepared and presented additional information regarding wetted perimeter and flow in the river reach between the dam and proposed powerhouse. On May 8, 2013, the licensee released a draft amendment application to the interested parties. Most of the response comments received raised

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<sup>4</sup> For a complete list of consulted parties, see the initial consultation document for the license amendment process to add the lower Slab Creek (South Fork) powerhouse filed on November 1, 2011.

concerns about environmental protection measures, traffic and fire hazards, and interaction between the South Fork powerhouse and boating flow release facility amendment and the relicensing process that was ongoing at the time. The licensee responded to these comments in its final application filed with the Commission.

### **Public Notice**

11. On October 17, 2014, the Commission issued public notice that the amendment application was accepted for filing, that the project was ready for environmental analysis, and soliciting motions to intervene, comments, recommendations, terms and conditions, and fishway prescriptions. In response, the American River Recreation Association, American Whitewater, California Outdoors, the California Sportfishing Protection Alliance, Friends of the River, Hilde Schweitzer, and Theresa Simsiman filed a joint motion to intervene on December 10, 2015.<sup>5</sup> The Forest Service filed a notice of intervention, comments, and preliminary conditions under section 4(e) of the Federal Power Act (FPA) and recommendations under section 10(a) of the FPA on December 16, 2014. The California Water Board also filed a notice of intervention on December 16, 2014 and the BLM filed preliminary 4(e) conditions on December 17, 2015. The licensee filed reply comments on January 30, 2015.

12. On April 29, 2015, Commission staff issued a public notice adopting the licensee's August 27, 2014 Exhibit E and April 20, 2015 supplemental biological resource analysis as Commission staff's environmental assessment (EA). The notice also solicited comments on the EA. No comments were filed in response to the EA notice.

13. In response to letters requesting final section 4(e) conditions issued by the Commission on November 18, 2015, the Forest Service and the BLM filed final 4(e) terms and conditions and 10(a) recommendations on December 31, 2015 and December 21, 2015, respectively.

### **Water Quality Certification**

14. Under section 401(a) of the Clean Water Act (CWA),<sup>6</sup> the Commission may not authorize construction or operation of a hydroelectric project that may result in a discharge from the project unless the state water quality certifying agency either has issued water quality certification for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed 1 year.

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<sup>5</sup> Timely, unopposed motions to intervene are granted by operation of Rule 214(c) of the Commission's Rules of Practice and Procedure. 18 C.F.R. § 385.214(c) (2015).

<sup>6</sup> 33 U.S.C. § 1341(a) (2012).

Section 401(d) of the CWA provides that the certification shall become a condition of any federal license that authorizes construction or operation of the project.<sup>7</sup> The licensee requested a revised water quality certification from the California Water Board on February 2, 2015. The licensee withdrew and refiled its application on January, 20, 2016, and April 13, 2016.

15. On July 12, 2016, the California Water Board filed a WQC for the South Fork powerhouse and boating flow release valve amendment containing 36 conditions. The conditions are set forth in Appendix A of this order, incorporated into the license by ordering paragraph (C), and summarized below.

16. The conditions of the July 12, 2016 WQC require the licensee to: (1) release specified minimum flows into the South Fork American River between Slab Creek dam and the South Fork powerhouse; (2) implement the Iowa Canyon Creek Reconfiguration Plan; (3) implement the South Fork American River Habitat Improvement Plan; (4) implement the South Fork American River Gravel Augmentation Plan; (5) develop a Whitewater Boating Parking Area and Put-in Plan; (6) revise existing plans associated with the project to accommodate the proposal; (7) protect federally listed and sensitive riparian or aquatic species if observed; (8) conduct water quality sampling during construction; (9) limit turbidity increases during construction; (10) include secondary containment for hazardous chemicals; (11) construct project facilities only in the proposed locations; (12) install and remove a temporary cofferdam during in-water construction; (13) consult with the Consultation Group to determine the final design of the boating flow release valve energy dissipating structure;<sup>8</sup> (14) comply with all measures described in its WQC application; (15) report any deviations from the WQC; (16) obtain all necessary federal and state permits prior to commencing construction; (17) provide a copy of the certification to all contractors and subcontractors; (18) file any required plan with the Commission within 14 days of the deadline if the California Water Board has not yet approved it; (19) notify the California Water Board 1 week prior to ground disturbing activity and allow access to the construction site upon request; (20) be subject to any remedies, process, or sanctions as provided for under applicable law if the licensee violates the WQC; (21) furnish any technical or monitoring reports in response to a suspected violation of the WQC; (22) honor the responsibilities and authority of any agency that succeeds an agency listed in the WQC; (23) submit any changes proposed to the South Fork powerhouse and boating release valve facilities that would affect the conditions of the WQC; (24) accommodate the California Water Board's notice and

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<sup>7</sup> 33 U.S.C. § 1341(d) (2012).

<sup>8</sup> The Consultation Group is defined in section 4.12.1 of the Relicensing Settlement Agreement for the Upper American River Project and the Chili Bar Hydroelectric Project, filed February 1, 2007.

opportunity for hearing in exercising its authority; (25) accommodate modification or revocation of the WQC upon administrative or judicial review; (26) not apply the WQC to any activity involving Commission licensing unless being filed pursuant to the pertinent sections of California state law; (27) submit any fee required under California state law for the certification; (28) notify the California Water Board within 24 hours of any unauthorized discharge to surface waters; (29) immediately cease activities if they are causing an unauthorized discharge to surface waters; (30) operate the project in a manner consistent with all water quality standards; (31) obtain authorization prior to initiating activities that may cause a take of species listed under the federal or state Endangered Species Acts; (32) accommodate any California Water Board's modifications of the certificate based on monitoring or reporting results; (33) request an amendment of the certificate if necessary; (34) accommodate modifications or additions to the certificate to require monitoring or other measures; (35) accommodate modification of the certificate to coordinate the requirements with other hydrologically connected projects; (36) and not construe any condition of the certificate to approve the validity of water rights or claims.

### **Threatened and Endangered Species**

17. Section 7(a)(2) of the Endangered Species Act of 1973<sup>9</sup> requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence to federally listed threatened and endangered species, or result in the destruction or adverse modification of their designated critical habitat.

18. By letter issued January 14, 2015, the Commission designated the licensee as its non-federal representative for the purpose of conducting informal consultation under section 7 of the Endangered Species Act. The licensee filed a biological evaluation on June 11, 2015 concluding that no federally listed species occurred in the project area and therefore, none would be affected by the proposed construction activities. We have reviewed the biological evaluation and agree that the proposed action would have no effect on federally listed threatened or endangered species.

### **National Historic Preservation Act**

19. Under section 106 of the National Historic Preservation Act<sup>10</sup> and its implementing regulations,<sup>11</sup> federal agencies must take into account the effect of any

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<sup>9</sup> 16 U.S.C. § 1536(a) (2012).

<sup>10</sup> Section 106 of the National Historic Preservation Act of 1966, as amended, 54 U.S.C. § 306108, Pub. L. No. 113-287, 128 Stat. 3188 (2014). (The National Historic Preservation Act was recodified in Title 54 in December 2014).

proposed undertaking on properties listed or eligible for listing in the National Register of Historic Places (National Register) (defined as historic properties) and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the State Historic Preservation Officer (SHPO) to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

20. The Commission authorized the licensee to consult, on its behalf, with the California SHPO by letter issued January 14, 2015. On August 13, 2015, the licensee submitted a request to the California SHPO to review the proposed action. The licensee's submittal defined the area of potential effect (APE) for the undertaking and identified three cultural or historical resources, including the Slab Creek dam and Slab Creek road, which may be potentially affected. However, the licensee concluded that none of the resources were eligible for listing on the National Register and construction and operation of the South Fork powerhouse and boating flow release valve would not affect historic properties. By letter filed with the Commission on September 16, 2015, the California SHPO agreed with the APE but stated that it does not concur with the licensee's conclusion regarding the individual eligibility of two of the resources, Slab Creek dam and Slab Creek road. The California SHPO said both resources are approaching the age threshold for consideration as a historic property. It strongly recommended for future undertakings that the licensee evaluate the Upper American River Project as a whole to determine its potential significance as a historic district and if Slab Creek dam and Slab Creek Road would contribute to that district. Therefore, the California SHPO did not concur with the licensee's determination that the undertaking would result in no historic properties affected. However, the California SHPO had no objection to a finding of no adverse effect to historic properties for the proposed action.

### **Section 18 Fishway Prescriptions**

21. Section 18 of the FPA<sup>12</sup> provides that the Commission shall require the construction, maintenance, and operation by a licensee of such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate. No fishway prescriptions or reservations of authority were filed.

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<sup>11</sup> 36 C.F.R. Part 800 (2016).

<sup>12</sup> 16 U.S.C. § 811 (2012).

### **Coastal Zone Management Act**

22. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),<sup>13</sup> the Commission cannot issue a license for a project within or affecting a state's coastal zone unless the state CZMA agency concurs with the applicant's certification of consistency with the state's CZMA program, or the agency's concurrence is conclusively presumed by its failure to act within 180 days of its receipt of the applicant's certification.

23. The California Coastal Commission administers the CZMA in California and the coastal zone extends inland a maximum of 5 miles from the mean high tide line. The project is located approximately 100 miles east of the California coastal zone. Because the area of the proposed action is outside the California coastal zone, and since the California Coastal Commission did not notify the Commission or licensee that it wished to review the application, the CZMA does not apply to this proceeding.

### **Section 4(e) of the FPA**

24. Section 4(e) of the FPA<sup>14</sup> provides that the Commission may issue a license for a project on a federal reservation only if it finds that the license would not interfere or be inconsistent with the purpose for which the reservation was created or acquired. In addition, section 4(e) requires that any license for which we make this finding must include conditions prescribed by the Secretary under whose supervision the reservation falls. The Upper American River Project occupies federal lands administered by the BLM and within the Eldorado National Forest administered by the Forest Service. Both the Forest Service and the BLM filed 4(e) conditions for the proposal. These 4(e) conditions were intended to supplement, not replace, the 4(e) conditions that were approved in the project license.

25. Commission staff has reviewed the Organic Administration Act of 1897,<sup>15</sup> which established the purposes for forest reservations, and the presidential proclamations and executive orders that created the Eldorado National Forest.<sup>16</sup> There is no evidence or

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<sup>13</sup> 16 U.S.C. § 1456(3)(A) (2012).

<sup>14</sup> 16 U.S.C. § 797(e) (2012).

<sup>15</sup> 16 U.S.C. § 473 *et seq.* (2012).

<sup>16</sup> The Eldorado National Forest was established by Presidential Proclamation on July 28, 1910, from parts of the Tahoe National Forest and other lands (36 Stat. 2729). At the time the National Forest was established, the Organic Administration Act of 1897, 16 U.S.C. § 475 (2012), stipulated that all National Forest lands were established and administered only for watershed protection and timber production. These are the only

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allegation in this proceeding to indicate that the South Fork powerhouse and boating flow release valve amendment will interfere with the purposes of the Eldorado National Forest. We find that this amendment will not interfere or be inconsistent with the purposes for which the reservation was created.

26. No evidence or allegation exists in this proceeding to show that the South Fork powerhouse and boating flow release valve amendment would interfere with the purposes of the BLM administered land. We therefore find that this amendment will not interfere with or be inconsistent with the purposes for which the BLM administered land was created.

#### **A. Forest Service Conditions**

27. The license is subject to 74 existing 4(e) conditions filed by the Forest Service on June 11, 2008 and incorporated into the current license. For this amendment, the Forest Service filed 43 final 4(e) conditions on December 31, 2015. The final terms and conditions are set forth in Appendix B of this order, incorporated into the license by ordering paragraph (D), and summarized below.

28. The Forest Service's December 31, 2015 4(e) conditions include 18 standard administrative conditions identical to those attached to the license. The 25 remaining conditions require the licensee to: (1) accommodate revisions to the Forest Service conditions; (2) obtain a special use authorization for use of new Forest Service lands or those not previously covered by a special use authorization; (3) obtain a short-term special use authorization; (4) develop an erosion control plan; (5) develop a solid waste and wastewater plan; (6) develop a water quality and water pollution plan; (7) develop a storm water pollution prevention plan; (8) evaluate and implement wildlife and sensitive plant protection measures; (9) develop a fire and fuels management plan; (10) obtain Forest Service approval of final designs of project facilities; (11) obtain authorization from the Forest Service to make changes to the project on National Forest lands; (12) release specified minimum flows into the South Fork American River immediately below the Slab Creek dam following construction; (13) develop a South Fork American River habitat improvement plan; (14) develop a South Fork American River gravel augmentation plan; (15) develop a special status plant protection plan; (16) develop a non-native invasive plants management plan; (17) conduct surveys and develop bat protection measures; (18) use raptor-safe designs for new or replacement power lines; (19) develop a heritage resources management plan; (20) develop a plan for a whitewater

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purposes that are relevant for a Commission determination under section 4(e) as to whether a project will interfere or be inconsistent with the purpose for which the reservation (National Forest) was created or acquired. *See Rainsong Company v. FERC*, 106 F.3d 269 (9th Cir. 1997).

boater parking area and put-in; (21) design the boating flow release valve to minimize spray interference with boaters and install boating flow ramping rate warning signs if necessary; (22) develop a new South Fork powerhouse construction transportation plan; (23) develop a visual resource plan; (24) develop a construction noise plan; and (25) avoid disposing of spoil on National Forest lands without prior approval from the Forest Service.

29. In its January 30, 2015 reply comments, the licensee stated that it would work with the Forest Service to modify the preliminary 4(e) condition 20, as the schedule envisioned in the condition was inconsistent with the timing specified in existing 4(e) condition 50, incorporated as part of the July 23, 2014 license. However, the Forest Service did not modify condition 20 in response to the licensee's concerns when filing its final amendment conditions on December 31, 2015. We agree with the licensee that the schedule mandated in the Forest Service's 4(e) condition 20 would complicate the gathering of recreational use data and constructing facilities; however, the licensee may utilize extension of time requests and agency consultation, as it has done for the existing condition 50, to help ensure that the schedules are not contradictory.<sup>17</sup> Regardless, the new 4(e) condition 20 is a mandatory condition and we must include it, unchanged. Otherwise, we support the Forest Service's 4(e) conditions.

30. Several of the conditions do not require that plans, yet to be prepared, be filed with the Commission, or that the plans be filed for Commission approval. Article 412 requires that these plans be filed with the Commission, for approval.

### **B. BLM Conditions**

31. The license is subject to 24 standard section 4(e) conditions filed by the BLM on January 31, 2007. On December 21, 2015, the BLM filed 26 final section 4(e) conditions for this amendment. These conditions are set forth in Appendix C of this order, incorporated into the license through ordering paragraph (E) and summarized below. Of these conditions, 25 are standard and largely equivalent to those attached to the license.<sup>18</sup> The single, remaining condition requires the licensee to finance the analysis, construction, maintenance, and administration of the whitewater boating take out, if it is constructed on land administered by the BLM. The condition requires the licensee to

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<sup>17</sup> See unpublished Orders Granting Extensions of Time issued February 12, 2016, and July 27, 2016.

<sup>18</sup> The most significant difference between the standard 24 BLM 4(e) conditions, already attached to the license and the 25 for this amendment, is that the BLM expanded upon the licensee's responsibilities to monitor hazardous conditions on BLM land, making the licensee potentially liable for damage to federal land.

construct the facilities within 3 years and obtain BLM approval for the vehicular access, parking, onsite water gage sign, and kiosk sign.

32. The Forest Service's 4(e) condition 50, incorporated into the license, requires the licensee to file various plans involving a boater take out location near the White Rock powerhouse. Specifically, this includes a plan to purchase, lease, or gain an easement for access and parking near the White Rock powerhouse for recreational streamflow users that was required to be filed by January 25, 2016 and implemented by July 25, 2016. On January 25, 2016, the licensee requested an extension of time to file this plan until February 23, 2017, which the Commission granted.<sup>19</sup> Condition 50 also requires a recreation management plan, addressing the whitewater recreation needs below the Slab Creek dam, including necessary take outs and parking that must be filed by July 23, 2019.<sup>20</sup>

33. We acknowledge that a formal boater take out facility near the White Rock powerhouse would help facilitate use of the required recreational streamflow within this river reach. Furthermore, the deadline stipulated in the BLM's 4(e) condition is not inconsistent with the schedules considered in the site access and recreation management plans required by Forest Service 4(e) condition 50 incorporated in the license.. Therefore, we support this condition.

#### **Recommendations of Federal and State Fish and Wildlife Agencies Pursuant to Section 10(j) of the FPA**

34. Section 10(j)(1) of the FPA<sup>21</sup> requires the Commission, when issuing a license, to include conditions based on recommendations submitted by federal and state fish and wildlife agencies pursuant to the Fish and Wildlife Coordination Act,<sup>22</sup> to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" affected by the project.

35. No section 10(j) recommendations were filed for the proposed amendment.

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<sup>19</sup> Unpublished Order Granting Extension of Time to File an Access and Parking Plan under Forest Service 4(e) Condition 50, issued February 12, 2016.

<sup>20</sup> Unpublished Order Granting Extensions of Time, issued July 27, 2016.

<sup>21</sup> 16 U.S.C. § 803(j)(1) (2012).

<sup>22</sup> 16 U.S.C. §§ 661 *et seq.* (2012).

### **Section 10(a) of the FPA**

36. Section 10(a) of the FPA<sup>23</sup> requires that any project for which the Commission issues a license be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce; for the improvement and utilization of waterpower development; for the adequate protection, mitigation, and enhancement of fish and wildlife; and for other beneficial public uses, including irrigation, flood control, water supply, recreation, and other purposes. Both the Forest Service and the BLM filed section 10(a) recommendations.

#### **A. Agency Recommendations**

37. The Forest Service filed two section 10(a) recommendations on December 31, 2015. The Forest Service recommends the licensee develop a plan to reconfigure the lowermost 200 feet of Iowa Canyon Creek in order to restore it to a more natural grade and width to allow hydraulic and biological connectivity to the South Fork American River during low flow. Iowa Canyon Creek enters the South Fork American River just upstream of the proposed powerhouse. We discuss this recommendation below under the licensee's proposed measures. The Forest Service also recommends that the licensee fund construction of a whitewater boater take out with parking, signage, and flow gage sign, and reimburse the BLM for the agency's management costs if the licensee constructs the take out on BLM land. The activities proposed under this recommendation are functionally equivalent to those required by the BLM's 4(e) condition, if the licensee were to construct the facility on land administered by the BLM.

38. The BLM filed one section 10(a) recommendation, similar to its 4(e) condition and the Forest Service's (10)(a) recommendation that recommends the licensee fund the analysis, construction, and maintenance of a boater take-out within 3 years. However, the BLM would not require the licensee to reimburse it for costs associated with BLM's management of the facility if it is not constructed on BLM land.

39. As described above, we support the BLM's 4(e) condition regarding the boater take out. Similarly, we adopt the recommendation of the Forest Service and BLM that the licensee construct a boater take out facility as required by existing Forest Service 4(e) condition 50, but that includes vehicular access, parking, an onsite water gage sign, and a kiosk sign within 3 years of the date of this order, and require the licensee to do so in Article 413.

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<sup>23</sup> 16 U.S.C. § 803(a)(1) (2012).

**B. Licensee's Proposed Measures and Completed Plans**

40. The licensee proposes a number of measures to protect resources during and following the proposed construction activities.

41. To protect aquatic habitat between the dam and new powerhouse, the licensee proposes to provide minimum flow releases varying between 15 and 36 cfs based on the month and water year type. This proposal is identical to the mandatory WQC condition 1 and Forest Service 4(e) condition 12. Additionally, WQC condition 1 requires the licensee to notify the Commission, Forest Service, U.S. Fish and Wildlife Service, California Water Board, and the California Department of Fish and Wildlife if it deviates from this minimum flow requirement.

42. The licensee also proposes to prepare and file a Storm Water Pollution Prevention Plan and an Erosion and Sedimentation Control Plan. Forest Service 4(e) conditions 7 and 4, respectively, require these plans.

43. In the application, the licensee proposes to protect rare plants by developing and filing a Special-Status Plant Protection Plan. This plan is required by Forest Service 4(e) condition 15. The licensee also intends to file an Invasive and Noxious Weeds Management Plan, required by Forest Service 4(e) condition 16, and to conduct pre-construction bat surveys required by Forest Service 4(e) condition 17. The licensee would also design powerline poles to reduce raptor electrocution hazards, which is required by Forest Service 4(e) condition 18.

44. To protect recreation resources, the licensee would design the new boating flow release valve to dissipate energy of the discharged water to minimize interference with passing boaters. Forest Service 4(e) condition 21 requires the licensee to design the release valve to protect boaters and other river users.

45. To reduce the impact of construction on local socioeconomics and aesthetics, the licensee proposes to file a South Fork Powerhouse Construction Transportation Management Plan and a South Fork Powerhouse Construction Noise Plan. These proposals are required through Forest Service 4(e) conditions 22 and 24, respectively.

46. On August 22, 2016, the licensee filed the Iowa Canyon Creek Reconfiguration Plan, including the required revegetation plan and the South Fork American River Habitat Improvement Plan, which are required to be implemented by WQC conditions 2 and 3, respectively. The South Fork American River Habitat Improvement Plan is also required by Forest Service 4(e) condition 13. In addition, the licensee filed, on September 6, 2016, the South Fork American River Gravel Augmentation Plan required to be implemented by WQC condition 4 and Forest Service 4(e) condition 14. The terms and conditions associated with these plans did not require Commission approval. However, these plans will require long-term maintenance and monitoring throughout the

life of the license; therefore we find Commission approval necessary. The plans document that they were approved by the California Water Board and the Forest Service. We have reviewed these plans and they are acceptable and will be approved in this order.

47. On August 22, 2016, the licensee also filed three additional plans required by the Forest Service: Fire and Fuels Management Plan (condition 9), Heritage Resources Plan (condition 19), and Construction Transportation Plan (condition 22), all of which have been approved by the Forest Service. These plans are only required to be filed with the Commission and do not require specific Commission approval.

### **Comprehensive Plans**

48. Section 10(a)(2)(A)<sup>24</sup> of the FPA requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving waterways affected by the project.<sup>25</sup> We have reviewed two federal and six state comprehensive plans that address resources relevant to the South Fork powerhouse and boating flow release valve, listed below. No conflicts were found.

#### **Federal**

- Forest Service. 1988. Eldorado National Forest land and resource management plan. Department of Agriculture, Placerville, California. December 1998.
- U.S. National Park Service. The Nationwide Rivers Inventory. Department of the Interior, Washington, D. C. 1993.

#### **California**

- California Department of Fish and Game. 2007. California wildlife: Conservation challenges, California's wildlife action plan. Sacramento, California. 2007.

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<sup>24</sup> 16 U.S.C. § 803(a)(2)(A) (2012).

<sup>25</sup> Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2016).

- California Department of Fish and Game. 2003. Strategic plan for trout management: A plan for 2004 and beyond. Sacramento, California. November 2003.
- California Department of Parks and Recreation. 1998. Public opinions and attitudes on outdoor recreation in California. Sacramento, California. March 1998.
- California Department of Parks and Recreation. California outdoor recreation plan (SCORP). Sacramento, California. April 1994.
- California Department of Water Resources. 1994. California water plan update. Bulletin 160-93. Sacramento, California. October 1994. Two volumes and executive summary.
- California – The Resources Agency. Department of Parks and Recreation. 1983. Recreation needs in California. Sacramento, California. March 1983.

### **Applicant's Plans and Capabilities**

#### **A. Conservation Efforts**

49. Section 10(a)(2)(C) of the FPA requires the Commission to consider the electricity consumption improvement program of the applicant, including its plans, performance, and capabilities for encouraging or assisting its customers to conserve electricity cost effectively, taking into account the published policies, restriction, and requirements of state regulatory authorities. The licensee is a municipality and sells power generated at the project directly to its customers.

50. The licensee has an extensive record of encouraging and assisting its customers in the efficient use of electricity. In recognition of its efforts, the licensee won the 2004 American Council for an Energy Efficient Economy's Champion of Energy Efficiency Award, the National Energy Resources Organization's Award for Energy Efficiency, and the U.S. Department of Energy's Energy Star Partner of the Year. We conclude that, given its efforts to persuade customers to reduce energy usage and improve efficiency, the licensee complies with section 10(a)(2)(C) of the FPA.

#### **B. Safe Management, Operation, and Maintenance of the Project**

51. Commission staff has reviewed the licensee's management, operation and maintenance of the Upper American River Project pursuant to the requirements of 18 C.F.R. Part 12 of the Commission's regulations and the Commission's Engineering Guidelines and periodic Independent Consultant Safety Inspection Reports. We have determined that the license amendment, which includes the addition of a new penstock

and powerhouse, should not prevent the licensee from safely managing, operating, and maintaining the project.

### **Comprehensive Development**

52. Sections 4(e) and 10(a)(1) of the FPA,<sup>26</sup> require the Commission to give equal consideration to power development purposes and to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of fish and wildlife, the protection of recreational opportunities, and the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgment would be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to issue this license amendment, and the terms and conditions included herein, reflect such consideration.

53. The Exhibit E for the licensee's proposal contains background information, analysis of impacts, and support for related license articles. The project would be safe if operated and maintained in accordance with the requirements of the license.

54. Based on staff's independent review, evaluation of the project, and section 4(e) conditions, we have selected the licensee's proposal and find that it is best adapted to a comprehensive plan for improving or developing the South Fork American River.

55. We selected this alternative because: (1) issuance of the amendment would serve to maintain a beneficial and dependable source of electric energy; (2) the project, through providing approximately 10,500 megawatt-hours of hydropower generation annually from required minimum flows, would eliminate the need for an equivalent amount of fossil fuel produced energy which helps conserve these nonrenewable resources and decreases atmospheric pollution; and (3) the proposed environmental measures would protect project resources.

### **Administrative Conditions**

#### **A. Annual Charges**

56. The licensee's proposal would increase the authorized installed capacity of the project by 2,700 kW. The Commission collects annual charges from licensees, based on the authorized installed capacity of their projects, to recompense it for the administration of part I of the FPA. As a municipality, the licensee's annual charges are revised on the date the new capacity becomes operational.<sup>27</sup> Article 205 requires the licensee to file a

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<sup>26</sup> 16 U.S.C. §§ 797(e) and 803(a)(1) (2006).

<sup>27</sup> 18 C.F.R. § 11.1(d)(6) (2016).



report identifying the date on which the new South Fork powerhouse becomes operational so that the Commission can revise the annual charges for the project.

57. The Commission also collects charges from licensees for use of federal lands. The licensee's amendment application indicates that the revised project boundary around the new powerhouse and boating flow release valve would occupy federal land, but it does not state how much additional federal land the boundary revision would occupy. Furthermore, license Article 203 requires the licensee to provide a statement quantifying the amount of federal land occupied by the project so the Commission can revise the licensee's annual charges. The licensee provided this statement on October 21, 2014, but the Exhibit G drawings included in the filing were found to inaccurately depict federal lands occupied by the project. Therefore, the Commission granted extensions of time until April 6, 2017 to give the licensee sufficient time to revise the drawings and refile them.<sup>28</sup> Below, we are requiring the licensee to modify those Exhibit G drawings to include facilities authorized in this order. Similarly, we will require the licensee to provide an updated statement identifying the amount of federal land occupied by the project, including those lands necessary for the new powerhouse and boating flow release valve.

#### **B. Project Description**

58. The licensee submitted, with its August 27, 2014 amendment application, an Exhibit A briefly discussing the whole project while providing an in-depth description of the new facilities. The Commission's requirements, detailed in section 4.41(b) of the Commission's regulations, dictate that an Exhibit A includes a description of all project features at each project development. Therefore, the licensee's Exhibit A included in the amendment application cannot be approved and we will require the licensee to revise the Exhibit A to describe the entire project, including the South Fork powerhouse, boating flow release valve, and associated facilities, and file it for Commission approval in Article 206.

#### **C. Exhibit Drawings**

59. The licensee included 10 Exhibit F drawings in the application showing the South Fork powerhouse, vault for the boating flow valve, and penstock. On drawing number 2, showing a site plan, the licensee illustrates a transmission line path superseded in the June 11, 2015 supplemental filing. As such, we cannot approve this drawing. However, we have reviewed the remaining Exhibit F drawings and determined that they conform to

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<sup>28</sup> Unpublished Orders Granting Extensions of Time to File Revised Exhibit G Drawings Pursuant to Article 203, issued October 20, 2015, April 15, 2016, and October 12, 2016.

the Commission's regulations and should be approved. In Article 207 we are requiring the licensee to file the exhibit drawings in electronic format. We will require the licensee to revise the site plan drawing in Article 208, to show the currently proposed transmission line route and file it for Commission approval.

60. As part of the August 27, 2014 application, the licensee submitted a drawing showing land ownership and the approximate locations of the proposed project boundary expansion in the vicinity of the South Fork powerhouse and boating flow release valve. The licensee stated this is a preliminary drawing intended to show the proposed boundary and that it will file a final Exhibit G drawing prior to commencement of the proposed construction. As discussed above, the licensee has an outstanding requirement to file Exhibit G drawings for the project by April 6, 2017. Article 209 will require the licensee to show the South Fork powerhouse, boating flow release valve, and related facilities on these drawings.

61. In addition, Article 314 requires the licensee to submit as-built Exhibits A, F, and G, as appropriate, to reflect the construction of the facilities approved in this order, within 90 days following the completion of construction activities.

#### **D. Review of Final Plans and Specifications**

62. Article 311 requires the licensee to commence construction of the authorized project works within 2 years from the issuance date of this order and complete construction of the project within 5 years from the issuance date of this order.

63. Article 312 requires the licensee to provide the Commission's Division of Dam Safety and Inspection – San Francisco Regional Office (D2SI – SFRO) with final contract drawings and specifications – together with a supporting design report consistent with the Commission's engineering guidelines. Article 313 requires the licensee to provide the Commission's D2SI-SFRO with cofferdam construction drawings.

#### **Environmental Review**

64. The construction of the project could increase erosion and sedimentation leading into Iowa Canyon Creek and the South Fork American River. To offset the potential for sedimentation, the licensee would implement several best management practices and develop an erosion and sedimentation control plan and a storm water pollution prevention plan. Disturbed areas would be revegetated using native species. During construction, the licensee would remove a portion of the sediment from the lowermost Iowa Canyon Creek. The material would be removed to create rock fill material for the powerhouse construction site and to return lower Iowa Canyon creek to a more natural grade and width to allow flow connectivity to the South Fork American River during periods of low flow. As part of the project, the licensee prepared an Iowa Canyon Creek

Reconfiguration Plan and a South Fork American River Habitat Improvement Plan that are being approved as part of this order. To improve trout spawning habitat within the South Fork American River the licensee developed the South Fork American River Gravel Augmentation Plan, also being approved by this order.

65. Project construction would result in the permanent loss of approximately 200 linear feet of riparian vegetation along the south bank of the South Fork American River. The licensee would work with the Corps and the California DFW to develop measures to compensate for the loss of jurisdictional wetlands.

66. There are 14 populations of the Forest Service special-status species Brandegee's clarkia (*Clarkia bilboea ssp brandegeae*) in the project area. Twelve of these populations have the potential to be directly affected by construction. Two populations near the adit portal would likely be eliminated during project construction. To minimize construction and/or operational impacts the licensee proposes to develop a Special-Status Plant Protection Plan. Because noxious weeds often spread in areas of disturbance, the licensee would prepare an Invasive and Noxious Species Management Plan to manage and prevent invasive species.

67. The project is not expected to significantly impact wildlife because less than one acre of land would be disturbed and only a small number of mature trees would be removed during site clearing. The trees would be removed outside of the nesting season to lessen impacts to tree-nesting or roosting wildlife. However, there is a high likelihood of occurrence for pallid, spotted, and western mastiff bats and the potential exists for long-term disturbance and/or habitat loss. As a result, the licensee would perform pre-construction surveys in the immediate area of the new powerhouse, as well as 0.5 mile downstream and upstream of the adit portal. If the surveys indicate the presence of special-status bats, appropriate avoidance, protection, and/or mitigation measures would be developed in consultation with the appropriate resource agencies.

68. Recreation is limited at the project because of the steep terrain of the South Fork American River canyon. There are no developed recreational facilities at the reservoir or the river; although there is a primitive boat launch at the reservoir. Recreationists are frequently observed during the summer months swimming in the deep pool directly below the pedestrian footbridge. The Slab Creek Dam Reach has a history of whitewater boaters and is characterized as a class IV/V run. Swimmers may have their experience impacted by the presence of a construction project 400 feet downstream. This impact may last for possibly four summers. However, whitewater boating should be enhanced once the project is completed and operational.

69. In 2010 a cultural resource survey was conducted within the APE. Two cultural sites were identified outside but adjacent to the APE, the Historic Chute Camp Road and a newly identified multi-component resource. The two sites would not be affected by the

construction or operation of the project. The proposed project would have no effect on cultural resources.

70. The steep topography and heavy vegetation block the view of the powerhouse from all residences and roads on the surrounding canyon walls as well as recreationists boating on Slab Creek Reservoir. The new powerline would be visible to recreationists coming to the lake and whitewater boaters launching their watercraft at a proposed put-in. The line would also be visible for one residence on the crest of the northern canyon wall, but from a distance of 1,000 vertical feet.

71. Minimal noise impacts are anticipated because of the project site's remote location and the physiographic features of the surrounding area. The licensee would implement several noise reducing measures as well as limiting construction between 7:00 am and 7:00 pm.

### **Conclusion**

72. The new powerhouse would take advantage of the newly required minimum flows and would generate an additional 10.5 gigawatts of electricity annually. Appurtenant facilities, such as the boating flow valve, valve vault, and energy dissipating structure would be used to achieve the required boating releases of the new license. Another advantage of the new powerhouse is that the licensee would be able to provide the new boating flows in year 4 of the new license instead of year 15. This project would have some short term environmental impacts associated with construction of the new facility.

73. Commission staff concludes that the proposed amendment for the Upper American River Project, with the mitigation measures required by this order, would not constitute a major federal action significantly affecting the quality of the human environment. Therefore, the amendment application will be granted, as considered herein.

### **The Director orders:**

(A) The license for the Upper American River Project, FERC No. 2101, is amended as provided by this order, effective the day this order is issued.

(B) Ordering paragraph (B)(2) of the license is revised, to read as follows:

2) The project works consisting of seven developments: Loon Lake, Robbs Peak, Jones Fork, Union Valley, Jaybird, Camino, and Slab Creek/White Rock.

The Loon Lake development includes:

- (1) Rubicon Dam, a 36-foot-high by 644-foot-long concrete gravity diversion dam located on the Rubicon River, and a concrete gravity auxiliary dam that is 29 feet high by 553 feet long together creating the 108-acre Rubicon reservoir

- with a storage capacity of 1,450 acre-feet;
- (2) Rubicon-Rockbound tunnel, a 13-foot-diameter, 0.2-mile-long unlined horseshoe tunnel which diverts water from Rubicon reservoir to Buck Island reservoir via Rockbound Lake (a non-project facility) located on Highland Creek;
  - (3) Buck Island Dam, a concrete gravity diversion dam located on the Little Rubicon River that is 23 feet high by 293 feet long, and a 15-foot-high by 244-foot-long concrete gravity auxiliary dam together creating 78-acre Buck Island reservoir with a storage capacity of 1,070 acre-feet;
  - (4) Buck Island-Loon Lake tunnel, a 13-foot-diameter, 1.6-mile-long unlined modified horseshoe tunnel which diverts water from Buck Island reservoir to Loon Lake reservoir;
  - (5) Loon Lake Dam, a rockfill dam on Gerle Creek that is 108 feet high by 0.4 mile long with a 250-foot-long side channel spillway on the right bank, a 95-foot-high by 910-foot-long rockfill auxiliary dam, and an earthfill dike. These structures create the 1,450-acre Loon Lake reservoir with a storage capacity of 76,200 acre-feet;
  - (6) Loon Lake penstock—a 14-foot-diameter, 0.3-mile-long concrete-lined horseshoe tunnel, 10-foot-diameter concrete-lined vertical shaft, and 8.5-foot-diameter steel-lined tunnel—which extends from Loon Lake reservoir to Loon Lake powerhouse;
  - (7) Loon Lake powerhouse, an underground powerhouse located over 1,100 feet below the surface of the Loon Lake reservoir which consists of one generating unit with an authorized installed capacity of 70,479 kilowatts (kW);
  - (8) Loon Lake tailrace tunnel, an 18-foot-diameter, 3.8-mile-long unlined horseshoe tunnel which runs from Loon Lake powerhouse and discharges into Gerle Creek reservoir; and
  - (9) Two 69- kilovolt (kV) overhead transmission lines: one (Loon Lake-Robbs Peak) extends 7.9 miles to the Robbs Peak switchyard, and the other (Loon Lake-Union Valley) extends 12.4 miles to the Union Valley switchyard.

The Robbs Peak development includes:

- (1) Gerle Creek Dam, a 58-foot-high, 444-foot-long concrete gravity overflow structure located on Gerle Creek upstream of its confluence with the South Fork Rubicon River. This structure creates the 60-acre Gerle Creek reservoir with a storage capacity of 1,260 acre-feet and incorporates the intake of Gerle Creek canal in its left abutment;
- (2) Gerle Creek canal, an above-ground canal, 22 feet wide and 19 feet deep,

- which extends 1.9 miles from Gerle Creek reservoir to Robbs Peak reservoir;
- (3) Robbs Peak Dam, a 44-foot-high, 320-foot-long concrete gravity overflow structure located on the South Fork Rubicon River upstream of its confluence with Gerle Creek, with twelve 6.2-foot-high steel bulkhead gates on the spillway crest. This structure forms the 2-acre Robbs Peak reservoir with a storage capacity of 30 acre-feet;
  - (4) Robbs Peak tunnel, a 13-foot-diameter, 3.2-mile-long unlined horseshoe tunnel and 10-foot-diameter lined diversion tunnel, which extends from Robbs Peak reservoir to Robbs Peak penstock;
  - (5) Robbs Peak penstock, a 9.75- to 8.5-foot-diameter, 0.4-mile-long steel penstock from Robbs Peak tunnel to Robbs Peak powerhouse;
  - (6) Robbs Peak powerhouse, located on the northeast shore of Union Valley reservoir, equipped with one generating unit with an authorized installed capacity of 28,125 kW; and
  - (7) Robbs Peak-Union Valley Transmission Line, a 69-kV, 6.8-mile-long overhead line which connects the Robbs Peak switchyard to the Union Valley switchyard.

The Jones Fork development includes:

- (1) Ice House Dam, a rockfill dam located on the South Fork Silver Creek, 150-foot-high and 0.3-mile-long, which incorporates one concrete ogee spillway with radial gates and two auxiliary earthfill dikes. These structures create the 678-acre Ice House reservoir with a storage capacity of 45,960 acre-feet;
- (2) Jones Fork tunnel, an 8-foot-diameter, 0.3-mile-long steel-lined concrete horseshoe tunnel from Ice House reservoir to the Jones Fork penstock;
- (3) Jones Fork penstock, a 6-foot-diameter, 1.6-mile-long steel and concrete penstock from Jones Fork tunnel to the Jones Fork powerhouse;
- (4) Jones Fork powerhouse, located on the southeast shore of Union Valley reservoir, with one generating unit with an authorized installed capacity of 10,400 kW; and
- (5) Jones Fork-Union Valley Transmission Line, a 69-kV, 4.0-mile-long overhead transmission line from the Jones Fork switchyard to the Union Valley switchyard.

The Union Valley development includes:

- (1) Union Valley Dam, an earthfill dam located on Silver Creek, 453 feet high and 0.3 mile long, which incorporates a concrete ogee spillway with radial gates. This structure creates the 2,860-acre Union Valley reservoir with a storage capacity of 277,290 acre-feet;

- (2) Union Valley tunnel, an 11-foot-diameter, 268-foot-long concrete-lined tunnel, with an approximately 10-foot-diameter steel penstock in part of the tunnel, which connects Union Valley reservoir with Union Valley powerhouse;
- (3) Union Valley penstock, a 10-foot-diameter, 0.3-mile-long steel penstock which conveys water from the outlet of the Union Valley tunnel to the Union Valley powerhouse;
- (4) Union Valley powerhouse, equipped with one generating unit with an authorized installed capacity of 40,074 kW; and
- (5) Two 230-kV overhead transmission lines: one (Union Valley-Camino) extending 11.8 miles to the Camino switchyard, and the other (Union Valley-Jaybird) extending 5.9 miles to the Jaybird switchyard.

The Jaybird development includes:

- (1) Junction Dam, a concrete double curvature overflow arch dam located on Silver Creek that is 168 feet high and 525 feet long. This structure creates the 64-acre Junction reservoir with a storage capacity of 3,250 acre-feet;
- (2) Jaybird tunnel, an 11- to 14-foot-diameter, 4.4-mile-long modified horseshoe tunnel which connects Junction reservoir and the Jaybird penstock;
- (3) Jaybird penstock, a 6- to 10-foot-diameter steel penstock with a surge tank that is 0.5-mile-long, connecting Jaybird tunnel and Jaybird powerhouse;
- (4) Jaybird powerhouse, equipped with two Pelton turbines, one with an authorized installed capacity of 55,871 kW and the other 56,841 kW; and
- (5) Jaybird-White Rock Transmission Line, a 230-kV, 15.9-mile-long overhead transmission line connecting the Jaybird and White Rock switchyards.

The Camino development includes:

- (1) Camino Dam, a concrete double-curvature arch dam located on Silver Creek which is 133 feet high and 470 feet long with 3 integral bulkhead gates. These structures create the 20-acre Camino reservoir with a storage capacity of 825 acre-feet;
- (2) Camino tunnel, a 13- to 14-foot-diameter, 5-mile-long tunnel, including a surge tank, which connects Camino reservoir with the Camino penstock;
- (3) Brush Creek Dam, a double curvature arch dam located on Brush Creek, 213 feet high and 780 feet long. This structure creates the 20-acre Brush Creek reservoir with a storage capacity of 1,530 acre-feet;
- (4) Brush Creek tunnel, an approximately 14-foot-diameter modified horseshoe tunnel which extends 0.8 mile from Brush Creek reservoir to the lower end of

- Camino tunnel;
- (5) Camino penstock, a 5- to 12-foot-diameter, 0.3-mile-long above-ground steel penstock connecting the combined flow in Camino tunnel to Camino powerhouse;
  - (6) Camino powerhouse, located on the South Fork American River and equipped with two generating units, one with an authorized installed capacity of 73,760 kW and the other with an authorized installed capacity of 70,769 kW; and
  - (7) Two 230-kV overhead transmission lines originate at the Camino switchyard, one (Camino-Lake) extends 31.7 miles to the licensee's Lake Substation and the other (Camino-White Rock) extends 10.0 miles to the White Rock switchyard.

The Slab Creek/White Rock development includes:

- (1) Slab Creek dam, a double curvature, variable radius concrete arch dam which stretches across the South Fork American River and is 250 feet high and 817 feet long with a central uncontrolled overflow spillway. The structure creates the 280-acre Slab Creek reservoir with a storage capacity of 16,600 acre-feet;
- (2) Slab Creek penstock, a 24-inch-diameter, 40-foot-long steel penstock which passes through the dam and connects Slab Creek reservoir with Slab Creek powerhouse;
- (3) Slab Creek powerhouse, which is located at the base of Slab Creek dam and uses minimum flow releases, has one generating unit with an authorized installed capacity of 450 kW;
- (4) White Rock tunnel, an approximately 20- to 24-foot-diameter, 4.9-mile-long modified horseshoe tunnel, with a surge shaft, which connects Slab Creek reservoir with White Rock penstock;
- (5) South Fork powerhouse, located approximately 0.25 miles downstream of the Slab Creek dam housing a single 2,700 kW generating unit fed by a 400-foot-long, 8-foot-diameter penstock connected to the White Rock tunnel;
- (6) Fixed cone boating flow release valve within a reinforced concrete vault approximately 50 feet downstream from the second Slab Creek powerhouse and fed by the same penstock;
- (7) White Rock penstock, a 9- to 15-foot-diameter, 0.3-mile-long above-ground steel penstock that connects White Rock Tunnel to White Rock powerhouse;
- (8) White Rock powerhouse, which is equipped with two generating units, one with an authorized installed capacity of 97,664 kW and the other at 132,824 kW; and
- (9) Two 230-kV overhead transmission lines and two 12 kV distribution line. The



two transmission lines, both 21.8 miles long, connect the White Rock switchyard to the licensee's Folsom Junction. The two 12-kV lines, one 600-foot-long Slab Creek powerhouse line and one 1,300-foot-long second Slab Creek powerhouse line connect to the junction with Pacific Gas and Electric Company's 12-kV distribution line.

(C) The license is subject to the conditions submitted by the California State Water Resources Control Board filed on July 12, 2016, under section 401 of the Clean Water Act, as those conditions are set forth in Appendix A to this order.

(D) The license is subject to the conditions submitted by the U.S. Forest Service, filed on December 31, 2015, under section 4(e) of the Federal Power Act, as those conditions are set forth in Appendix B to this order.

(E) The license is subject to the conditions submitted by the U.S. Bureau of Land Management, filed on December 21, 2015, under section 4(e) of the Federal Power Act as those conditions are set forth in Appendix C to this order.

(F) The following exhibit drawings filed August 27, 2014 for the Upper American River Project conform to the Commission's rules and regulations and are approved and made part of the license. The superseded drawings are deleted from the license.

<b>EXHIBIT</b>	<b>FERC DRAWING No.</b>	<b>FERC DRAWING TITLE</b>
F-166	P-2101-1166	South Fork Enlarged Site Plan
F-167	P-2101-1167	South Fork Powerhouse Turbine Floor Plan
F-168	P-2101-1168	South Fork Powerhouse Roof Plan
F-169	P-2101-1169	South Fork Powerhouse Section
F-170	P-2101-1170	South Fork Powerhouse Elevation
F-171	P-2101-1171	South Fork Penstock Bifurcation and Valve House Plan
F-172	P-2101-1172	South Fork Valve House Section
F-173	P-2101-1173	South Fork Tunnel Portal Entry Details
F-174	P-2101-1174	South Fork Adit and Tunnel Connection

(G) The license is subject to the following additional articles:

Article 205. Commencement of Powerhouse Operation. Within 15 days of the date the new powerhouse authorized in this order becoming operational, the licensee must file a report with the Commission identifying that date. This report will be used to revise the licensee's annual charges under license Article 201.

Article 206. Revised Exhibit A. Within 60 days of the date of issuance of this order, the license must file a revised Exhibit A for Commission approval. The revised exhibit must include a description of all project facilities as currently approved, including the South Fork powerhouse and boating flow release valve authorized in this order.

Article 207. Approved Exhibit F Drawings. Within 45 days of the date of issuance of this order, as directed below, the licensee must file the approved exhibit drawings in electronic file format on compact disc.

Digital images of the approved exhibit drawings must be prepared in electronic format. Prior to preparing each digital image, the FERC Project-Drawing Number (i.e., P-2101-1166, etc.) must be shown in the margin below the title block of the approved drawing. Exhibit F drawings must be identified as **Critical Energy Infrastructure Information (CEII) material under 18 CFR §388.113(c)**. Each drawing must be a separate electronic file, and the file name must include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this order, and file extension in the following format [P-2101-1166, F-166, South Fork Enlarged Site Plan, MM-DD-YYYY.TIF].

All digital images of the exhibit drawings must meet the following format specification:

IMAGERY - black & white raster file  
 FILE TYPE – Tagged Image File Format, (TIFF)  
 CCITT T.6 (CCITT Group 4 fax encoding)  
 RESOLUTION – 300 dpi desired, (200 dpi min)  
 DRAWING SIZE FORMAT – 22” x 34” (min), 24” x 36” (max)  
 FILE SIZE – less than 1 MB desired

Two sets of electronic drawings on compact discs must be filed with the Secretary of the Commission, ATTN: OEP/DHAC.

Article 208. Revised Exhibit F Drawing. Within 30 days of the date of issuance of this order, the licensee must file a revised Exhibit F-2 showing the correct transmission line path. The drawing must comply with section 4.39 and 4.41(h) of the Commission regulations.

Article 209. *Exhibit G Drawings and Federal Lands Acreage.* In accordance with the extended due date for license Article 203, the licensee must file revised Exhibit G drawings by April 6, 2017. These drawings must show the South Fork powerhouse, boating flow release valve, and associated facilities and the filing must include a statement of federal land occupied by the project, including those lands necessary for construction and maintenance of the facilities authorized in this order. The drawings must comply with section 4.39 and 4.41(h) of the Commission's regulations.

Article 311. *Start of Construction.* The licensee must commence construction of the authorized project works within 2 years from the issuance date of this order, and must complete construction within 5 years from the issuance date of this order.

Article 312. *Contract Plans and Specifications.* At least 60 days prior to start of any construction, the licensee must submit one copy of its plans, specifications, supporting design documents, and proposed construction schedule to the Commission's Division of Dam Safety and Inspections (D2SI) – San Francisco Regional Engineer, and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI). The submittal to the San Francisco Regional Engineer must also include as part of the preconstruction requirements: a final Supporting Design Document, a Quality Control and Inspection Program (QCIP), a Temporary Emergency Action Plan, and a Soil Erosion and Sediment Control Plan. The licensee must not begin any construction until the D2SI – San Francisco Regional Engineer has reviewed and commented on the plans and specifications, determined that all preconstruction requirements have been satisfied, and authorized start of construction.

Article 313. *Cofferdam Construction Drawings and Deep Excavations.* Should construction require cofferdams or deep excavations, the licensee must review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction and must make sure construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of the cofferdam, the licensee must submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-San Francisco Regional Engineer and two copies to the Commission (one of these copies must be a courtesy copy to the Commission's Director, D2SI), of the approved cofferdam construction drawings and specifications and the letters of approval for comment by the Commission.

Article 314. *As-built Drawings.* Within 90 days of completion of construction of the project modifications, the licensee must file with the Commission for approval, revised exhibits A, F, and G, as applicable, to describe and show those project facilities as-built. A courtesy copy must be filed with the Commission's Division of Dam Safety and Inspections–San Francisco Regional Engineer; the Director, Division of Dam Safety and Inspections; and the Director, Division of Hydropower Administration and

## Compliance.

Article 412. Requirement to File Plans for Commission Approval. Various conditions of this license found in the U.S. Forest Service's final section 4(e) conditions, require the licensee to prepare plans for approval by the U.S. Forest Service and implement specific measures without prior Commission approval. Each such plan or proposed measures must also be submitted to the Commission, and may not be implemented prior to Commission approval. The licensee must include documentation that it has developed the plan or measures in consultation with the agencies identified and has received approval from the U.S. Forest Service, as appropriate. The Commission reserves the right to make changes to any plan or measure submitted. Upon Commission approval, a plan or requirement will become a requirement of the license, and the licensee must implement the plan or measure, or changes in project operations or facilities, including any changes required by the Commission. The plans and measures are listed below.

<b>U.S. Forest Service Condition</b>	<b>Description</b>	<b>Consult With</b>	<b>Due Date</b>
4	Erosion Control Plan	U.S. Forest Service, U.S Fish and Wildlife Service (FWS), California State Water Resources Control Board (California Water Board), California Department of Fish and Wildlife (California DFW)	90 days prior to ground disturbing activities
5	Solid Waste and Wastewater Plan	U.S. Forest Service, California Water Board, California DFW	60 days prior to ground disturbing activity
6	Water Quality and Water Pollution Plan	U.S. Forest Service, California Water Board	60 days prior to ground disturbing activity
7	Storm Water Pollution Prevention Plan	U.S. Forest Service, California Water Board, California DFW	90 days prior to ground disturbing activity
15	Special Status Plant Protection Plan	U.S. Forest Service, FWS, California DFW	90 days prior to construction activity
16	Non-native Invasive Plants Management Plan	U.S. Forest Service, FWS, California DFW	90 days prior to ground disturbing activity
17	Pre-construction Bat	U.S. Forest Service, FWS,	90 days prior to

	Survey Plan	California DFW	construction activities
24	Construction Noise Plan	U.S. Forest Service	90 days prior to construction activities

Article 413. Boater Take Out Facility. U.S. Forest Service 4(e) condition 50, incorporated into the project license, requires the licensee to develop a plan that includes construction of a boater take out facility on the South Fork American River below the Slab Creek dam and above the White Rock powerhouse. If the licensee finds a suitable location for a boater take out facility for recreational boaters using this reach that is not on U.S. Bureau of Land Management (BLM) administered land, the licensee must complete construction of the facility within 3 years of the date of this order. The facility must include vehicular access, parking sites, an onsite water gage sign, and a kiosk sign that is approved by the U.S. Forest Service, BLM, the California State Water Resources Control Board, California Outdoors, and American Whitewater.

(H) The South Fork American River Iowa Canyon Creek Reconfiguration Plan pursuant to Water Quality Certificate condition 2 and South Fork American River Iowa Canyon Creek Habitat Improvement Plan pursuant to Water Quality Certificate condition 3 and Forest Service 4(e) condition 13, filed August 22, 2016, are approved. The South Fork American River Gravel Augmentation Plan, filed September 6, 2016, pursuant to Water Quality Certificate Condition No. 4 and Forest Service 4(e) Condition 14, is approved.

(I) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 8251 (2012), and the Commission's regulations at 18 C.F.R. § 385.713 (2016). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Steve Hocking, Chief  
Environmental and Project Review Branch  
Division of Hydropower Administration  
and Compliance

**APPENDIX A**

**California State Water Resources Control Board  
Water Quality Certificate Terms and Conditions**

**ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER RESOURCES CONTROL BOARD CERTIFIES THAT THE NEW SLAB CREEK POWERHOUSE AND BOATING FLOW RELEASE VALVE PROJECT** Will comply with sections 301, 302, 303, 306, and 307 of the Clean Water Act, and with applicable provisions of state law, if the Sacramento Municipal Utility District complies with the following terms and conditions during the Project activities certified herein.

CONDITION 1. The Licensee shall, beginning as early as reasonably practicable and no later than three months after completion of Project construction, maintain minimum streamflows as specified in this condition in the 0.25 mile reach of the South Fork American River directly below Slab Creek Dam to the location of the new powerhouse. All specified streamflows are in cfs. The Licensee shall implement the required stream flows in the 0.25 mile reach throughout the term of the license and any extensions. The flow schedules described below specify minimum streamflows by month and water year type. The water year types are defined in Condition 1 of the 2014 UARP certification. Consistent with Condition f of the 2014 UARP certification, the Licensee shall provide notice to the FERC, USFS, USFWS, CDFW, and the Deputy Director of the final water year type determination within 30 days of the Department of Water Resource Bulletin 120 May forecast.

The licensee shall report any deviation from the required minimum flows to the State Water Board and furnish electronic streamflow records upon request. The minimum streamflows specified in the schedules may be temporarily modified if required by equipment malfunction or operating emergencies reasonably beyond the control of the Licensee. If the streamflow is so modified, the licensee shall provide notice to the FERC, USFS, USFWS, CDFW, and the Deputy Director as soon as possible, but no later than 10 days after such incident. The minimum streamflows specified may also be temporarily modified for short periods in non-emergency situations five days after notice to the FERC; and upon approval by the Deputy Director.

Month	Minimum Streamflow by Water Year Type (cfs)				
	Critically Dry	Dry	Below Normal	Above Normal	Wet
October	15	15	20	20	20
November	15	15	15	15	15
December	15	15	15	15	15
January	15	15	15	15	15
February	15	15	15	15	15
March	15	20	20	30	36
April	15	20	36	36	36
May	15	20	36	36	36
June	15	20	30	30	30
July	15	20	20	20	20
August	15	20	20	20	20
September	15	20	20	20	20

CONDITION 2. The Licensee shall implement the South Fork American River Iowa Canyon Creek Reconfiguration Plan dated January 20, 2016. Any modifications to the plan must be approved by the Deputy Director prior to implementing the modified plan. Additionally, as described in the Iowa Canyon Creek Reconfiguration Plan, the licensee shall develop and implement a revegetation plan for the 200 foot reconfiguration reach. The licensee shall provide the Deputy Director with at least 90 days to review and approve the revegetation plan prior to submittal to the FERC, if applicable. The Deputy Director may require modifications as part of the approval. The Licensee shall not implement any activities associated with the revegetation plan that may impact water quality or beneficial uses until the revegetation plan is approved by the Deputy Director. Subsequent modifications to the revegetation plan must be approved by the Deputy Director prior to implementing the modified plan. The licensee shall file the Deputy Director's approval, together with any required plan modification, with the FERC.

CONDITION 3. The Licensee shall implement the South Fork American River Habitat Improvement Plan dated January 20, 2016. Any modifications to the plan must be approved by the Deputy Director prior to implementing the modified plan. The approved plan shall be implemented throughout the term of the license and any extensions.

CONDITION 4. The Licensee shall implement the South Fork American River Gravel Augmentation Plan dated April 26, 2016. Any modification to the plan must be approved by the Deputy Director prior to implementing the modified plan. The approved plan shall be implemented throughout the term of the license and any extensions.

CONDITION 5. The Licensee shall develop and implement a Whitewater Boating Parking Area and Put-in Plan (Boating Plan) in consultation with the State Water Board and the USFS. The Boating Plan shall include: (a) information on potential



discharges to surface water and streambed alteration activities, along with proposed BMPs to avoid or minimize erosion, turbidity, and other potential water quality impairments associated with implementation of the Boating Plan; (b) anticipated construction schedule; and (c) a list of permits and other approvals the Licensee will obtain before initiating construction activities.

The Licensee shall submit the Boating Plan to the Deputy Director for review and approval. The Deputy Director may require modifications as part of the approval. The licensee shall not implement any activities associated with the Boating Plan that may impact water quality or beneficial uses until after receipt of Deputy Director approval and any other necessary regulatory approvals. Subsequent modifications to the Boating Plan must be approved by the Deputy Director prior to implementing the modified plan. The Licensee shall file the Deputy Director's approval, together with any required plan modifications, with the FERC.

CONDITION 6. The Licensee shall revise pertinent UARP plans required per the 2014 UARP license to include the Project and any associated activities and plan. The plans that potentially require revision include, but are not limited to: Spill Prevention and Control Plan; Water Quality Monitoring Plan; Vegetation Management Plan; Transportation System Management Plan; and Water Temperature Monitoring Plan. The Licensee shall provide a list of all applicable plans to the State Water Board within six months of the license amendment for this Project; the list shall include the projected date for submittal of each of the revised plans to the Deputy Director for review and approval. The revised plans shall be reviewed and approved by the Deputy- Director prior to implementation of the modified plans. Approved revised plans shall be filed with the FERC, if necessary, and implemented throughout the term of the license and any extensions.

CONDITION 7. If a state or federally listed sensitive riparian or aquatic species is observed prior to or during Project construction, work shall cease immediately, and the USFS, CDFW, USFWS, and the State Water Board shall be notified. The Licensee, in consultation with the USFS, CDFW, USFWS, and the State Water Board, shall conduct a potential impact assessment and develop and implement appropriate avoidance and protection measures prior to recommencement of work. Following Project construction, if a state or federally- listed sensitive riparian or aquatic species is observed during on-going Project operation or maintenance work, the agencies listed above shall be notified within 10 days, and consulted with to determine appropriate action, as needed.

CONDITION 8. The Licensee shall perform water quality sampling: when performing any in-water work; in the event that Project activities result in any materials reaching surface waters; or when any Project-related activities result in the creation of a visible plume in surface waters. Sampling shall be conducted immediately upstream out of the influence of the Project (background) and no more than 300 feet downstream of

the active work area.

<b>Table 2. Water Quality Sampling</b>			
<b>Parameter</b>	<b>Unit</b>	<b>Type of Sample</b>	<b>Frequency of Sample</b>
Turbidity	Nephelometric turbidity units	Grab	Every four hours during in-water work
Settleable Material	Milliliter per liter	Grab	Every four hours during in-water work
Visible construction-related pollutants	Observation	Visual inspections	Continuous throughout construction period

Sampling results shall be submitted to the State Water Board within two weeks of initiation of sampling and every two weeks thereafter. The sampling frequency may be modified for certain Project activities with written permission from the Deputy Director. If monitoring shows that a parameter identified in Table 2 has exceeded the water quality objective stated in the Basin Plan (Condition 9), construction shall cease immediately and the violation shall be reported immediately to the Deputy Director and Central Valley Water Board Executive Officer. Construction may not recommence without the permission of the Deputy Director.

CONDITION 9. Project activities including but not limited, to construction activities; restoration activities; operation of the boating flow release valve; and operation of the powerhouse, shall not cause an increase in erosion or turbidity greater than those identified in the Basin Plan within the vicinity of and downstream of the Project area. Waters shall be free of changes in turbidity that cause nuisance and adversely affect the water for beneficial uses. Except for in-water working periods discussed below, increases in turbidity shall not exceed background levels (natural turbidity measured in nephelometric turbidity units [NTUs] prior to the start of Project activities) by more than the thresholds identified below and is outlined in the Basin Plan. The table below, taken from the Basin Plan, shows the allowable increases in turbidity due to Project operation compared to natural turbidity.

Table 3. Maximum Increase over Natural Turbidity per the Basin Plan

Natural Turbidity	Maximum Increase
less than one NTU	Total Turbidity Shall not exceed 2 NTU above natural turbidity
Between 1 and 5 NTU	Total Turbidity shall not exceed 1 NTU above natural turbidity
Between 5 and 50 NTU	20 percent above natural turbidity
Between 50 and 100 NTU	10 NTU above natural turbidity
Greater than 100 NTU	10 percent above natural turbidity

These limits may be eased during in-water working periods to allow a turbidity increase of 15 NTU over background turbidity as measured in surface waters within 300 feet downstream of the working area. For in-water working periods, turbidity shall not exceed 15 NTU over background turbidity for more than four consecutive hours or 24 hours total for the Project.

CONDITION 10. On-site containment for storage of chemicals classified as hazardous shall include secondary containment and appropriate management as specified in California Code of Regulations, title 27, section 20320.

CONDITION 11. Construction of the penstock shall occur within Adit #3 and the new powerline shall be constructed in upland areas located away from the South Fork American River and Iowa Canyon Creek, as described in the IS/MND issued by the Licensee for the Project.

CONDITION 12. A temporary cofferdam shall be installed along the southern shoreline of the South Fork American River. The temporary cofferdam will be comprised of rubber water-filled bladders to isolate the construction area associated with the new powerhouse and boating flow release valve. The temporary cofferdam will be constructed to allow the South Fork American River to flow around the Project area while avoiding erosion of newly constructed embankments. The temporary cofferdam shall be installed during the summer low flow period and shall be removed prior to winter storms. Installation and removal of the temporary cofferdam must meet Basin Plan water quality objectives, including the turbidity water quality objectives (Condition 9). The temporary cofferdam shall be removed in a manner that prevents elevated turbidity due to re inundation of the construction site and temporary cofferdam location.

CONDITION 13. The Licensee shall consult with the Consultation Group to ensure the final design of the energy-dissipating structure complies with water quality standards. The Licensee shall submit the final design of the energy-dissipating structure to the Consultation Group for review and comment. The Licensee shall provide the Consultation Group with a minimum of 30 days to comment and make recommendations before filing the final design with FERC. The Licensee shall

provide FERC with any comments provided by the Consultation Group during the consultation process, and a description of how the comments are addressed in the final design. If the licensee does not adopt a recommendation made by a member of the Consultation Group during the comment period, the Licensee's filing of the final design with FERC shall include specific reasons for not adopting the recommendation in the final design. The final design shall include features to ensure the device functions in compliance with water quality standards and to prevent the creation of dangerous hydraulic conditions in the South Fork American River. The design shall clearly identify the assumptions for the expected water velocities and hydraulic conditions in the vicinity of the boating flow release valve. The design shall include warning signs, and other guidance to the public as needed. The design shall adhere to FERC's *Guidelines for Public Safety at Hydropower Projects*<sup>29</sup> or amendments thereto.

CONDITION 14. Notwithstanding the conditions of this water quality certification, all measures, including but not limited to BMP's, described in the application for water quality certification are hereby incorporated by reference and are conditions of approval of this water quality certification. The Licensee shall comply with all measures described in the application for water quality certification and its supplements.

CONDITION 15. Notwithstanding the conditions of this water quality certification, all applicable conditions of the 2014 UARP water quality certification are hereby incorporated by reference and are conditions of this water quality certification. Violations of this water quality certification shall be reported to the State Water Board within 48 hours. Potential impacts to fisheries (e.g, a fish kill or fish observed in obvious distress) resulting from any deviations from prescribed flow or Project activities shall be reported immediately to the State Water Board and CDFW. Following the initial report to the State Water Board and CDFW, the Deputy Director may direct the licensee to provide a report that documents: all observed impacts resulting from the violation or event; an assessment of the cause of the violation or event; and a plan describing how the Licensee intends to avoid such a violation or event in the future. The State Water Board may pursue enforcement related to any violation of this water quality certification.

CONDITION 16. The Licensee shall obtain all of the necessary state and federal permits and any other regulatory approvals prior to construction, including, but not limited to Construction General Permit; National Pollutant Discharge Elimination System permit from the Central Valley Regional Water Board for dewatering

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<sup>29</sup> *Guidelines for Public Safety at Hydropower Projects*. Division of Dam Safety and Inspections. Federal Energy Regulatory Commission. March, 1992

activities; USACE 404 permit; and CDFW streambed alteration agreement. No construction shall commence until all necessary federal, state, and local approvals are obtained.

CONDITION 17. A copy of this water quality certification shall be provided to all contractors and subcontractors conducting Project work, and copies shall remain in their possession at the Project site. The Licensee shall be responsible for work conducted by its contractors or subcontractors.

CONDITION 18. When FERC approval is required for a plan, if Deputy Director approval is not received 14 calendar days prior to an applicable FERC deadline, the Licensee may file the plan with the FERC; however, Deputy Director approval required prior to plan implementation. The licensee must amend its filing with the FERC if modifications are made as part of the Deputy Director's subsequent approval.

CONDITION 19. The Deputy Director shall be notified one week prior to the commencement of Project-related ground-disturbing activities. Upon request, a construction schedule shall be provided to State Water Board staff. The Licensee must provide State Water Board and Central Valley Regional Water Board staff access to the Project site upon request.

CONDITION 20. In the event of any violation or threatened violation of the conditions of this water quality certification, the violation or threatened violation is subject to any remedies, penalties, process or sanctions as provided for under applicable state or federal law. For the purposes of section 401(d), of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, processes or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this water quality certification.

CONDITION 21. In response to a suspected violation of any condition of this water quality certification, the State Water Board may require the holder of any federal permit or license subject to this water quality certification to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The State Water Board may add to or modify the conditions of this water quality certification as appropriate to ensure compliance.

CONDITION 22. Any requirement in this water quality certification that refers to an agency whose authorities and responsibilities are transferred to or subsumed by another state or federal agency, will apply equally to the successor agency.

CONDITION 23. The Licensee must submit any changes to the Project, including Project operation, which would have a material effect on the findings, conclusions,

water quality, beneficial uses or conditions of this water quality certification, to the State Water Board for prior review and written approval prior to implementation. If the State Water Board is not notified of a significant change to the Project, it will be considered a violation of this water quality certification.

CONDITION 24. The State Water Board will provide notice and an opportunity to be heard in exercising its authority to add to or modify any of the conditions of this water quality certification.

CONDITION 25. This water quality Certification is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330 and California Code of Regulations, title 231 division 3, Chapter 28, article 6 (commencing with section 3867).

CONDITION 26. Water quality certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a FERC license or an amendment to a FERC license unless the pertinent water quality certification application was filed pursuant to California Code of Regulations, title 231 section 3855, subdivision (b) and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

CONDITION 27. Water quality certification is conditioned upon total payment of any fee required under California Code of regulations, title 23, division 31, chapter 28, and owed by the Licensee.

CONDITION 28. This water quality certification is contingent on compliance with all applicable requirements of the Basin Plan. The Licensee shall notify the Deputy Director within 24 hours of any unauthorized discharge to surface waters.

CONDITION 29. If at any time an unauthorized discharge to surface waters (including rivers or streams) occurs or monitoring indicates that the Project has or could soon be in violation with water quality objectives, the associated Project activities shall cease immediately and the Deputy Director shall be notified. Associated activities will not resume without approval from the Deputy Director.

CONDITION 30. Notwithstanding any more specific conditions in this water quality certification, the Project shall be operated in a manner consistent with all water quality Standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act. The Licensee must take all reasonable measures to protect the beneficial uses of waters of the South Fork American river and its tributaries.

CONDITION 31. This water quality certification does not authorize any act which results in the taking of a threatened, endangered or candidate species or any act, which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (ESA) (Fish and G. Code, §§ 2050-2097) or the

federal ESA (16 U.S.C. §§ 1531-1544). If a "take" will result from any act authorized under this water quality certification or water rights held by the Licensee, the Licensee must obtain authorization for the take prior to any construction or operation of the portion of the Project that may result in a take. The licensee is responsible for meeting all requirements of the applicable ESAs for the Project authorized under this water quality certification.

CONDITION 32. The State Water Board reserves authority to modify this water quality certification if monitoring and reporting results indicate that continued operation of the Project could violate water quality objectives or impair the beneficial uses of the South Fork American River or its tributaries.

CONDITION 33. If Project operation requires modifications to any of the terms or conditions of this water quality certification, the Licensee shall request an amendment of the water quality certification from the State Water Board.

CONDITION 34. Future changes in climate projected to occur during the license term may significantly alter the baseline assumptions used to develop the conditions in this water quality certification. The State Water Board reserves authority to modify or add conditions in this water quality certification to require additional monitoring and/or other measures, as needed, to verify that Project operations meet water quality objectives and protect beneficial uses assigned to the project-affected stream reaches.

CONDITION 35. The State Water Board may add to or modify the conditions of this water quality certification as appropriate to coordinate the operations of this Project and other hydrologically connected water development projects, where coordination of operations is reasonably necessary to achieve water quality standards or to protect beneficial uses of water.

CONDITION 36. Nothing in this water quality certification shall be construed as State Water Board approval of the validity of any water rights, including pre-1914 claims. The State Water Board has separate authority under the Water Code to investigate and take enforcement action if necessary, to prevent any unauthorized or threatened unauthorized diversions of water.

**APPENDIX B**

**U.S. Department of Agriculture, Forest Service  
Final 4(e) Terms and Conditions**



## **INTRODUCTION**

The USDA Forest Service (FS) submits the following Preliminary<sup>30</sup> Section 4(e) Conditions for the Slab Creek Flow Facility Project License Amendment, part of the Upper American River Project, FERC No. 2101, in accordance with 18 CFR 4.34(b)(1)(i). Section 4(e) of the Federal Power Act (FPA) states the Commission may issue a license for a project within a reservation only if it finds that the License will not interfere or be inconsistent with the purpose for which such reservation was created or acquired. This is an independent threshold determination made by the Commission, with the purpose of the reservation defined by the authorizing legislation or proclamation (see *Rainsong v. FERC*, 106 F.3d 269 (9th Cir. 1977)). FS, for its protection and utilization determination under Section 4(e) of the FPA, may rely on broader purposes than those contained in the original authorizing statutes and proclamations in prescribing conditions (see *Southern California Edison v. FERC*, 116F.3d 507 (D.C. Cir. 1997)).

The following terms and conditions are based on those resource and management requirements enumerated in the Organic Administration Act of 1897 (30 Stat. 11), the Multiple-Use Sustained Yield Act of 1960 (74 Stat. 215), the National Forest Management Act of 1976 (90 Stat. 2949), and any other law specifically establishing a unit of the National Forest System or prescribing the management thereof (such as the Wild and Scenic Rivers Act), as such laws may be amended from time to time, and as implemented by regulations and approved by Land and Resource Management Plans prepared in accordance with the National Forest Management Act. Specifically, the 4(e) conditions in this document are based on the Land and Resource Management Plan (as amended) for the Eldorado National Forest, as approved by the Regional Forester of the Pacific Southwest Region.

Pursuant to Section 4(e) of the Federal Power Act, the Secretary of Agriculture, acting by and through FS, considers the following conditions necessary for the adequate protection and utilization of the land and resources of the Eldorado National Forest. License articles contained in the Federal Energy Regulatory Commission's (Commission's) Standard Form L-1 (revised October 1975) issued by Order No. 540, dated October 31, 1975, cover general requirements. Part I of this document includes standard administrative conditions deemed necessary for the administration of National Forest System lands.

Part II of this document includes standard resource conditions deemed necessary for protection and utilization of National Forest System lands. Part III of this document includes specific resource requirements for protection and utilization of National Forest System lands related to the Slab Creek Flow Facility License Amendment.

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<sup>30</sup> *Although the word preliminary is used here, these are the final conditions.*

## **PART I: STANDARD ADMINISTRATIVE CONDITIONS**

The following FS Final Section 4(e) Conditions from the license for the Upper American River Project (issued July 23, 2014) apply to the Slab Creek Flow Facility License Amendment and are herein incorporated by reference:

- Surrender of License or Transfer of Ownership
- Valid Claims and Existing Rights
- Compliance with Regulations on National Forest System Lands
- Damage to Land, Property, and Interests of the United States
- Indemnification
- Surveys, Land Corners
- Hazardous Substances Plan
- Use of Explosives
- Pesticide Use Restrictions
- Risks and Hazards on National Forest System Lands
- Project Access Roads
- Traffic Safety
- Access and Road Use by Licensee
- Crossings
- Signs
- Construction Inspections
- Unattended Construction Equipment
- Maintenance of Improvements

### **Condition No. 1 – Revision of Forest Service Conditions**

FS reserves the right, after notice and opportunity for comment, to require changes in the Project and its operation through revision of the Section 4(e) conditions to accomplish protection and utilization of National Forest System lands and resources. FS also reserves the right to modify these conditions, if necessary, to respond to any significant changes that warrant a revision of these conditions, for example, a Final Biological Opinion issued for this Project by the National Marine Fisheries Service or United States Fish and Wildlife Service; or any Certification issued for this Project by the State Water Resources Control Board.

**Condition No. 2 - Requirement to Obtain a Forest Service Special Use Authorization for Use of National Forest System Lands**

Licensee shall obtain a special use authorization from FS for the occupancy and use of National Forest System lands that are (1) not part of the existing license but are added to the FERC boundary by the Commission and (2) not previously covered by a special use authorization. Licensee shall obtain the executed authorization within 6 months of license issuance and prior to beginning any ground disturbing activities on National Forest System lands to be covered by the special use authorization and shall file that special use authorization with the Commission. Licensee shall be responsible for the costs of collecting all information directly related to the evaluation of the effects of the proposed occupancy and use that FS needs in order to make a decision concerning issuance of a special use authorization.

**Condition No. 3 - Requirement to Obtain a Short-Term Forest Service Special Use Authorization**

Licensee shall obtain a short-term special use authorization prior to beginning any ground disturbing activities on National Forest System land. Licensee shall be responsible for the costs of collecting and analyzing all information directly related to the evaluation of the effects of the proposed project that FS needs in order to make a decision concerning issuance of a short-term special use authorization. Licensee may commence ground disturbing activities authorized by the License and short-term special use authorization no sooner than 60 days following the date Licensee files the FS short-term special use authorization with the Commission, unless the Commission prescribes a different commencement schedule. In the event there is a conflict between any provisions of the License and FS special use authorization, the special use authorization shall prevail to the extent that FS, in consultation with the Commission, deems the terms of the special use authorization necessary to protect and utilize National Forest System resources.

The short-term special use permit shall address but not be limited to:

- Safety.
- Use and storage of equipment.
- Properly licensed construction personnel.
- Inspections.
- Requirements determined necessary by FS to meet applicable Forest Plan direction, including direction in the Sierra Nevada Forest Plan Amendment.

Before any construction occurs on National Forest System lands, Licensee shall obtain prior written approval of FS for all final design plans for Project components, which FS deems as affecting or potentially affecting National Forest System resources.

## **PART II: STANDARD RESOURCE CONDITIONS**

### **Condition No. 4 – Erosion Control Plan**

Prior to undertaking activities on National Forest System lands, Licensee shall complete, in consultation with FS, an Erosion Control Plan that is approved by FS. Licensee shall submit the plan to FS at least 180 days prior to undertaking activities on National Forest System lands. The objective of the erosion control plan is to effectively limit and mitigate erosion and sedimentation from any ground-disturbing activities, provide seamless transition between planning-level mitigation descriptions and on-the-ground implementation, ensure that all disturbance related mitigation requirements for the project are captured in one comprehensive document, and comply with overarching plans (such as the Sierra Nevada Forest Plan Amendment).

The plan shall be based on actual-site conditions (including but not limited to geological, soil, climate, and groundwater conditions and shall include:

- Erosion and sediment control measures that include: (1) list of anticipated ground-disturbing activities; (2) a checklist which includes all required mitigation measures; (3) illustrations of control practices designed to prevent erosion and sedimentation; (4) map/drawing(s) showing soil or water buffer zones; (5) a storm preparedness plan; (6) a winterization plan; (7) operability specifications for any winter operations proposed; and (8) revegetation of disturbed areas in accordance with current direction on use of native plants and locality of plant and seed sources. The selection of erosion control measures shall be based on assessments of site conditions and how storm events may contribute to erosion. A description of actual site conditions will be included in the plan.
- Clear, legible, and adequately scaled maps that depict specific locations of storm water structures and controls both during and post-project; equipment access, storage, and service sites; road locations, watercourse crossings, and other relevant area features.
- Detailed plans for any diversion of live streams, including storm contingencies.
- Provisions for non-storm water management.
- Provisions for waste management and disposal.
- Inspection, maintenance, and repair procedures for pollution-control measures and devices.
- Storm water control structures and management practices to be implemented post-project.

- The erosion control plan may incorporate, by reference, the appropriate elements of other plans required by local, State, or Federal agencies.

Once the plan is approved by FS, it shall be filed with FERC.

### **Condition No. 5 – Solid Waste and Waste Water Plan**

Prior to undertaking activities on National Forest System lands, Licensee shall complete, in consultation with FS, a Solid Waste and Waste Water Plan that is approved by FS. Licensee shall submit the plan to FS at least 180 days prior to undertaking activities on National Forest System lands. At a minimum, the plan must address the estimated quantity of solid waste and waste water generated each day, the location of disposal sites and methods of treatment, the implementation schedule, areas available for disposal of wastes, design of facilities, comparisons between on- and off-site disposal, and maintenance programs. Once the plan is approved by FS, it shall be filed with FERC.

### **Condition No. 6 – Water Quality and Water Pollution Plan**

Prior to undertaking activities on National Forest System lands, Licensee shall complete, in consultation with FS, a Water Quality and Water Pollution Plan that is approved by FS. Licensee shall submit the plan to FS at least 180 days prior to undertaking activities on National Forest System lands. Licensee shall consult with FS and other appropriate resource agencies with authority over the public trust resources within the area of potential effects from construction and operation of the project. Licensee shall provide appropriate resource agencies detailed design plans and a proposed timeline for construction and must obtain all necessary permits before undertaking any activities on National Forest System lands.

Licensee shall discharge no waste or byproduct on or affecting National Forest System lands if it contains any substances in concentrations that would result in violation of water quality standards set forth by the State; would impair present or future beneficial uses of water; would cause pollution, nuisance, or contamination; or would unreasonably degrade the quality of any waters in violation of any federal or state law. The Water Quality and Water Pollution Plan will include water quality monitoring which evaluates the implementation and effectiveness of management prescriptions in protecting water quality (beneficial uses). Once the plan is approved by FS, it shall be filed with FERC.

### **Condition No. 7 – Storm Water Pollution Prevention Plan**

Prior to undertaking any activities on National Forest System lands, licensee shall complete, in consultation with FS and other appropriate resource agencies, a Storm Water Pollution Prevention Plan (SWPPP) that is approved by FS. Licensee shall submit the

plan to FS at least 180 days prior to undertaking activities on National Forest System lands. The plan will be prepared by a Qualified SWPPP Developer (QSD), in consultation with California State Department of Fish and Wildlife (CDFW), FS, and California State Water Resources Control Board (SWRCB). During construction, Licensee shall prevent water pollution by implementing management practices identified in the Storm Water Pollution Prevention Plan and other requirements identified by FS and other appropriate resource agencies.

### **Condition No. 8 – Wildlife and Sensitive Plant Protection Measures**

Prior to undertaking activities on National Forest System lands, Licensee shall ensure that biological evaluations (including surveys deemed necessary by FS) are completed and approved by FS. If Licensee prepares the biological evaluations, Licensee shall submit the biological evaluations to FS at least 180 days prior to undertaking activities on National Forest System lands. The biological evaluations shall evaluate the potential effects of the action on the aquatic, terrestrial, and botanical species or their habitat and follow the recommendations in the biological evaluation determined necessary by FS. The biological evaluations must be approved by FS. FS may require mitigation measures for the protection of sensitive species.

If occurrences of FS, FWS, or CDFW sensitive plant or aquatic or terrestrial wildlife species are detected prior to or during ongoing construction, operation, or maintenance of the Project or during Project operations, the licensee shall immediately notify FS, CDFW, and FWS. If FS, FWS, or CDFW determine that the Project-related activities are adversely affecting the sensitive species, the licensee shall, in consultation with FS, CDFW, and FWS, develop and implement appropriate protection measures.

### **Condition No. 9 – Fire Management and Response Plan**

Prior to undertaking activities on National Forest System lands, Licensee shall complete, in consultation with FS, a Fire and Fuels Management Plan (FFMP) that is approved by FS. Licensee shall submit the plan to FS at least 180 days prior to undertaking activities on National Forest System lands. The plan shall set forth in detail Licensee's responsibility for the prevention (including fuels treatment), reporting, emergency response, and investigation of fires related to Project operations. Once the plan is approved by FS, it shall be filed with FERC.

Minimum components include, but may not be limited to:

- Fuels Treatment/Vegetation Management: Identification of fire hazard reduction measures and reoccurring maintenance measures to prevent the escape of project-induced fires.

- Fire Prevention and Patrol: Address fire danger and public safety associated with project induced recreation, including fire danger associated with dispersed camping, existing and proposed developed recreation sites, trails, and vehicle access. Identify water drafting sites and other fire suppression resources (including water rights for these sites).
- Emergency Response Preparedness: Analyze fire prevention needs including equipment and personnel availability.
- Reporting: Licensee shall report any project related fires immediately to FS.
- Fire Control/Extinguishing: Provide FS a list of the locations of available fire suppression equipment and the location and availability of fire suppression personnel.

### **PART III: SPECIFIC RESOURCE REQUIREMENTS**

#### **Condition No. 10 - Forest Service Approval of Final Design**

Before any construction of the Project occurs on National Forest System lands, Licensee shall obtain prior written approval of FS for all final design plans for Project components, which FS deems as affecting or potentially affecting National Forest System resources. Licensee shall follow the schedules and procedures for design review and approval specified in the conditions herein. As part of such written approval, FS may require adjustments to the final plans and facility locations to preclude or mitigate impacts and to insure that the Project is either compatible with on-the-ground conditions or approved by FS based on agreed upon compensation or mitigation measures to address compatibility issues. Should such necessary adjustments be deemed necessary by FS, the Commission, or Licensee to be a substantial change, Licensee shall follow the procedures of FERC Standard Article 2 of the license. Any changes to the license made for any reason pursuant to FERC Standard Article 2 or Article 3 shall be made subject to any new terms and conditions of the Secretary of Agriculture made pursuant to Section 4(e) of the Federal Power Act.

#### **Condition No. 11- Approval of Changes**

Notwithstanding any license authorization to make changes to the Project, when such changes directly affect National Forest System lands, Licensee shall obtain written approval from FS prior to making any changes in any constructed Project features or facilities, or in the uses of Project lands and waters or any departure from the requirements of any approved exhibits filed with the Commission. Following receipt of such approval from FS, and a minimum of 60 days prior to initiating any such changes, Licensee shall file a report with the Commission describing the changes, the reasons for the changes, and showing the approval of FS for such changes. Licensee shall file an exact copy of this report with FS at the same time it is filed with the Commission. This

condition does not relieve Licensee from the amendment or other requirements of Article 2 or Article 3 of this license.

## **Condition No. 12 – Minimum Streamflows**

### **Water Year Types**

The minimum streamflow schedule has been separated into five water year types: Wet, Above Normal (AN), Below Normal (BN), Dry, and Critically Dry (CD). The licensee shall determine the water year type based on the water year forecast of unimpaired runoff in the American River below Folsom Lake published, near beginning of each month from February through May, in the California Department of Water Resources (DWR) Bulletin 120 “Report of Water Conditions in California.” Specifically, the “American River Below Folsom Lake” forecast is currently shown in the “Water Year Forecast” column of the “Water Year Unimpaired Runoff” table in Bulletin 120. The water year types are defined as follows:

<u>Year Type</u>	<u>American River Water Year Forecast</u>
Wet	greater than or equal to 3.5 MAF
AN	greater than or equal to 2.6 MAF but less than 3.5 MAF
BN	greater than 1.7 MAF or equal to but less than 2.6 MAF
Dry	greater than 0.9 MAF or equal to but less than 1.7 MAF
CD	less than 0.9 MAF

Each February through May the licensee shall determine the water year type based on the DWR Bulletin 120 forecast and shall operate for that month based on that forecast beginning 3 days after issuance of the forecast and continuing until 2 days after issuance of a subsequent monthly forecast. The May forecast shall be used to establish the final water year type for the remaining months of the water year and the month of October. The water year type for the months of November through January shall be based on the Department of Water Resources’ Full Natural Flow record for the American River at Folsom (California Data Exchange Center site AMF sensor 65) for the preceding water year, and the licensee shall operate based on that record beginning November 1. The licensee shall provide Notice to FS, FERC, CDFW, FWS, and SWRCB of the final water year type determination within 30 days of the May forecast.

### **South Fork American River Below Slab Creek Reservoir Dam**

Beginning as early as practical but within 3 months of the conclusion of construction activities, Licensee shall maintain the minimum streamflow specified in the following schedule based on month and water year type. The minimum streamflows apply between Slab Creek Reservoir Dam and the new Slab Creek Flow Facility Powerhouse (approximately .25 miles). Below the Slab Creek Flow Facility Powerhouse, the



minimum streamflows specified in the Final Section 4(e) Conditions for the Upper American River Project license shall be implemented. The following minimum streamflows shall be measured at USGS gage 11443500, located at the existing Slab Creek Dam Powerhouse.

Month	Minimum Streamflow by Water Year (cfs)				
	CD	DRY	BN	AN	WET
OCT	15	15	20	20	20
NOV	15	15	15	15	15
DEC	15	15	15	15	15
JAN	15	15	15	15	15
FEB	15	15	15	15	15
MAR	15	20	20	30	36
APR	15	20	36	36	36
MAY	15	20	36	36	36
JUNE	15	20	30	30	30
JULY	15	20	20	20	20
AUG	15	20	20	20	20
SEPT	15	20	20	20	20

### **Condition No. 13 – South Fork American River Habitat Improvement Plan**

Prior to undertaking any activities on National Forest System lands, licensee shall complete a South Fork American River Habitat Improvement Plan that is approved by FS. Licensee shall submit the plan to FS at least 180 days prior to undertaking activities on National Forest System lands. The plan shall be developed in consultation with FS, CDFW, FWS, and SWRCB. The plan shall include measures to ensure that minimum streamflow releases emanating from Slab Creek Dam to the new Slab Creek Flow Facility on the South Fork American River as surface flow rather than subsurface flow, thereby providing riffle habitat for aquatic resources. The plan will also include a post-construction surface flow and water temperature monitoring plan to determine the effectiveness of the habitat improvement plan. Once the plan is approved by FS, it shall be filed with FERC.

### **Condition No. 14 – South Fork American River Gravel Augmentation Plan**

Prior to undertaking any activities on National Forest System lands, licensee shall complete a South Fork American River Gravel Augmentation Plan that is approved by FS. Licensee shall submit the plan to FS at least 180 days prior to undertaking activities on National Forest System lands. The plan shall be developed in consultation with FS, CDFW, FWS, and SWRCB. The plan shall include measures to enhance trout spawning habitat in the ¼-mile reach between Slab Creek Reservoir Dam and the new Slab Creek Flow Facility. The plan shall focus on increasing the amount of spawning gravel in the

600-foot segment between the large pool and new powerhouse. The size of the gravel pile is expected to be 200-300 cubic yards; its replenishment frequency will be determined by the results of annual monitoring of the pile size and gravel distribution in the 600-foot section of the SFAR. The plan shall also include a proposal for introducing gravel and monitoring of gravel entrainment and distribution, water quality (in-situ and chemistry), benthic macroinvertebrate (BMI), algae, and fish population monitoring sites within the ¼-mile reach, thereby augmenting the monitoring sites already established for the same resources throughout the UARP. Once the plan is approved by FS, it shall be filed with FERC.

### **Condition No. 15 - Special-Status Plant Protection Plan**

Prior to undertaking any activities on National Forest System lands, licensee shall complete a Special-Status Plant Protection Plan for FS approval. Licensee shall submit the plan to FS at least 180 days prior to undertaking activities on National Forest System lands. The plan shall be developed in consultation with FS, CDFW, and FWS. The plan shall include measures to minimize the probability of Project construction and/or operational impacts on *Clarkia biloba ssp. Brandegeae*. The plan will include a number of measures, including species protection during construction, employee training, development of an appropriate GIS database, and inclusion of special-status plants at the Project site into the UARP Vegetation Management Plan. Licensee will also include a riparian vegetation monitoring site within the ¼-mile reach in addition to the riparian monitoring sites throughout the UARP. Once the plan is approved by FS, it shall be filed with FERC.

### **Condition No. 16 – Non-Native Invasive Plants Management Plan**

Prior to undertaking any activities on National Forest System lands, licensee shall complete a Non-Native Invasive Plants Management Plan for FS approval. Licensee shall submit the plan to FS at least 180 days prior to undertaking activities on National Forest System lands. The plan shall be developed in consultation with FS, CDFW, and FWS. The plan shall include measures to address the establishment and spread of non-native invasive plants in the Project area. The plan will include a number of measures, including employee education, development of an appropriate GIS database, re-vegetation of construction sites, cleaning of equipment, and inclusion of invasive and noxious plants at the Project site into the UARP Vegetation Management Plan. Once the plan is approved by FS, it shall be filed with FERC.

### **Condition No. 17 – Bat Protection Measures**

Prior to undertaking any activities on National Forest System lands, licensee shall complete summer and winter bat surveys immediately cross-channel from the construction site (north bank) and 0.5 mile upstream and downstream of the adit portal

(along the south bank) of the South Fork American using methods approved by FS. The surveys shall include:

- Daytime observations and identification of potentially suitable roosting habitat.
- Sunset-night time assessments of potential roosting habitat, using acoustic devices, mist netting, and other standard techniques.

If the surveys indicate the potential for impacts to a maternity roost or hibernating special-status bats, licensee shall develop appropriate avoidance, protection, and/or mitigation measures in consultation with FS, CDFW, and FWS. The measures shall be approved by FS. Once they are approved by FS, the measures shall be filed with FERC.

### **Condition No. 18 - Project Powerlines**

Raptor-safe powerline design configurations described in Avian Protection on Powerline Interaction Committee's (APLIC) "Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006" (APLIC 2006), or the most current edition of this APLIC document, will be used as a guideline for all new powerlines or when replacement of existing poles, phase conductors, and associated equipment is required.

### **Condition No. 19 – Heritage Resources**

Section 106 requirements of the National Historic Preservation Act and its implementing regulations, found at 36 CFR 800, must be met prior to the licensee undertaking activities on National Forest System lands.

Prior to undertaking any activities on National Forest System lands, licensee shall complete a Heritage Resources Management Plan that is approved by FS. Licensee shall submit the plan to FS at least 180 days prior to undertaking activities on National Forest System lands. Once the plan is approved by FS, it shall be filed with FERC.

If, prior to or during ground disturbance or as a result of project operations, items of potential cultural, historical, archeological, or paleontological value are reported or discovered, or a known deposit of such items is disturbed, the licensee shall immediately cease work in the area so affected. The licensee shall then notify FS and shall not resume work on ground disturbing activities until it receives written approval from FS.

### **Condition No. 20 – Whitewater Boating Parking Area and Put-In**

Prior to undertaking activities on National Forest System lands, Licensee shall develop a plan to construct a parking area along Slab Creek Road and boater put-in on the south bank of the South Fork American River with a drop-off and turnaround area. Licensee

shall submit the plan to FS at least 180 days prior to undertaking activities on National Forest System lands. The plan shall be approved by FS. The parking area and put-in shall be completed by the time the Slab Creek Flow Facility is operational. The parking area and put-in shall be coordinated with the Slab Creek Recreation Management Plan required in Section 4(e) Condition No. 50 of the Upper American River Project License (issued July 23, 2014).

### **Condition No. 21 - Whitewater Boater and River User Protection**

Licensee shall design the boating release valve to minimize spray interfering with whitewater boaters negotiating rapids as they pass the valve. The design shall be developed in coordination with FS, SWRCB, and representatives of the boating community including American Whitewater, American River Recreation Association, California Outdoors, and interested private boaters.

If determined necessary by FS, Licensee shall post warning signs at river access points to ensure that river users such as anglers are aware of ramping of flows during whitewater releases.

### **Condition No. 22 – Construction Transportation Plan**

Prior to undertaking activities on National Forest System lands, licensee shall complete a New Slab Powerhouse Construction Transportation Plan that is approved by FS. Licensee shall submit the plan to FS at least 180 days prior to undertaking activities on National Forest System lands. The plan shall minimize the effects of construction traffic on the transportation system in the Project area. The plan shall include:

- An offsite staging area for workers and delivery trucks.
- A construction traffic schedule.
- Road improvements and reconstruction.
- Driver awareness training.

Once the plan is approved by FS, it shall be filed with FERC.

### **Condition No. 23 – Visual Resource Plan**

Prior to undertaking activities on National Forest System lands, Licensee shall complete a Visual Resource Plan that is approved by FS. Licensee shall submit the plan to FS at least 180 days prior to undertaking activities on National Forest System lands. The plan shall include the following:

- Revegetation plan.
- Final appearance, material selection and colors, treatment of buildings and other project features.
- Grading plan.
- Photographic renderings of transmission lines and measures proposed to mitigate visual impacts.

### **Condition No. 24 – Construction Noise Plan**

Prior to undertaking activities on National Forest System lands, licensee shall complete a Construction Noise Plan that is approved by FS. Licensee shall submit the plan to FS at least 180 days prior to undertaking activities on National Forest System lands. The plan shall include:

- Limiting the hours and days of noise-generating construction activities.
- Periodic monitoring of noise generated by construction activities.
- Proper maintenance of construction equipment to reduce noise.
- Establishing a community response program.
- Requiring all vehicles to undergo regular maintenance, in particular muffler maintenance.
- Limiting speeds on Slab Creek Road to 20 mph or less.
- Limiting equipment/materials transportation to within 9:00 a.m. and 2:00 p.m. on weekdays whenever possible.
- Limiting idling for vehicles.

There may also be a need to address noise impacts to certain species, depending on the outcome of surveys.

Once the plan is approved by FS, it shall be filed with FERC.

### **Condition No. 25 – Spoils Disposal**

No spoils shall be deposited on National Forest System lands without prior approval of FS.

**APPENDIX C**

**U.S. Department of the Interior, Bureau of Land Management  
Final 4(e) Terms and Conditions**

## **INTRODUCTION:**

The Bureau of Land Management (BLM) submits the following Final Section 4(e) Conditions for the Slab Creek Flow Facility Project License Amendment, part of the Upper American River Project, FERC No. 2101, in accordance with 18 CFR 4.34(b)(1)(i). Section 4(e) of the Federal Power Act (FPA) states the Commission may issue a license for a project within a reservation only if it finds that the License will not interfere or be inconsistent with the purpose for which such reservation was created or acquired. This is an independent threshold determination made by the Commission, with the purpose of the reservation defined by the authorizing legislation or proclamation (see *Rainson v. FERC*, 106 F.3d 269 (9th Cir. 1977)). Pursuant to Section 4(e) of the Federal Power Act, the Secretary of Interior, acting by and through BLM, considers the following conditions necessary for the adequate protection and utilization of the land and resources of the BLM. License articles contained in the Federal Energy Regulatory Commission's (Commission's) Standard Form L-1 (revised October 1975) issued by Order No. 540, dated October 31, 1975, cover general requirements. Part I of this document includes standard administrative conditions deemed necessary for the administration of BLM affected lands. BLM is including the same Standard 4(e) Conditions that were used in BLM's Filing for the UARP 2101 Licensee filed and included in the UARP Project 2101 license. Part II of this document includes specific resource requirements for protection and utilization of BLM lands related to the Slab Creek Flow Facility License Amendment. Part III of this document contains 10(a) Recommendations.

## **PART I: STANDARD ADMINISTRATIVE CONDITIONS**

The following BLM Final Section 4(e) Conditions from the license for the Upper American River Project apply to the Slab Creek Flow Facility License Amendment and are herein incorporated by reference:

### **Condition 1. Bureau of Land Management Approval of Final Design**

Before any new construction of the Project occurs on Bureau of Land Management lands, the Applicant shall obtain prior written approval of BLM for all final design plans for Project components, which BLM deems as affecting or potentially affecting Bureau of Land Management lands. The applicant shall follow the schedules and procedures for design review and approval specified in the conditions herein. As part of such written approval, BLM may require adjustments to the final plans and facility locations to preclude or mitigate impacts and to insure that the Project is either compatible with on-the-ground conditions or approved by BLM based on agreed upon compensation or mitigation measures to address compatibility issues. Should such necessary adjustments be deemed by BLM, FERC, or the applicant to be a substantial change, the applicant shall follow the procedures of Article 2 of the license. Any changes to the license made for

any reason pursuant to Article 2 or Article 3 shall be made subject to any new terms and conditions of the Secretary of Interior made pursuant to Section 4(e) of the Federal Power Act.

**Condition 2. Approval of Changes**

Notwithstanding any license authorization to make changes to the Project, when such changes directly affect BLM lands the applicant shall obtain written approval from BLM prior to making any changes in any constructed project features or facilities, or in the uses of project lands and waters or any departure from the requirements of any approved exhibits filed with FERC. Following receipt of such approval from BLM, and a minimum of 60 days prior to initiating any such changes, the applicant shall file a report with PERC describing the changes, the reasons for the changes, and showing the approval of the BLM for such changes. The applicant shall file an exact copy of this report with BLM at the same time it is filed with FERC. This article does not relieve the applicant from the amendment or other requirements of Article 2 or Article 3 of this license.

**Condition 3. Consultation**

Each year between February 15 and April 15, the applicant shall consult with BLM with regard to measures needed to ensure protection and utilization of BLM resources affected by the Project. Within 60 days following such consultation, the applicant shall file with FERC evidence of the consultation with any recommendations made by BLM. BLM reserves the right, after notice and opportunity for comment, to require changes in the Project and its operation through revision of the 4(e) conditions that require measures necessary to accomplish protection and utilization of BLM resources.

**Condition 4. Modification of 4(e) Conditions After Biological Opinion or Water Quality Certification**

BLM reserves the right, after notice and opportunity for comment, to modify these conditions, if necessary, to respond to any Final Biological Opinion issued for this Project by the United States Fish and Wildlife Service, NOAA Fisheries, or any Certification or permit issued for this Project by the State Water Resources Control Board or Army Corps of Engineers.

**Condition 5. Surrender of License or Transfer of Ownership**

Prior to any surrender of this license, the applicant shall provide assurance acceptable to BLM that applicant shall restore any Project area directly affecting BLM lands to a condition satisfactory to BLM upon or after surrender of the license, as appropriate. The restoration plan shall identify the measures to be taken to restore such BLM lands and



shall include adequate financial mechanisms to ensure performance of the restoration measures.

In the event of any transfer of the license or sale of the Project, the applicant shall assure that, in a manner satisfactory to BLM, the applicant or transferee will provide for the costs of surrender and restoration. If deemed necessary by BLM to assist it in evaluating the applicant's proposal, the applicant shall conduct an analysis, using experts approved by BLM, to estimate the potential costs associated with surrender and restoration of any Project area directly affecting BLM lands to BLM specifications. In addition, BLM may require the applicant to pay for an independent audit of the transferee to assist BLM in determining whether the transferee has the financial ability to fund the surrender and restoration work specified in the analysis.

**Condition 6. Valid Claims and Existing Rights**

The applicant shall be subject to all valid claims and existing rights.

**Condition 7. Compliance with Regulations on Bureau of Land Management Lands**

The applicant shall comply with the regulations of the Department of Interior for activities on BLM lands, and all applicable Federal, State, county, and municipal laws, ordinances, or regulations in regards to the area or operations on or directly affecting BLM lands, to the extent those laws, ordinances or regulations are not pre-empted by federal law.

**Condition 8. Damage to Land, Property, and Interests of the United States**

The licensee has an affirmative duty to protect the land, property, and interests of the United States from damage arising from the applicant's construction, maintenance, or operation of the Project works or of the works appurtenant or accessory thereto under the license.

The licensee is liable for and shall pay, after being afforded an opportunity to review BLM claimed costs, all damages, costs and expenses associated with damage to the land, property and interests of the United States occasioned by the construction, maintenance, or operation of the Project works or of the works appurtenant or accessory thereto under the license, including but not limited to damages, costs and expenses resulting from fire. Such damages, costs and expenses shall include, but not be limited to:

1. Fire suppression costs
2. Rehabilitation and restoration costs

3. Value of lost resources
4. Abatement costs
5. Investigative and administrative expenses
6. Attorneys' fees

The licensee's liability under this condition shall not extend to acts or omissions of third parties outside of the applicant's control. The applicant's contractors or employees of contractors are not considered third parties. Damages will be determined by the value of the resources lost or impaired, as determined by BLM. The basis for damages will be provided to the applicant. The applicant shall accept transaction registers certified by the appropriate BLM official as evidence of costs and expenses.

The licensee shall have an opportunity to review the basis for BLM's damages, costs and expenses, and to meet and confer with BLM to resolve any questions or disputes regarding such damages, costs and expenses. After the opportunity for review, the applicant shall promptly pay to the United States such damages, costs and expenses upon written demand by the United States.

#### **Condition 9. Indemnification**

The applicant shall indemnify, defend, and hold the United States harmless for any violations incurred under any laws and regulations applicable to, or for judgments, claims, or demands assessed against the United States caused by, the construction, maintenance, or operation of the Project works or of the works appurtenant or accessory thereto under the license. The applicant's indemnification of the United States shall include any loss by personal injury, loss of life or damage to property caused by the construction, maintenance, or operation of the Project works or of the works appurtenant or accessory thereto under the license. Indemnification shall include, but is not limited to, the value of resources damaged or destroyed; the costs of restoration, cleanup, or other mitigation; fire suppression or other types of abatement costs; third party claims and judgments; and all administrative, interest, and other legal costs. Upon surrender, transfer, or termination of the license, the applicant's obligation to indemnify and hold harmless the United States shall survive for all valid claims for actions that occurred prior to such surrender, transfer, or termination.

#### **Condition 10. Surveys, Land Corners**

The applicant shall avoid disturbance to all public land survey monuments, private property corners, and forest boundary markers. In the event that any such land markers or monuments on BLM lands are destroyed by an act or omission of the applicant, in connection with the use and/or occupancy authorized by this license, depending on the type of monument destroyed, the applicant shall re-establish or reference same in accordance with (1) the procedures outlined in the "Manual of Instructions for the Survey

of the Public Land of the United States,” (2) the specifications of the County Surveyor, or (3) the specifications of BLM. Further, the applicant shall ensure that any such official survey records affected are amended as provided by law.

**Condition 11. Hazardous Substances Plan**

Within 1 year of license issuance or prior to undertaking activities on public lands, the applicant shall file with FERC a plan approved by BLM for oil and hazardous substances storage and spill prevention and cleanup. In addition, during planning and prior to any new construction or maintenance not addressed in an existing plan, the applicant shall notify BLM and these entities shall make a determination whether a plan approved by BLM for oil and hazardous substances storage and spill prevention and cleanup is needed. Any such plan shall be filed with FERC.

At a minimum, the plan must require the applicant to (1) maintain in the Project area, a cache of spill cleanup equipment suitable to contain any spill from the Project; (2) to periodically inform BLM of the location of the spill cleanup equipment on public lands and of the location, type, and quantity of oil and hazardous substances stored in the Project area; and (3) to inform BLM immediately of the magnitude, nature, time, date, location, and action taken for any spill. The plan shall include a monitoring plan that details corrective measures that will be taken if spills occur. The plan shall include a requirement for a weekly written report during construction documenting the results of the monitoring.

**Condition 12. Use of Explosives**

Use of explosives shall be consistent with state and local requirements.

1. The applicant shall use only electronic detonators for blasting on public lands and applicant adjoining property, except near high-voltage powerlines. BLM may allow specific exceptions when in the public interest.
2. In the use of explosives, the applicant shall exercise the utmost care not to endanger life or property and shall comply with the requirements of BLM. The applicant shall contact BLM prior to blasting to obtain the requirements from BLM. The applicant shall be responsible for any and all damages resulting from the use of explosives and shall adopt precautions to prevent damage to surrounding objects. The applicant shall furnish and erect special signs to warn the public of the applicant's blasting operations. The applicant shall place and maintain such signs so they are clearly evident to the public during all critical periods of the blasting operations and shall ensure that they include a warning statement to have radio transmitters turned off.

3. The applicant shall store all explosives on public lands in a secure manner, in compliance with State and local laws and ordinances, and shall mark all such storage places "DANGEROUS - EXPLOSIVES." Where no local laws or ordinances apply, the applicant shall provide storage that is satisfactory to BLM and in general not closer than 1,000 feet from the road or from any building or camping area.
4. When using explosives on BLM lands, the applicant shall adopt precautions to prevent damage to landscape features and other surrounding objects. When directed by the BLM, the applicant shall leave trees within an area designated to be cleared as a protective screen for surrounding vegetation during blasting operations. The applicant shall remove and dispose of trees so left when blasting is complete. When necessary, and at any point of special danger, the applicant shall use suitable mats or some other approved method to smother blasts.

### **Condition 13. Pesticide Use Restrictions**

Pesticides may not be used to control undesirable woody and herbaceous vegetation, aquatic plants, fish, insects, and rodents on BLM lands without the prior written approval of BLM. The applicant shall submit a request for approval of planned uses of pesticides on BLM lands. The request must cover annual planned use and be updated as required by BLM. The applicant shall provide information essential for review, including a forest-specific pesticide risk assessment, in the form specified. Exceptions to this schedule may be allowed only when unexpected outbreaks of pests require control measures that were not anticipated at the time the request was submitted. In such an instance, an emergency request and approval may be made.

The licensee shall use on BLM lands only those materials registered by the U. S. Environmental Protection Agency for the specific purpose planned. The applicant must strictly follow label instructions in the preparation and application of pesticides and disposal of excess materials and containers.

### **Condition 14. Damage, High Hazards**

The licensee is hereby made liable for all injury, loss, or damage to the United States land and property, including, but not limited to, fire suppression costs, directly or indirectly resulting from or caused by any high-risk use and occupancy of the area covered by this license, regardless of whether the applicant is negligent or otherwise at fault, provided that the maximum liability without fault shall not exceed \$1,000,000 for any one occurrence, and provided further that the applicant shall not be liable when such injury, loss, or damage results wholly, or in part, from a negligent act of the United States, or from an act of a third party not involving the applicant's facilities.

Determination of liability for injury, loss, or damage, including fire suppression costs, in excess of the specified maximum, shall be according to the laws governing ordinary negligence.

**Condition 15. Risks and Hazards on BLM Lands**

As part of the occupancy and use of the Project area, the applicant has a continuing responsibility to reasonably identify and report all known or observed hazardous conditions on or directly affecting BLM lands within the Project boundary or part of the project that would affect the improvements, resources, or pose a risk of injury to individuals. The applicant will abate those conditions, except those caused by third parties or not related to the occupancy and use authorized by the license. Any non-emergency actions to abate such hazards on BLM lands shall be performed after consultation with BLM. In emergency situations, the applicant shall notify BLM of its actions as soon as possible, but not more than 48 hours, after such actions have been taken. Whether or not BLM is notified or provides consultation; the applicant shall remain solely responsible for all abatement measures performed. Other hazards should be reported to the appropriate agency as soon as possible.

**Condition 16. Road Use By Government**

The United States shall have unrestricted use of any road constructed within the Project area for all purposes deemed necessary and desirable in connection with the protection, administration, management, and utilization of Federal lands or resources and shall have the right to extend rights and privileges of use of such road to states and local subdivisions thereof, as well as to other users, including members of the public, except contractors, agents, and employees of the applicant; provided that the agency having jurisdiction shall control such use so as not unreasonably to interfere with the safety or security uses, or cause the applicant to bear a share of the costs of maintenance greater than the applicant's use bears to all use of the road.

**Condition 17. Crossings**

The licensee shall maintain suitable crossings as required by BLM for all roads and trails that intersect the right-of-way occupied by linear Project facilities (powerline, penstock, ditch, pipeline).

**Condition 18. Access**

The United States shall have unrestricted use of any road over which the licensee has control within the Project area for all purposes deemed necessary and desirable in connection with the protection, administration, management, and utilization of Federal lands or resources. When needed for the protection, administration, and management of

Federal lands or resources, the United States shall have the right to extend rights and privileges for use of the right-of-way and road thereon to States and local subdivisions thereof, as well as to other users. The United States shall control such use so as not to unreasonably interfere with the safety or security uses, or cause the applicant to bear a share of costs disproportionate to the applicant's use in comparison to the use of the road by others.

**Condition 19. Signs**

The applicant shall consult with BLM prior to erecting signs related to safety issues on public lands covered by the license. Prior to the applicant erecting any other signs or advertising devices on public lands covered by the license, the applicant must obtain the approval of BLM as to location, design, size, color, and message. The applicant shall be responsible for maintaining all applicant-erected signs to neat and presentable standards.

**Condition 20. Construction Inspections**

Within 60 days of planned ground-disturbing activity, the licensee shall file with FERC a Safety During Construction Plan that identifies potential hazard areas and measures necessary to address public safety. Areas to consider include construction activities near public roads, trails, and recreation areas and facilities.

The licensee shall perform daily (or on a schedule otherwise agreed to by BLM in writing) inspections of applicant's construction operations on public lands and applicant adjoining property while construction is in progress. The licensee shall document these inspections (informal writing sufficient) and shall deliver such documentation to BLM on a schedule agreed to by BLM. The inspections must specifically include fire plan compliance, public safety, and environmental protection. The licensee shall act immediately to correct any items found to need correction.

A registered professional engineer of the appropriate specialty shall regularly conduct construction inspections of structural improvements on a schedule approved by BLM.

**Condition 21. Unattended Construction Equipment**

The licensee shall not place construction equipment on public lands prior to actual use or allow it to remain on public lands subsequent to actual use, except for a reasonable mobilization and demobilization period agreed to by BLM. The licensee shall remove equipment from public lands unless a permit is issued for equipment storage.

## **Condition 22. Maintenance of Improvements**

The licensee shall maintain the improvements and premises on public lands and licensee adjoining property to standards of repair, orderliness, neatness, sanitation, and safety. For example, trash, debris, and unusable machinery will be disposed of separately; other materials will be stacked, stored neatly, or placed within buildings. Disposal will be at an approved existing location, except as otherwise agreed to by BLM.

## **Condition 23. Erosion Control Plan**

During planning and before any new construction or non-routine maintenance projects with the potential for causing erosion and/or stream sedimentation on or affecting BLM lands, the applicant shall file with FERC an Erosion Control Measures Plan that is approved by BLM. The Plan shall include measures to control erosion, stream sedimentation, dust, and soil mass movement attributable to the Project.

The plan shall be based on actual-site geological, soil, and groundwater conditions and shall include:

1. A description of the actual site conditions.
2. Detailed descriptions, design drawings, and specific topographic locations of all control measures.
3. Measures to divert runoff away from disturbed land surfaces.
4. Measures to collect and filter runoff over disturbed land surfaces, including sediment ponds at the diversion and powerhouse sites.
5. Revegetating disturbed areas in accordance with current direction on use of native plants and locality of plant and seed sources.
6. Measures to dissipate energy and prevent erosion.
7. A monitoring and maintenance schedule.

Upon FERC approval, the applicant shall implement the plan.

## **Condition 24. Solid Waste and Waste Water Plan, New Construction and Project Operation and Maintenance**

During planning and prior to any new construction or maintenance not addressed in an existing plan (including, but not limited to, any recreation-related construction), the applicant shall notify BLM, and BLM shall make a determination whether a plan shall be filed with FERC. At a minimum, the plan must address the estimated quantity of solid waste and waste water generated each day; the location of disposal sites and methods of treatment; the implementation schedule; areas available for disposal of wastes; design of facilities; comparisons between on- and off-site disposal; and maintenance programs.

## **Condition 25. Water Quality and Water Pollution**

The licensee shall comply with state water quality standards to ensure compliance with the Clean Water Act, protection of beneficial uses, and adequate protection during utilization of the public lands.

The licensee shall discharge no waste or by-product on or affecting public lands if it contains any substances in concentrations that would result in violation of water quality standards set forth by the State; would impair present or future beneficial uses of water; would cause pollution, nuisance, or contamination; or would unreasonably degrade the quality of any waters in violation of any federal or state law. Prior to construction, and during operation and maintenance of the Project, the applicant shall develop a plan approved by BLM and subject to requirements of other federal and state water quality agencies.

## **PART II: SPECIFIC RESOURCE CONDITION**

### **Condition No.1 -Whitewater Boating Take-Out and Water Gage**

If the Licensee finds a suitable location to build a whitewater boating takeout on BLM lands the Licensee shall fund and conduct the NEPA analysis, and construct and maintain the boating takeout(s) within three years. The take-out needs to include vehicular access, parking, onsite water gage sign, and a Kiosk sign that is acceptable and approved by BLM. Funding provided from SMUD will be required to pay for BLM involvement in managing this activity if the takeout occurs on BLM land. The funding amount has not been determined yet because the BLM cannot assess our costs associated with this amendment until more information is known about location of required boating put-ins and take-outs are finalized.



Document Content(s)

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