California Department of Fish and Wildlife
Region 2/North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

California Endangered Species Act
Incidental Take Permit No. 2081-2017-047-02

Log Cabin and Our House Diversion Dams Sediment Management Plan Project

Authority: This California Endangered Species Act (CESA) Incidental Take Permit (ITP) is issued by the California Department of Fish and Wildlife (CDFW) pursuant to Fish and Game Code section 2081, subdivisions (b) and (c), and California Code of Regulations, Title 14, section 783.0 et seq. CESA prohibits the take[1] of any species of wildlife designated by the California Fish and Game Commission as an endangered, threatened, or candidate species.[2] CDFW may authorize the take of any such species by permit if the conditions set forth in Fish and Game Code section 2081, subdivisions (b) and (c) are met. (See Cal. Code Regs., tit. 14, § 783.4).

Permittee:	**Yuba County Water Agency**
Principal Officer:	**Curt Aikens**
Mailing Address:	**1220 F Street** **Marysville, CA 95901**

Effective Date and Expiration Date of this ITP:
This ITP shall be executed in duplicate original form and shall become effective once a duplicate original is acknowledged by signature of the Permittee on the last page of this ITP and returned to CDFW's Habitat Conservation Planning Branch at the address listed in the Notices section of this ITP. Unless renewed by CDFW, this ITP's authorization to take the Covered Species shall expire on **December 31, 2019.**

Notwithstanding the expiration date on the take authorization provided by this ITP, Permittee's obligations pursuant to this ITP do not end until CDFW accepts as complete the Permittee's Final Mitigation Report required by Condition of Approval 6.6 of this ITP.

Project Location:

The Log Cabin and Our House Diversion Dams Sediment Management Plan Project (Project) has two separate locations where Covered Activities will occur. The first location is at the Log Cabin Diversion, which is located on National Forest Service Land within the Tahoe National

[1]Pursuant to Fish and Game Code section 86, "'take' means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." (See also *Environmental Protection Information Center v. California Department of Forestry and Fire Protection* (2008) 44 Cal.4th 459, 507 [for purposes of incidental take permitting under Fish and Game Code section 2081, subdivision (b), "'take' … means to catch, capture or kill"].)

[2]"The definition of an endangered, threatened, and candidate species for purposes of CESA are found in Fish and Game Code sections 2062, 2067, and 2068, respectively.

Forest is located on Oregon Creek, 4.3 miles upstream of the confluence with the Middle Yuba River. Access to Log Cabin Diversion is off of State Route 49. Township 18N, Range 8E, Section 11. Latitude -121.0589, Longitude 39.44402 (Figure 1).

The second location is at the Our House Diversion Dam, located on National Forest Service Land within the Tahoe National Forest, and is located on the Middle Yuba River, 12.6 miles upstream of its confluence with the North Yuba River. Access to Our House Diversion Dam is from State Route 49 via Ridge Road, approximately 2 miles south of the intersection of State Route 49 and Marysville Road. Township 18N, Range 8E, Section 10. Latitude -120.9974, Longitude 39.4115 (Figure 2).

Project Description:

The Project includes sediment management at both Log Cabin and Our House Diversion Dams which includes two components: 1) passage of sediment; and 2) planned mechanical removal of sediment. Each of the two components is described below:

Sediment Passage

Under the FERC-ordered Sediment Management Plan (Plan)(Attachment 1), at the Log Cabin Diversion Dam, at least once between November 1 and March 15 of each year inclusive, and with the Camptonville Diversion Tunnel intake fully open, the Yuba County Water Agency (YCWA) is required by the Federal Energy Regulatory Commission (FERC) to open the low-level outlet valve to full capacity for at least 96 continuous hours when: 1) instantaneous flow immediately downstream of the dam, as measured at the United States Geological Survey (USGS) streamflow gage 11409400, is equal to or greater than 540 cubic feet per second (cfs); 2) the wet period is forecast to extend for at least 48 continuous hours after opening the valve; and 3) YCWA anticipates that instantaneous flow downstream of the dam will increase to at least 750 cfs during the period the valve is open or shortly after the valve is closed. YCWA may close the valve during the 96-hour period if daily average flow downstream of the dam, as measured at USGS gage 11409400, drops below 540 cfs during that period. During periods when the valve is open, YCWA is required to inspect the valve at least once a day during business hours. If the flows drop to 540 cfs or lower after business hours, YCWA may close the valve during regular business hours the next day.

Also per the Plan, at the Our House Diversion Dam, at least once between November 1 and March 15 of each year and with the Lohman Ridge Diversion Tunnel intake fully open, YCWA is required to open the low-level outlet valve to full capacity for at least 96 continuous hours when: 1) instantaneous flow immediately downstream of the dam, as measured at USGS streamflow gage 11408880, is equal to or greater than 600 cfs; 2) the wet period is forecast to extend at least 48 continuous hours after opening the valve; and 3) YCWA anticipates that instantaneous flow downstream of the dam will increase to at least 1,500 cfs during the period the valve is open or shortly after the valve is closed. YCWA may close the valve during

the 96-hour period if daily average flow downstream of the dam, as measured at gage 1140880, drops below 600 cfs during that period. During periods when the valve is open, YCWA is required to inspect the valve at least once a day during business hours. If the flows drop to 600 cfs or lower after business hours, YCWA may close the valve during regular business hours the next day.

Mechanical Removal of Sediment

Planned sediment removal, when needed, may only occur in summer/early fall (i.e., drier months) when inflow into the impoundment is low (i.e., inflow less than or equal to minimum instream flow requirement). Specifically, work may only occur between September 15 and November 15 in any given year, although the Sediment Management Plan (Plan) states that the period may be extended in either direction with the permission of all appropriate agencies, which includes the CDFW.

If sediment removal is planned, YCWA is required to draw down the pool in the impoundment as low as possible immediately prior to the start of work and divert inflows around the diversion so that sediment can be excavated in the dry stream bed. The water must be drained in a way to avoid seasonal increases to instream flow downstream of the dams, such as allowing it to drain naturally through the valve or pumping it into the diversion tunnels. When mechanical excavation is needed, it occurs in seven steps: 1) sediment testing for metals; 2) mobilization; 3) diversion/control of water; 4) removal of sediment; 5) stockpiling of sediment; 6) stabilization of the stockpile; and 7) demobilization. Each step is described below regardless of the impoundment in which the work would occur.

1. Sediment Testing for Metals: Prior to removing any sediment from an impoundment, the Plan requires that YCWA collect three to five bulk samples of the sediment to be removed from the impoundment and transport the samples to a state-certified laboratory for determination of metals content. Sediments must be characterized as hazardous or non-hazardous, based on the results of the sampling. If sediment testing results are hazardous, additional confirmatory samples may be taken, and an alternate plan for sediment stockpiling or disposal will be developed in accordance with the test results and appropriate regulations. No material determined to be a hazardous waste may be removed from the impoundment until an alternate plan is in place and all necessary permits and approvals have been obtained.

2. Mobilization: Mobilization includes delivery of equipment to the site, establishing laydown areas, and creating stable pads for equipment, as needed (e.g., if YCWA plans to use a mobile crane with a clam shell on the bank).

3. Diversion and Control of Water. The Plan allows that diversion and control of water may consist of one or two methods. One approach is to channel natural inflow into the impoundment around the planned work area and through the dam via the fish release

valve or low-level outlet valve, or both. The diversion would consist of installation of temporary piping to deliver the required flow of water continuously to the valve(s). Flow would be intercepted upstream of the planned excavation and diverted into a pipe. The pipe would be routed away from the planned excavation. The pipe would be installed in a buried trench and/or protected by steel plates in areas where equipment would pass over the pipe to allow for movement of equipment in the impoundment without damage to the pipe.

The second approved approach is pumping water around the work area. In this approach, a small temporary catchment would be constructed upstream of the work area and pumps would actively pass the water through one or more pipes routed around the outside of the work area and discharge it into the stream below the dam.

Per the Plan, prior to and during diversion of flow and dewatering of the stream channel and work area, a qualified aquatic biologist must remove all aquatic vertebrate species using fine mesh, soft material nets (e.g., catch-and-release nets), or another method approved by the Forest Service, United States Department of the Interior, Fish and Wildlife Service (USFWS) and CDFW, and relocate these species to an area of the stream channel upstream of the sediment removal activities where they would not reenter the work area. Fine-mesh nets must be installed across the wetted channel upstream of the work area to downstream to deter movements of frogs and other species capable of moving outside of the wetted channel. Additionally, the biologist must monitor dewatered areas for stranded aquatic species and relocate them upstream of the work site. Handling of aquatic species must be minimized to the greatest extent feasible.

4. Removal of Sediment. Per the Plan, excavation must be accomplished with track-mounted excavators located within the impoundment, or with larger mobile cranes working from the access roads above the impoundments. The excavation area within Log Cabin Diversion Dam impoundment is 1.47 acres (Figure 1) and in Our House Diversion Dam impoundment is 4.56 acres (Figure 2). Stable pads must be constructed for equipment working in the impoundment.

5. Stabilization of Stockpiling: Excavated sediment must be loaded into large-capacity off-road trucks that will deliver the material to a temporary laydown areas outside the impoundments (See Figure 3 and 4). The material, which must be clean and non-hazardous, may be temporarily (no more than 48 hours) stockpiled at the laydown area for eventual loading onto street legal trucks for hauling to the final stockpile area. After the last day of sediment removal, within 72 business hours YWCA will clean-up the laydown area, including removing the last of the sediment. During the work, the excavators and trucks must be removed from the impoundment at the end of each shift.

6. Laydown of Sediment. After the stockpiles are removed from the temporary laydown area, the material will then be moved to an offsite area and outside of Covered Species habitat (See Attachment 1, Figures 3.36 and 3.37). The Plan states that excavated material will be placed as engineered fill in accordance with generally accepted geotechnical engineering practices; it will be dumped and spread out in loose lifts not exceeding 12 inches (in.) in depth and compaction will be based on a maximum lift thickness (12 in.) and two passes with a Cat D6 or equivalent. The final stockpile dimensions will also be dependent on the volume of material excavated. The stockpile slope inclinations must not exceed 2 to 1 (horizontal to vertical). Silt fencing must be installed at the perimeter of the stockpile area to mitigate the potential for migration of sediment. At the completion of the stockpiling, the surface of the stockpile must be compacted and hydro-seeded for long term erosion control.

7. Demobilization. The Plan states that once removal of sediment is complete, the work area must be demobilized by: removing all equipment from the site (including the laydown areas); restoring minimum flow by gravity through the impoundment to the fish release valve; removing sediment control measures within the impoundment; and removing all temporary water control (diversion) measures. The site must be returned to its original state (except for the impoundment) at the end of Project activities.

In addition to sediment removal, approximately 201 trees below the ordinary high water mark will be removed. Of the 201 trees marked for removal, there are approximately 161 willow trees (*Salix alba*) with a diameter at breast height (dbh) of 4 inches or less, and 40 willows and one cottonwood (*Populous fremontii)* over 4 inches dbh.

Covered Species Subject to Take Authorization Provided by this ITP:

This ITP covers the following species:

Name	CESA Status
1. Foothill yellow-legged frog *(Rana boylii)*	Candidate[3]

This species and only this species is the "Covered Species" for the purposes of this ITP.

Impacts of the Taking on Covered Species:
Project activities and their resulting impacts are expected to result in the incidental take of individuals of the Covered Species. The activities described above expected to result in

[3]The species status may change following the decision of the Fish and Game Commission to designate the species as threatened or endangered but if there is such a designation, the species will remain a Covered Species.

incidental take of individuals of the Covered Species and include opening of low-level outlet valve to full capacity for 96 hours, pool draw down, creating stability pads for equipment, installation of temporary piping, trenching, aquatic species relocation and handling, temporary water diversion and stream dewatering, temporary road construction, equipment operations, mechanical removal of sediment, vegetation and tree removal, installation of environmentally sensitive area (ESA) fencing, stockpiling, valve blow-out (Covered Activities).

Incidental take of individuals of the Covered Species in the form of mortality ("kill") may occur as a result of Covered Activities such as water diversion and dewatering, relocation of tadpoles and/or adults, potential crushing of individuals during equipment operations, tree and sediment removal. Incidental take of individuals of the Covered Species may also occur from the Covered Activities in the form of "pursue, catch, capture, or attempt to do so" of the Covered Species during relocation of individual adults and tadpoles out of the Project Area and during bullfrog removal or restoration work. The areas where authorized take of the Covered Species is expected to occur include areas within and adjacent to Oregon Creek and the Yuba River (collectively, the Project Area Figures 1 and 2).

The Project is not expected to cause the permanent loss of any habitat for the Covered Species. Implementation of this Project is expected to cause the temporary loss of up to 13.67 acres of habitat for each year the project is implemented (3.57 acres at Log Cabin Diversion and 10.10 acres at Our House Diversion), for the Covered Species. Impacts of the authorized taking also include adverse impacts to the Covered Species related to temporal losses, increased habitat fragmentation and edge effects, and the Project's incremental contribution to cumulative impacts (indirect impacts). These impacts include: long-term effects due to increased water pollution, displacement from preferred habitat, increased competition for food and space, and increased vulnerability to predation.

Incidental Take Authorization of Covered Species:
This ITP authorizes incidental take of the Covered Species and only the Covered Species. With respect to incidental take of the Covered Species, CDFW authorizes YCWA (Permittee), its employees, contractors, and agents to take Covered Species incidentally in carrying out the Covered Activities, subject to the limitations described in this section and the Conditions of Approval identified below. This ITP does not authorize take of Covered Species from activities outside the scope of the Covered Activities, take of Covered Species outside of the Project Area, take of Covered Species resulting from violation of this ITP, or intentional take of Covered Species except for capture and relocation of Covered Species as authorized by this ITP.

Conditions of Approval:
Unless specified otherwise, the following measures apply to all Covered Activities within the Project Area, including areas used for ingress and egress, staging and parking. CDFW's

issuance of this ITP and Permittee's authorization to take the Covered Species are subject to Permittee's compliance with and implementation of the following Conditions of Approval:

1. **Legal Compliance:** Permittee shall comply with all applicable federal, state, and local laws in existence on the effective date of this ITP or adopted thereafter.

2. **CEQA Compliance:** Permittee shall implement and adhere to the mitigation measures related to the Covered Species in the Biological Resources section of the Negative Declaration (SCH No.: 2014072043) certified by the Yuba County Water Agency as lead agency for the Project pursuant to the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.).

3. **LSA Agreement Compliance:** Permittee shall implement and adhere to the mitigation measures and conditions related to the Covered Species in the Lake and Streambed Alteration Agreement (LSAA) (Notification No. 1600-2014-0163-R2) for the Project executed by CDFW pursuant to Fish and Game Code section 1600 et seq.

4. **ITP Time Frame Compliance:** Permittee shall fully implement and adhere to the conditions of this ITP within the time frames set forth below and as set forth in the Mitigation Monitoring and Reporting Program (MMRP), which is included as Attachment 1 to this ITP.

5. **General Provisions:**

5.1. Designated Representative. Before starting Covered Activities, Permittee shall designate a representative (Designated Representative) responsible for communications with CDFW and overseeing compliance with this ITP. Permittee shall notify CDFW in writing before starting Covered Activities of the Designated Representative's name, business address, and contact information, and shall notify CDFW in writing if a substitute Designated Representative is selected or identified at any time during the term of this ITP.

5.2. Designated Biologist. Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information of a biological monitor (Designated Biologist) at least 30 days before starting Covered Activities. Permittee shall ensure that the Designated Biologist is knowledgeable and experienced in the biology, natural history, collecting, and handling of the Covered Species. The Designated Biologist shall be responsible for monitoring Covered Activities to help minimize and fully mitigate or avoid the incidental take of individual Covered Species and to minimize disturbance of Covered Species' habitat. Permittee shall obtain CDFW approval of the Designated Biologist in writing before starting Covered

Activities, and shall also obtain approval in advance in writing if the Designated Biologist must be changed.

5.3. Designated Biologist Authority. To ensure compliance with the Conditions of Approval of this ITP, the Designated Biologist shall have authority to immediately stop any activity that does not comply with this ITP, and/or to order any reasonable measure to avoid the unauthorized take of an individual of the Covered Species.

5.4. Qualified Biologist. A qualified biologist for Covered Species monitoring is an individual who is experienced with construction level biological monitoring, who is able to recognize all potential age classes of Covered Species relative to other amphibians in the project area, and who is familiar with the habits and behavior of the Covered Species. A qualified biologist shall have academic and professional experience in biological sciences and related resource management activities as it pertains to this species. The names and qualifications of all qualified biologists for the Covered Species shall be provided to CDFW for review and approval prior to commencement of activities.

5.5. Education Program. The Permittee shall conduct an education program for all persons employed or otherwise working in the Project Area before performing any work. The program shall consist of a presentation from the Designated Biologist that includes a discussion of the biology and general behavior of the Covered Species, information about the distribution and habitat needs of the Covered Species, sensitivity of the Covered Species to human activities, its status pursuant to CESA including legal protection, recovery efforts, penalties for violations and Project-specific protective measures described in this ITP. Permittee shall provide interpretation for non-English speaking workers, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project Area. Permittee shall prepare and distribute wallet-sized cards or a fact sheet handout containing this information for workers to carry in the Project Area. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees that will be conducting work in the Project Area.

5.6. Construction Monitoring Notebook. The Designated Biologist shall maintain a construction monitoring notebook on-site throughout the construction period, which shall include a copy of this ITP with attachments and a list of signatures of all personnel who have successfully completed the education program. Permittee shall ensure a copy of the construction monitoring notebook is available for review at the Project area, upon request by CDFW.

5.7. Delineation of Property Boundaries. Before starting Covered Activities, Permittee shall clearly delineate the boundaries of the Project Area with fencing, stakes, or flags. Permittee shall restrict all Covered Activities to within the fenced, staked, or flagged areas. Permittee shall maintain all fencing, stakes, and flags until the completion of Covered Activities in that area.

5.8. Delineation of Habitat. Permittee shall clearly delineate habitat of the Covered Species within the Project Area with posted signs, posting stakes, flags, and/or rope or cord, and place fencing as necessary to minimize the disturbance of Covered Species' habitat.

5.9. Staging Areas. Permittee shall confine all Project-related parking, storage areas, laydown sites, equipment storage, and any other surface-disturbing activities to the Project Area using, to the extent possible, previously disturbed areas. Additionally, Permittee shall not use or cross Covered Species' habitat outside of the marked Project Area.

5.10. Project Access. Project-related personnel shall access the Project Area using routes identified in the Project Description and shall not cross Covered Species' habitat outside of or en-route to the Project Area. Permittee shall restrict Project-related vehicle traffic to established roads, staging, and parking areas. Permittee shall ensure that vehicle speeds do not exceed 10 miles per hour to avoid Covered Species on or traversing the roads. If Permittee determines construction of routes for travel are necessary outside of the Project Area, the Designated Representative shall contact CDFW for written approval before carrying out such an activity. CDFW may require an amendment to this ITP, among other reasons, if additional take of Covered Species will occur as a result of the Project modification.

5.11. Equipment Maintenance or Refueling. If maintenance or refueling of vehicles or equipment must occur on-site, use a designated area and/or a secondary containment, located away from drainage courses to prevent the runoff of storm water and the runoff of spills. Place drip pans or absorbent materials under vehicles and equipment when not in use. Equipment shall be stored in areas that any possible contamination from the equipment would not flow or be washed back into the channel.

5.12. Hazardous Waste. Permittee shall immediately stop and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so. Permittee shall exclude the storage and handling of hazardous materials from the Project Area and shall properly contain and dispose of any unused or leftover hazardous products off-site.

5.13. CDFW Access. Permittee shall provide CDFW staff with reasonable access to the Project and shall otherwise fully cooperate with CDFW efforts to verify compliance with or effectiveness of mitigation measures set forth in this ITP.

5.14. Erosion Control Materials. Permittee shall prohibit use of erosion control materials potentially harmful to Covered Species and other species, such as monofilament netting (erosion control matting) or similar material, in potential Covered Species' habitat.

5.15. Refuse Removal. Upon completion of Covered Activities, Permittee shall remove from the Project Area and properly dispose of all temporary fill and construction refuse, including, but not limited to, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, and boxes.

6. Monitoring, Notification and Reporting Provisions:

6.1. Notification Before Commencement. The Designated Representative shall notify CDFW three (3) calendar days before starting Covered Activities and shall document compliance with all pre-Project Conditions of Approval before starting Covered Activities.

6.2. Notification of Non-Compliance. The Designated Representative shall immediately notify CDFW in writing if it determines that the Permittee is not in compliance with any Condition of Approval of this ITP, including but not limited to any actual or anticipated failure to implement measures within the time periods indicated in this ITP and/or the MMRP. The Designated Representative shall report any non-compliance with this ITP to CDFW within 24 hours.

6.3. Compliance Monitoring. The Designated Biologist shall be on-site daily when Covered Activities occur. The Designated Biologist shall conduct compliance inspections to (1) minimize incidental take of the Covered Species; (2) prevent unlawful take of species; (3) check for compliance with all measures of this ITP; (4) check all exclusion zones; and (5) ensure that signs, stakes, and fencing are intact, and that Covered Activities are only occurring in the Project Area, and outside of the boundaries of the realigned channel. The Designated Representative or Designated Biologist shall prepare daily written observation and inspection records summarizing: oversight activities and compliance inspections, observations of Covered Species and their sign, survey results, and monitoring activities required by this ITP.

6.4. Monthly Compliance Report. The Designated Representative or Designated Biologist shall compile the observation and inspection records identified above, into a Monthly Compliance Report and submit it to CDFW along with a copy of the MMRP table with

notes showing the current implementation status of each mitigation measure. Monthly Compliance Reports shall be submitted to the CDFW offices listed in the Notices section of this ITP and via e-mail to CDFW's Regional Representative and Headquarters CESA Program. At the time of this ITP's approval, the CDFW Regional Representative can be contacted by emailing R2CESA@wildlife.ca.gov or calling 916-358-2930 and Headquarters CESA Program email is CESA@wildlife.ca.gov. CDFW may at any time increase the timing and number of compliance inspections and reports required under this provision depending upon the results of previous compliance inspections. If CDFW determines the reporting schedule must be changed, CDFW will notify Permittee in writing of the new reporting schedule.

6.5. Annual Status Report. Permittee shall provide CDFW with an Annual Status Report (ASR) no later than January 31 of every year beginning with issuance of this ITP and continuing until CDFW accepts the Final Mitigation Report identified below. Each ASR shall include, at a minimum: (1) a summary of all Monthly Compliance Reports for that year identified in Condition of Approval 6.4; (2) a general description of the status of the Project Area and Covered Activities, including actual or projected completion dates, if known; (3) a copy of the table in the MMRP with notes showing the current implementation status of each mitigation measure; (4) an assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing and mitigating Project impacts; (5) all available information about Project-related incidental take of the Covered Species; (6) an accounting of the number of acres subject to both temporary and permanent disturbance, both for the prior calendar year, and a total since ITP issuance; and (7) information about other Project impacts on the Covered Species.

6.6. CNDDB Observations. The Designated Biologist shall submit all observations of Covered Species to CDFW's California Natural Diversity Database (CNDDB) within 60 calendar days of the observation and the Designated Biologist shall include copies of the submitted forms with the next Monthly Compliance Report or ASR, whichever is submitted first relative to the observation.

6.7. Final Mitigation Report. No later than 45 days after completion of all mitigation measures, Permittee shall provide CDFW with a Final Mitigation Report. The Designated Biologist shall prepare the Final Mitigation Report which shall include, at a minimum: (1) a summary of all Monthly Compliance Reports and all ASRs; (2) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species; (4) information about other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an assessment of the effectiveness of this ITP's Conditions of Approval in minimizing and fully mitigating Project impacts of the taking on Covered Species; (7) recommendations on how

mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future projects on the Covered Species; and (8) any other pertinent information.

6.8. Notification of Take or Injury. Permittee shall immediately notify the Designated Biologist if a Covered Species is taken or injured by a Project-related activity, or if a Covered Species is otherwise found dead or injured within the vicinity of the Project. The Designated Biologist or Designated Representative shall provide initial notification to CDFW by calling the Regional Office at 916-358-2930 and R2CESA@wildlife.ca.gov. The initial notification to CDFW shall include information regarding the location, species, and number of animals taken or injured and the ITP Number. Following initial notification, Permittee shall send CDFW a written report within two calendar days. The report shall include the date and time of the finding or incident, location of the animal or carcass, and if possible provide a photograph, explanation as to cause of take or injury, and any other pertinent information.

7. Take Minimization Measures:

The following requirements are intended to ensure the minimization of incidental take of Covered Species in the Project Area during Covered Activities. Permittee shall implement and adhere to the following conditions to minimize take of Covered Species:

7.1. Work Period. Work within Covered Species habitat shall be confined to the period for each of the two Covered Activities:

a. For Sediment Passage- November 1 to March 15 (if approved by the FERC Agency Partners)

b. For Mechanical Removal of Sediment- September 15 to November 15 (if approved by the FERC Agency Partners, and with an approved Routine Maintenance Agreement and Verification Request Form from CDFW). CDFW may, if necessary, extend the work window for a number of weeks if weather conditions remain dry.

7.2. Biologist Onsite Daily. The Designated Biologist shall be on-site daily while construction and/or surface-disturbing activities are taking place to minimize impacts to the Covered Species; to check for compliance with all Agreement measures; to check all exclusion zones; and to ensure fencing are intact, and that human activities are restricted to outside of protective zones. The Designated Biologist shall prepare written records summarizing: oversight activities and compliance inspections, observations of Covered Species, survey results, and monitoring activities required by this Agreement. In addition, a qualified biologist(s) will survey the area each morning

prior to the start of work activities and again at the end of the work day for the duration of the Project.

7.3. Daily Briefing. Every day, prior to beginning construction where equipment or material may come in contact with water, gravel bars, riparian areas, and any other Covered Species or their habitat, a qualified biologist shall brief equipment operators (daily) about site-specific protective and avoidance and minimization measures.

7.4. Relocation. Covered Species shall be relocated out of the Project Area both prior to and during Covered Activities per the CDFW approved 2018 *Aquatic Vertebrate Relocation and Exclusion Plan* (Attachment 3). If Covered Species are found during Covered Activities, a biologist identified in Attachment 3, shall capture and move them out of harm's way, where no work will occur.

7.5. Invasive Species. Permittee shall conduct Project activities in a manner that prevents the introduction, transfer and spread of aquatic, riparian, and terrestrial invasive species from one work site and/or water body to another. Prevention BMP's and guidelines for invasive plants can be found on the California Invasive Plant Council's website at: http://www.cal-ipc.org/ip/prevention/index.pho and for invasive mussels and aquatic species can be found at the Stop Aquatic Hitchhikers website: http://www.protectyourwaters.net/. Permittee shall notify the Department immediately if an invasive species not previously known to occur within the work site is discovered during work activities by contacting the Department's Invasive Species Program by email at Invasives@wildlife.ca.gov.

7.6. Gear and Equipment Decontamination. Prior to entering the stream or initiating any aquatic species removal, all gear and equipment will be decontaminated in a designated location where runoff can be contained and not allowed to pass into water courses and other sensitive habitat areas.

7.7. No Equipment in Flowing Water. No equipment shall operate, or any excavation take place, in the portion of the stream where flowing water is present. Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily to prevent leaks of materials that could be deleterious to aquatic and terrestrial life or riparian habitat.

8. Habitat Restoration and Enhancement:

CDFW has determined that restoration, enhancement and monitoring of Covered Species and their habitat is necessary and required pursuant to CESA to fully mitigate Project-related impacts of the taking on the Covered Species that will result with implementation of the Covered Activities. This determination is based on factors including an assessment of the

importance of the habitat in the Project Area, the extent to which the Covered Activities will impact the habitat. CDFW has determined that the Permittee shall do all of the following to comply with this requirement:

8.1. Restoration Plan. The Permittee shall submit to CDFW, within 90 days from the effective date of this ITP, a detailed Restoration Plan which shall include invasive species removal, and other activities to enhance Covered Species and their habitat.

8.2. Cost Estimates. Restoration and enhancement of Covered Species habitat as described in Condition of Approval 8.1 is estimated at **$234,650.00** (Attachment 4).

9. Performance Security

The Permittee may proceed with Covered Activities only after the Permittee has ensured funding (Security) to complete any activity required by Condition of Approval 8 that has not been completed before Covered Activities begin. Permittee shall provide Security as follows:

9.1 Security Amount. The Security shall be in the amount of **$234,650.00.** This amount is based on the cost estimates identified in Condition of Approval 8.2 above.

9.2 Security Form. The Security shall be in the form of an irrevocable letter of credit (Attachment 5) or another form of Security approved in advance in writing by CDFW's Office of the General Counsel.

9.3 Security Timeline. The Security shall be provided to CDFW within 45 days after the effective date of this ITP.

9.4 Security Holder. The Security shall be held by CDFW or in a manner approved in advance in writing by CDFW.

9.5 Security Transmittal. If CDFW holds the Security, Permittee shall transmit it to CDFW with a completed Mitigation Payment Transmittal Form (see Attachment 6) or by way of an approved instrument such as escrow, irrevocable letter of credit, or other.

9.6 Security Drawing. The Security shall allow CDFW to draw on the principal sum if CDFW, in its sole discretion, determines that the Permittee has failed to comply with the Conditions of Approval of this ITP.

9.7 Security Release. The Security (or any portion of the Security then remaining) shall be released to the Permittee after CDFW has conducted an on-site inspection and

received confirmation that all secured requirements have been satisfied, as evidenced by:

- Restoration Plan Compliance
- Timely submission of all required reports.

Even if Security is provided, the Permittee must submit the Restoration Plan required in Condition 8.1. no later than 90 days from the effective date of the ITP and finish implementation of the Restoration Plan within 5 years of beginning restoration activities. CDFW may require the Permittee to provide additional mitigation and/or additional funding after the Restoration Plan is reviewed, to ensure the impacts of the taking are minimized and fully mitigated, as required by law.

Amendment:
This ITP may be amended as provided by California Code of Regulations, Title 14, section 783.6, subdivision (c), and other applicable law. This ITP may be amended without the concurrence of the Permittee as required by law, including if CDFW determines that continued implementation of the Project as authorized under this ITP would jeopardize the continued existence of the Covered Species or where Project changes or changed biological conditions necessitate an ITP amendment to ensure that all Project-related impacts of the taking to the Covered Species are minimized and fully mitigated.

Stop-Work Order:
CDFW may issue Permittee a written stop-work order requiring Permittee to suspend any Covered Activity for an initial period of up to 25 days to prevent or remedy a violation of this ITP, including but not limited to the failure to comply with reporting or monitoring obligations, or to prevent the unauthorized take of any CESA endangered, threatened, or candidate species. Permittee shall stop work immediately as directed by CDFW upon receipt of any such stop-work order. Upon written notice to Permittee, CDFW may extend any stop-work order issued to Permittee for a period not to exceed 25 additional days. Suspension and revocation of this ITP shall be governed by California Code of Regulations, Title 14, section 783.7, and any other applicable law. Neither the Designated Biologist nor CDFW shall be liable for any costs incurred in complying with stop-work orders.

Compliance with Other Laws:
This ITP sets forth CDFW's requirements for the Permittee to implement the Project pursuant to CESA. This ITP does not necessarily create an entitlement to proceed with the Project. Permittee is responsible for complying with all other applicable federal, state, and local law.

Notices:
The Permittee shall deliver a fully executed duplicate original ITP by registered first class mail or overnight delivery to the following address:

Habitat Conservation Planning Branch
California Department of Fish and Wildlife
Attention: CESA Permitting Program
Post Office Box 944209
Sacramento, CA 94244-2090

Written notices, reports and other communications relating to this ITP shall be delivered to CDFW by registered first class mail at the following address, or at addresses CDFW may subsequently provide the Permittee. Notices, reports, and other communications shall reference the Project name, Permittee, and ITP Number (2081-2017-047-02) in a cover letter and on any other associated documents.

Original cover with attachment(s) to:

Tina Bartlett, Regional Manager
California Department of Fish and Wildlife
1701 Nimbus Road
Rancho Cordova, CA 95670
Telephone (916) 358-2900
Fax (916) 358-2912

and a copy to:

Habitat Conservation Planning Branch
California Department of Fish and Wildlife
Attention: CESA Permitting Program
Post Office Box 944209
Sacramento, CA 94244-2090

Unless Permittee is notified otherwise, CDFW's Regional Representative for purposes of addressing issues that arise during implementation of this ITP is:

CESA Desk
1701 Nimbus Road
Rancho Cordova, CA 95817
Telephone (916) 358-2900
R2CESA@wildlife.ca.gov

Compliance with CEQA:

CDFW's issuance of this ITP is subject to CEQA. CDFW is a responsible agency pursuant to CEQA with respect to this ITP because of prior environmental review of the Project by the lead agency, the Yuba County Water Agency (See generally Pub. Resources Code, §§ 21067, 21069). The lead agency's environmental review of the Project is set forth in the Log Cabin and Our House Diversion Dam Sediment Management Project, (SCH No.: 2014072043) dated September 4, 2014, by the Yuba County Water Agency. At the time the lead agency adopted the Negative Declaration and approved the Project it also adopted various mitigation measures for the Covered Species as conditions of Project approval.

This ITP, along with CDFW's related CEQA findings, which are available as a separate document, provide evidence of CDFW's consideration of the lead agency's Negative Declaration for the Project and the environmental effects related to issuance of this ITP (CEQA Guidelines, § 15096, subd. (f)). CDFW finds that issuance of this ITP will not result in any previously undisclosed potentially significant effects on the environment or a substantial increase in the severity of any potentially significant environmental effects previously disclosed by the lead agency. Furthermore, to the extent the potential for such effects exists, CDFW finds adherence to and implementation of the Conditions of Project Approval adopted by the lead agency, and that adherence to and implementation of the Conditions of Approval imposed by CDFW through the issuance of this ITP, will avoid or reduce to below a level of significance any such potential effects. CDFW consequently finds that issuance of this ITP will not result in any significant, adverse impacts on the environment.

Findings Pursuant to CESA:

These findings are intended to document CDFW's compliance with the specific findings requirements set forth in CESA and related regulations. (Fish & G. Code § 2081, subs. (b)-(c); Cal. Code Regs., tit. 14, §§ 783.4, subds, (a)-(b), 783.5, subd. (c)(2).)

CDFW finds based on substantial evidence in the ITP application, Log Cabin and Our House Diversion Dam Sediment Management Plan Project's Negative Declaration, the results of site visits and consultations, and the administrative record of proceedings, that issuance of this ITP complies and is consistent with the criteria governing the issuance of ITPs pursuant to CESA:

1. Take of Covered Species as defined in this ITP will be incidental to the otherwise lawful activities covered under this ITP

2. Impacts of the taking on Covered Species will be minimized and fully mitigated through the implementation of measures required by this ITP and as described in the MMRP. Measures include: (1) additional biological monitoring; (2) Covered Species relocation; (3) implementation of a Restoration Plan (4) aquatic invasive species removal; (5)

Monthly Compliance Reports. CDFW evaluated factors including an assessment of the importance of the habitat in the Project Area, the extent to which the Covered Activities will impact the habitat. Based on this evaluation, CDFW determined that restoration of habitat, along with the minimization, monitoring, reporting, and funding requirements of this ITP minimizes and fully mitigates the impacts of the taking caused by the Project

3. The take avoidance and mitigation measures required pursuant to the conditions of this ITP and its attachments are roughly proportional in extent to the impacts of the taking authorized by this ITP

4. The measures required by this ITP maintain Permittee's objectives to the greatest extent possible

5. All required measures are capable of successful implementation

6. This ITP is consistent with any regulations adopted pursuant to Fish and Game Code sections 2112 and 2114

7. Permittee has ensured adequate funding to implement the measures required by this ITP as well as for monitoring compliance with, and the effectiveness of, those measures for the Project

8. Issuance of this ITP will not jeopardize the continued existence of the Covered Species based on the best scientific and other information reasonably available, and this finding includes consideration of the species' capability to survive and reproduce, and any adverse impacts of the taking on those abilities in light of (1) known population trends; (2) known threats to the species; and (3) reasonably foreseeable impacts on the species from other related projects and activities. Moreover, CDFW's finding is based, in part, on CDFW's express authority to amend the terms and conditions of this ITP without concurrence of the Permittee as necessary to avoid jeopardy and as required by law.

Attachments:

FIGURE 1	Log Cabin Project Location Map
FIGURE 2	Our House Project Location Map
FIGURE 3	Log Cabin Temporary Lay Down Area Map
FIGURE 4	Our House Temporary Lay Down Area Map
ATTACHMENT 1	Sediment Management Plan
ATTACHMENT 2	Mitigation Monitoring and Reporting Program
ATTACHMENT 3	2018 *Aquatic Vertebrate Relocation and Exclusion Plan*
ATTACHMENT 4	Restoration Plan Cost Estimate
ATTACHMENT 5	Letter of Credit Form
ATTACHMENT 6	Mitigation Payment Transmittal Form

ISSUED BY THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

on 9/13/2018

Tina Bartlett, Regional Manager
NORTH CENTRAL REGION

ACKNOWLEDGMENT

The undersigned: (1) warrants that he or she is acting as a duly authorized representative of the Permittee, (2) acknowledges receipt of this ITP, and (3) agrees on behalf of the Permittee to comply with all terms and conditions.

By: Curt Aikens Date: 9/18/18

Printed Name: CURT AIKENS Title: GM

Attachment 1

Section 3.0 of Sediment Management Plan

SECTION 3.0

SEDIMENT MANAGEMENT

Sediment management at both Log Cabin and Our House Diversion dams includes four components: 1) maintenance of minimum pools; 2) passage of sediment; 3) planned mechanical removal of sediment, when needed; and 4) emergency removal of sediment. Each of these components is described below. This section also describes for each component some specific environmental protection measures that would be taken; additional environmental protection measures are described in Section 4.

3.1 Maintenance of Minimum Pool at Our House Diversion Dam

Currently, YCWA attempts to maintain a pool throughout the year at Our House Diversion Dam and will continue to do so, but is not able to operate similarly at Log Cabin Diversion Dam. As a result, at Our House Diversion Dam, much of the sediment that enters the impoundment settles at the upstream end of the impoundment, whereas at Log Cabin Diversion Dam, sediment tends to accumulate at the dam, which occasionally affects the proper operations of the low level outlet and fish release valves.

3.2 Passage of Sediment

Opening of low level outlet valves in diversion dams is an effective measure to pass sediment, that otherwise would accumulate behind the dams, to the river downstream of the dam. The original Operation and Maintenance Manuals for Log Cabin and Our House dams recommended that, "*sluicing should be done periodically to prevent the buildup of gravel and silt below the sill of the tunnel intake. This should be done during a period of high flow to insure efficient sluicing.*" However, for maximum effect, the valves must be opened when hydraulic conditions are favorable – that is in winter when conditions are such that the majority of the water would pass through the outlet – not over the dam – to maximize direction of flow and movement of sediment in the impoundment. Importantly, the valve should be opened when a high flow is expected to occur soon after the valve opening, which would continue moving sediment downstream of the dam after the pass-through event. The event is best scheduled for winter so that the high spring flows will continue to mobilize and redistribute moderate size sediment below the dam.

At Log Cabin Diversion Dam, at least once between November 1 and March 15 of each year inclusive, and when the Camptonville Diversion Tunnel intake is fully open, YCWA will open the low level outlet valve to full capacity for at least 96 continuous hours when: 1) instantaneous flow immediately downstream of the dam, as measured at the United States Geological Survey (USGS) streamflow gage 11409400, is equal to or greater than 540 cfs; 2) the wet period is forecast to extend for at least 48 continuous hours after opening the valve; and 3) YCWA anticipates that instantaneous flow downstream of the dam will increase to at least 750 cfs during

the period the valve is open or shortly after the valve is closed. YCWA may close the valve during the 96-hour period if daily average flow downstream of the dam, as measured at USGS gage 11409400, drops below 540 cfs during that period. During periods when the valve is open, YCWA will inspect the valve at least once a day during business hours. If the flows drop to 540 cfs after business hours, YCWA will close the valve during regular business hours the next day.

At Our House Diversion Dam, at least once between November 1 and March 15 of each year and when the Lohman Ridge Diversion Tunnel intake is fully open, YCWA will open the low level outlet valve to full capacity for at least 96 continuous hours when: 1) instantaneous flow immediately downstream of the dam, as measured at USGS streamflow gage 11408880, is equal to or greater than 600 cfs; 2) the wet period is forecast to extend at least 48 continuous hours after opening the valve; and 3) YCWA anticipates that instantaneous flow downstream of the dam will increase to at least 1,500 cfs during the period the valve is open or shortly after the valve is closed. YCWA may close the valve during the 96-hour period if daily average flow downstream of the dam, as measured at gage 1140880, drops below 600 cfs during that period. During periods when the valve is open, YCWA will inspect the valve at least once a day during business hours. If the flows drop to 600 cfs after business hours, YCWA will close the valve during regular business hours the next day.

YCWA will initiate this procedure at each dam at least once between November 1 and March 15 of each year during favorable conditions (i.e., all of above conditions met).

3.3 Planned Mechanical Removal of Sediment

Even with the benefits of maintaining a pool in Our House impoundment and periodic opening of the low level outlet valves, it is likely that YCWA may need to remove sediment from the Our House Diversion Dam impoundment or the Log Cabin Diversion Dam impoundment, or both. In those cases, mechanical sediment removal may be necessary.

When possible, YCWA may use handwork (i.e., shovels), as opposed to mechanical removal, as a remediation method for sediment buildup in front of the valves at the diversion dams.

Planned sediment removal, when needed, will occur in summer/early fall (i.e., drier months) when inflow into the impoundment is low (i.e., inflow less than or equal to minimum instream flow requirement). If sediment removal is planned, YCWA would draw down the pool in the impoundment (Section 3.1) as low as possible immediately prior to the start of work and divert inflows around the diversion so that sediment can be excavated in the dry. The water will be drained in a way to avoid aseasonal increases to instream flow downstream of the dams, such as allowing it to drain naturally through the valve or pumping it into the diversion tunnels. YCWA does not propose to perform mechanical excavation work below the waterline or suction dredge sediments in the diversion pool.

YCWA estimates that the maximum amount of sediment that would be removed at any one time from Log Cabin Diversion Dam impoundment is 20,000 yd^3 and the maximum amount of sediment that would be removed at any one time from Our House Diversion Dam impoundment

is 40,000 yds^3. However, YCWA anticipates that any sediment excavation would be much less than this, since the purpose of this Plan is to manage sediment in the impoundments while minimizing mechanical excavation.

If mechanical excavation is needed, it would occur in nine steps: 1) notification of appropriate agencies about planned sediment removal; 2) sediment testing for metals; 3) mobilization; 4) diversion/control of water; 5) removal of sediment; 6) stockpiling of sediment; 7) stabilization of the stockpile; 8) demobilization; and 9) issuance of a report. Each step is described below regardless of the impoundment in which the work would occur.

All work will occur in accordance with applicable local, state, and federal regulations.

Best management practices, detailed in Section 4.2, will be followed during all activities associated with mechanical removal of sediment.

3.3.1 Notification of Agencies for Planned Sediment Removal

YCWA routinely inspects the Log Cabin Diversion Dam and Our House Diversion Dam impoundments. Though no quantification of sedimentation is done, YCWA routinely makes and notes qualitative assessments of the sediment deposit extent and levels and, in particular, any potential blockage or clogging of the fish release valve and low level outlet valve.

If YCWA determines that sedimentation in any of the impoundments warrants implementing mechanical removal, no later than 30 days prior to when the removal is scheduled to take place, YCWA will provide a written notification (i.e., may be via e-mail) to FERC, United States Army Corps of Engineers (USACE), United States Department of Interior, Fish and Wildlife Service (USFWS), United States Department of Agriculture, Forest Service (Forest Service), State Water Resources Control Board (SWRCB), Central Valley Water Quality Control Board (CVRWQCB) and California Department of Fish and Wildlife (Cal Fish and Wildlife) that YCWA intends to mechanically remove sediment from the impoundment. To the extent possible, the notification will provide: 1) a schedule that includes an estimated start and end date for major activities including mobilization, clearing activities, in-channel work, fish and other aquatic species relocation, demobilization and monitoring; 2) if a water diversion and/or pumping of water will be necessary; and 3) if the work will require removal of or disturbance to any riparian vegetation. YCWA will also include: 1) reasons why mechanical removal is warranted; 2) information on the method selected for providing flows below the construction site; 3) estimates on how much excavated material will be removed; 4) if any deviations from the Plan and associated permits are anticipated; and 5) results from the hazardous metal tests, if not already provided.

3.3.2 Sediment Testing for Metals

Prior to removing any sediment from an impoundment, YCWA will collect three to five bulk samples of the sediment to be removed from the impoundment and transport the samples to a

state-certified laboratory for determination of metals[10] content. Sediments will be characterized as hazardous[11] or non-hazardous, based on the results of the sampling. Sampling and handling procedures shall be in accordance with the United States Environmental Protection Agency's *Test Methods for Evaluating Solid Waste - Physical/Chemical Methods* (SW-846) (USEPA 2007). Sediment samples will be transferred to laboratory-quality sample containers and preserved by in accordance with SW-846. Each sediment sample will be recorded and transported using an approved chain-of-custody form. The results of the testing will be forwarded to FERC, USACE, USFWS, Forest Service, SWRCB, CVRWQCB and Cal Fish and Wildlife prior to any ground-disturbing activities. If sediment testing results are hazardous, additional confirmatory samples may be taken, and an alternate plan for sediment stockpiling or disposal will be developed in accordance with the test results and appropriate regulations. No material will be removed from the impoundment until the alternate plan is in place and all necessary permits and approvals have been obtained.

3.3.3 Mobilization

Once sediment testing and agency notifications and permitting, as described in Section 4.3, have been completed, mobilization will include delivery of equipment to the site, establishing laydown areas, and creating stable pads for equipment, as needed (e.g., if YCWA plans to use a mobile crane with a clam shell on the bank). Mobilization will also include the following, which YCWA anticipates will be developed by the contractor YCWA selects to perform the sediment removal:

- Work schedule describing start and completion dates of tasks required to complete the work.
- Job site security plan describing measures that will be taken to provide adequate job site security that protects the contractor's, the Forest Service's, and YCWA's property from damage and/or theft during working and non-working hours.
- Medical emergency response plan describing procedures to be followed in the event of a medical emergency and location of nearest medical facility.
- Fire prevention and protection plan describing measures that will be taken to reduce the potential for fire and the procedures to be followed in the event of fire.
- Hazardous materials management plan describing measures that will be taken to reduce the potential and control spills of hazardous materials.

[10] CCR Title 22 section 66261.24 specifies the 17 metals that can qualify waste as hazardous.

[11] Soil or liquid will be characterized as Resource Conservation and Recovery Act hazardous waste, per 40 CFR Parts 260 – 265, a Toxic Substances Control Act Polychlorinated Biphenyl hazardous waste, per 40 CFR Part 761, or a non- Resource Conservation and Recovery Act, California hazardous waste Section 25117 of the California Health and Safety Code, pursuant to Section 25141 of the California Health and Safety Code.

3.3.4 Diversion/Control or Water

Diversion and control of water may consist of one or two methods. One approach would be to channel natural inflow into the impoundment around the planned work area and through the dam via the fish release valve or low level outlet valve, or both. The diversion would consist of installation of temporary piping to deliver the required flow of water continuously to the valve. Flow would be intercepted upstream of the planned excavation and diverted into a pipe. The pipe would be routed away from the planned excavation. The pipe would be installed in a buried trench and/or protected by steel plates to allow for movement of equipment in the impoundment without damage to the pipe.

The second approach would be pumping water around the work area. In this approach, a small temporary catchment would be constructed upstream of the work area and pumps would actively pass the water through one or more pipes routed around the outside of the work area and discharge into the stream below the dam.

3.3.5 Removal of Sediment

The amount of material to be excavated from the impoundment will vary from event to event, but the maximum amount of sediment that YCWA estimates will be removed is 20,000 yd^3 from Log Cabin Diversion Dam and 40,000 yd^3 from Our House Diversion Dam.

The excavation will be accomplished with track-mounted excavators located within the impoundment, or with larger mobile cranes working from the access roads above the impoundments. Stable pads will be constructed for equipment working in the impoundment. Excavated sediment will be loaded into large-capacity off-road trucks which will deliver the material to laydown areas outside the impoundments. The material, which will be clean and non-hazardous, will be temporarily (no more than 48 hours) stockpiled at the laydown area for eventual loading onto street legal trucks for hauling to the final stockpile area. After the last day of sediment removal, YCWA will have 72 business hours to clean up the laydown area, including removing the last of the sediment. Appropriate BMPs from Forest Service's Soil and Water Conservation Handbook (Forest Service 2011) will be instituted to prevent erosion. During the work, the excavators and trucks will be removed from the impoundment at the end of each shift.

The laydown area for Log Cabin Diversion Dam is located adjacent to the paved dam access road, approximately 0.2 mile from the dam, and consists of a semi-cleared area (i.e., no trees, but covered with non-native low brush and grasses). The area consists of land owned by Sierra Pacific Industries and NFS land and is within the FERC Project Boundary. The laydown area is upland, away from any water.

The laydown area for Our House Diversion Dam is located just north of the impoundment on YCWA-owned land. The laydown area is upland, away from any water.

3.3.6 Disposal of Sediment

Removed sediment will be managed and disposed of in accordance with applicable local, state, and federal regulations.

The excavated sediment will be moved from the transfer areas in the street legal trucks to a sediment disposal area on YCWA-owned land (Site 1) or private land (Site 2) property.[12] YCWA is currently in discussions with the land owner for use of Site 2. Site 2 is included in the Plan at this time assuming YCWA will obtain permission. If permission is not obtained, YCWA will use Site 1 exclusively.

Disposal Site 1 is located within the FERC Project Boundary behind a locked gate. It is approximately 9 miles from Log Cabin Diversion Dam, and 15 miles from Our House Diversion Dam. YCWA estimates that Site 1 could hold up to 90,000 yd^3. There are three sub-areas at Disposal Site 1 - A, B and C - which are pictured in Figures 3.3-1, 3.3-2 and 3.3-3. Portions of Site 1 are vegetated, though the majority of the vegetation is non-native. Access to Disposal Site 1C would require the reopening of an old road.

Figure 3.3-1. Disposal Site 1A.

[12] Large quantities of dredged material may require the use of other areas for stockpiling. At this time, YCWA anticipates using the sites described above for sediment disposal, but may use other options in the future.

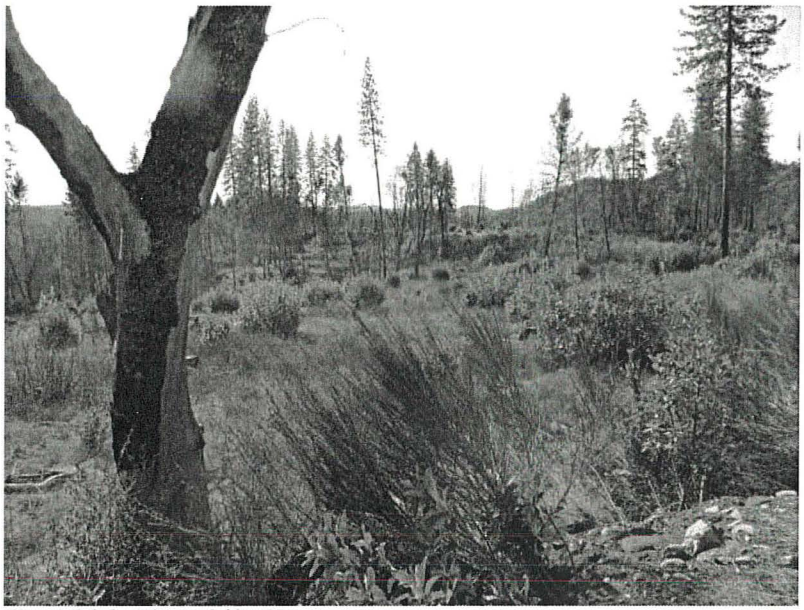


Figure 3.3-2. Disposal Site 1B.

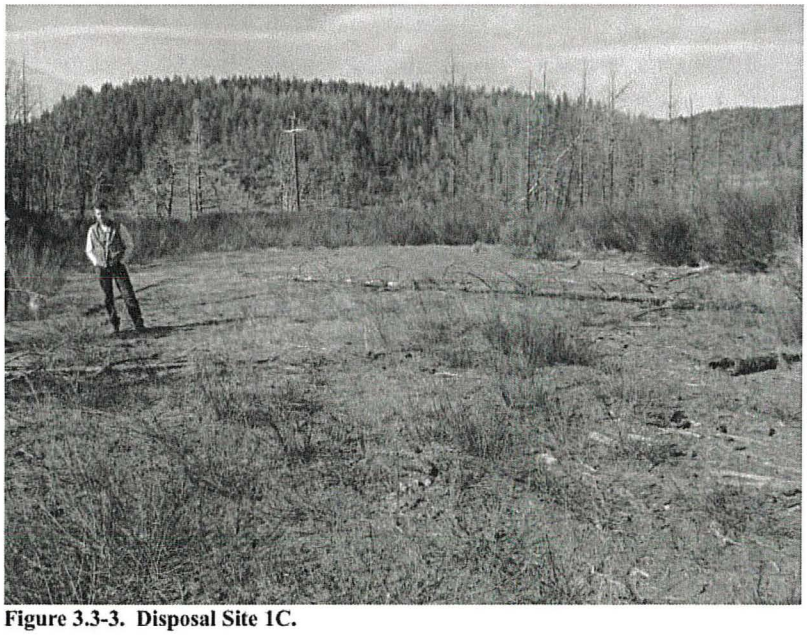


Figure 3.3-3. Disposal Site 1C.

Disposal Site 2 is on privately owned property, approximately 4.7 miles from Log Cabin Diversion Dam and 6 miles from Our House Diversion Dam, and is not within the FERC Project Boundary. A wide gravel road provides easy access into and out of the site. Within the property, a minimal dirt road would most likely need to be watered down during Project activities.

YCWA estimates that approximately 25,000 to 30,000 yd^3 of material can be disposed of at Site 2 and with little effort, the capacity could be increased significantly.

Figures 3.3-4 and 3.3-5 show Disposal Site 2.

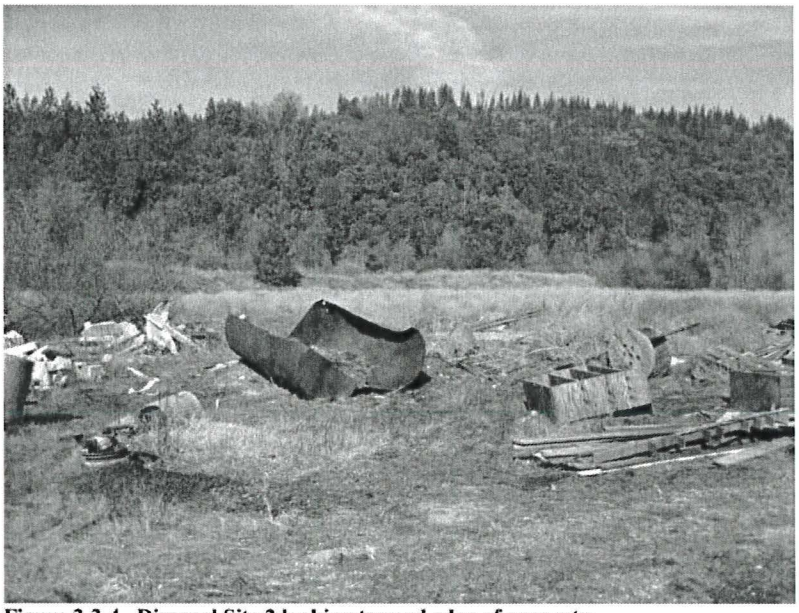


Figure 3.3-4. Disposal Site 2 looking toward edge of property.

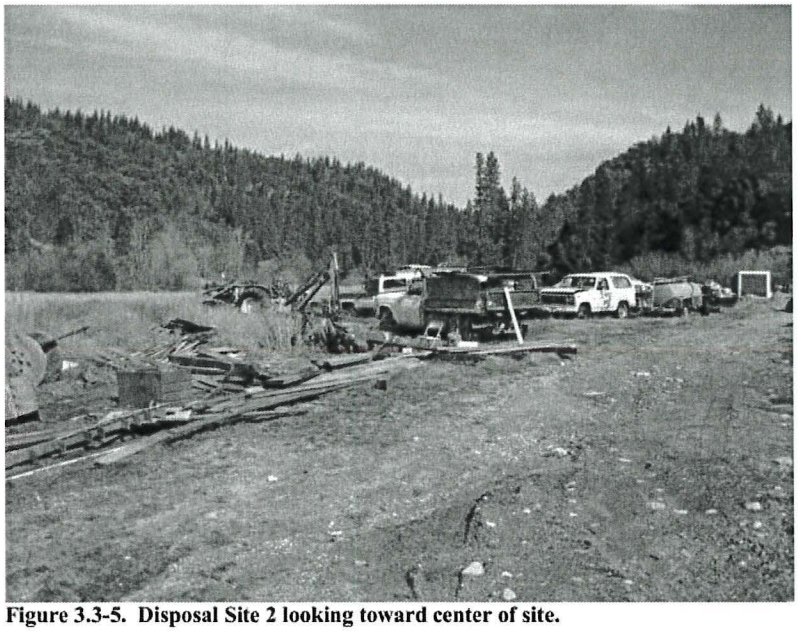


Figure 3.3-5. Disposal Site 2 looking toward center of site.

Figure 3.3-6 shows the location of Log Cabin Diversion Dam, and the routes that will be used to haul the sediment to Disposal Site 1 or Disposal Site 2. From the Log Cabin Diversion Dam, the haul route to the Site 1 sediment disposal location area will consist of the following: 1) an existing unimproved ramp from the impoundment up to the northern edge; 2) a gravel road along the northern edge of the impoundment to the right dam abutment; 3) a paved road, consisting of the lower portion of the dam access road to, the laydown area; 4) the upper portion of the dam access road to State Route 49; 5) south on State Route 49 to Marysville Road; 6) west on Marysville Road to a point east of New Bullard Bar Dam; and 7) south on an unpaved road to the stockpile area on YCWA property. From the Log Cabin Diversion Dam, the haul route to the Site 2 sediment disposal location area will consist of the following: 1) an existing unimproved ramp from the impoundment up to the northern edge; 2) a gravel road along the northern edge of the impoundment to the right dam abutment; 3) a paved road, consisting of the dam access road, from the dam to State Route 49; 4) south on State Route 49 to Ridge Road; 5) Ridge Road to north on Celestial Valley Road; and 6) north to the end of Celestial Valley Road. For any road use on NFS land, including "*existing unimproved ramp from impoundment up to the northern edge*," Forest Service Road Management BMP's will be followed (see Attachment C).

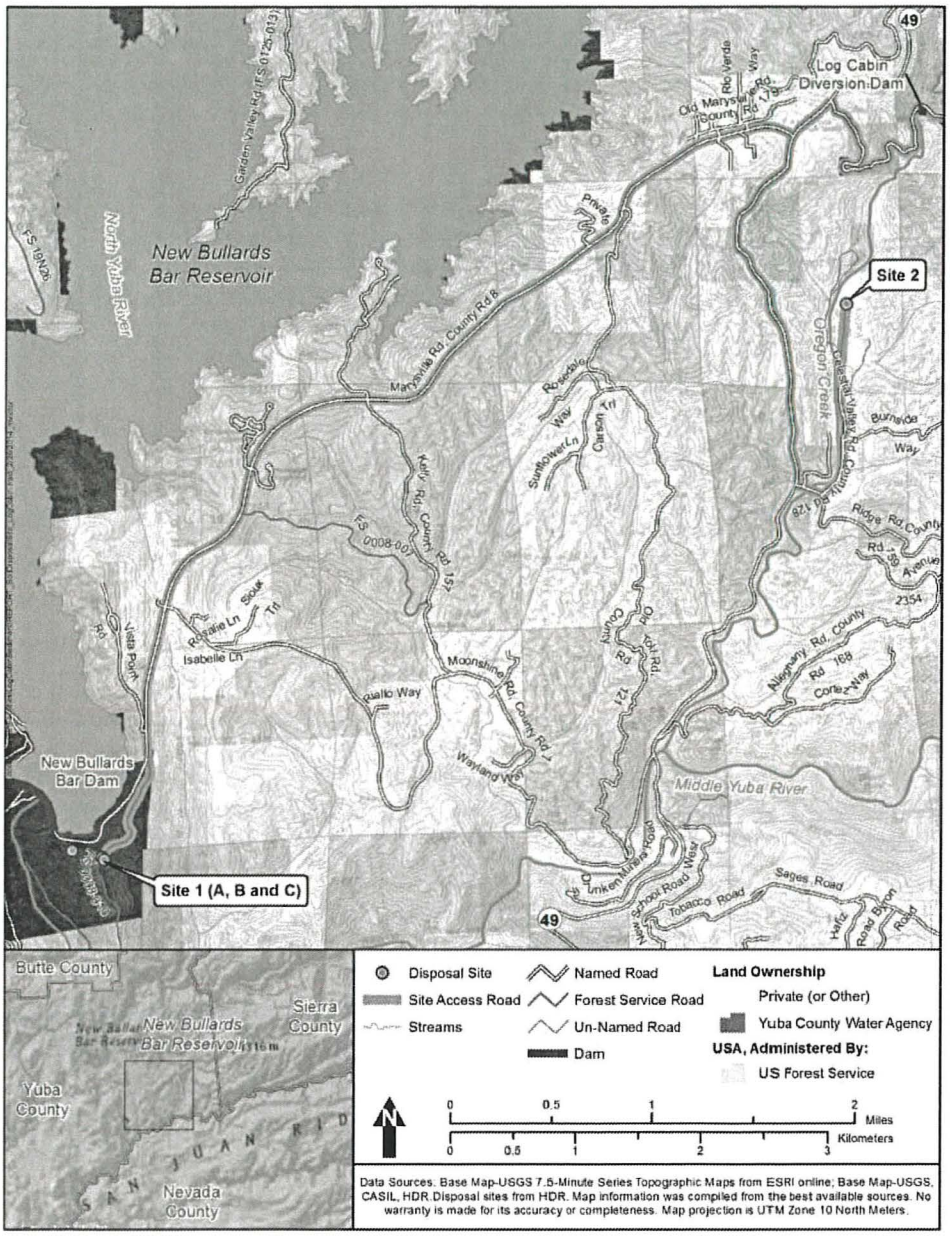


Figure 3.3-6. Location of Log Cabin Diversion Dam and haul route to Site 1 and Site 2.

Figure 3.3-7 shows the location of Our House Diversion Dam, the route that will be used to haul the sediment to Site 1, and the area where the sediment will be deposited. From the Our House Diversion Dam, the haul route to the Site 1 sediment disposal location area will consist of the following: 1) an existing unimproved, gravel ramp from the impoundment to the laydown area; 2) paved roads, consisting of Our House Dam access road, from the laydown area north of the impoundment to Ridge Road; 3) Ridge Road to State Route 49; 4) North on State Route 49 to west on Marysville Road to a point east of New Bullards Bar Dam; and 5) south on an unpaved road to the stockpile area on YCWA property. From the Our House Diversion Dam, the haul route to the Site 2 sediment disposal location area will consist of the following: 1) an existing unimproved, gravel ramp from the impoundment; 2) paved roads, consisting of Our House Dam access road, from the dam to Ridge Road; 3) Ridge Road to Celestial Valley Road; and 4) north to the end of Celestial Valley Road. For any road use on NFS land, including "existing unimproved ramp from impoundment up to the northern edge," Forest Service Road Management BMP's will be followed (see Attachment C).

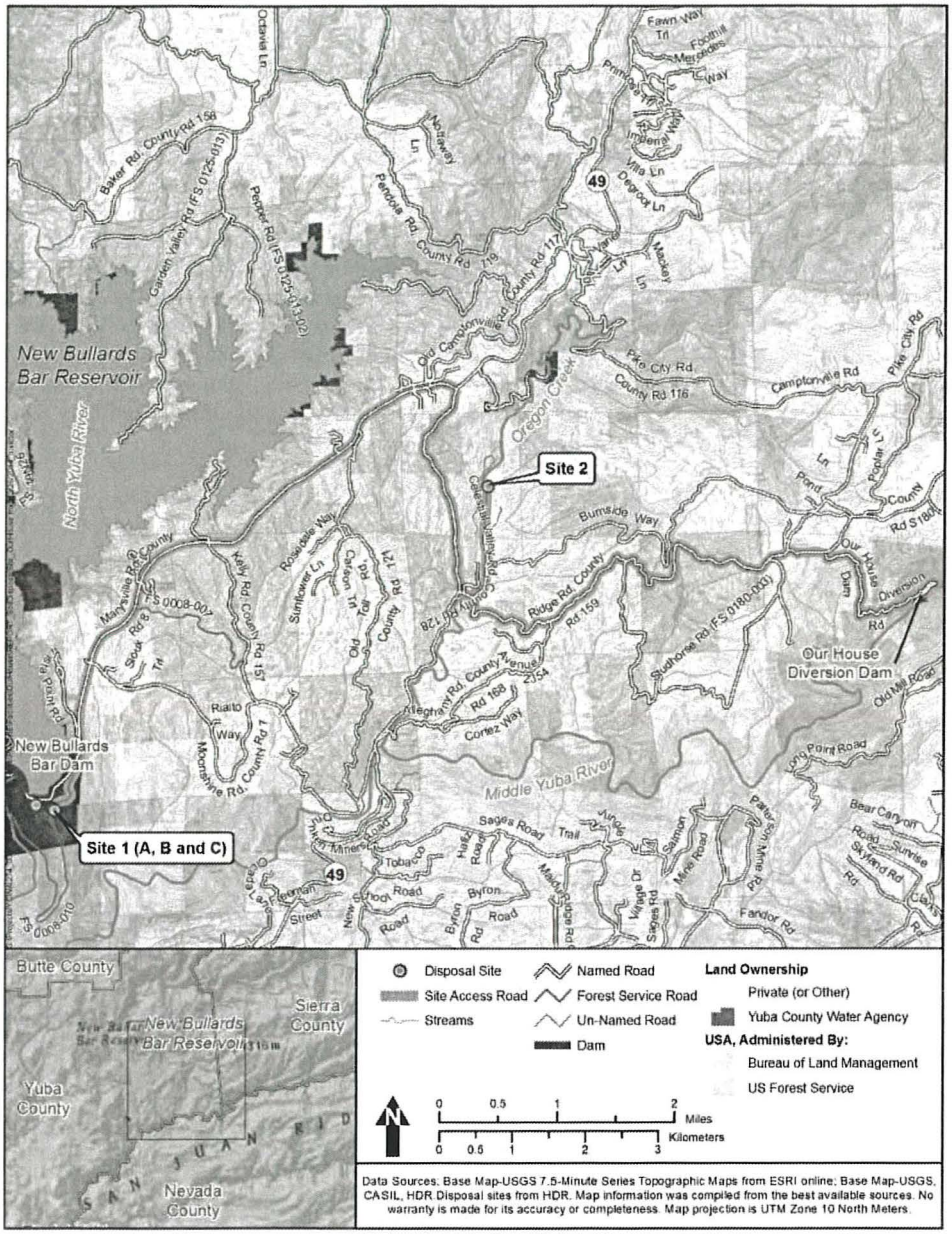


Figure 3.3-7. Location of Our House Diversion Dam and haul route to Site 1 and Site 2.

The number of round trips between the impoundment and the sediment disposal area will depend on the amount of material to be excavated. During hauling, YCWA will provide traffic control on the haul route at intersections where the haul trucks enter and leave public roads. Traffic control personnel will also be responsible for keeping the general public from getting past the diversion access road gates during work hours.

Signs will be posted during the work at the top of the access road to the impoundment warning the general public about the work underway and the associated dangers, and that they may access the site only by means other than a vehicle using caution.

3.3.7 Stockpile Stabilization

Both the Site 1 and Site 2 sediment disposal areas are generally flat with either minimal or non-native vegetation. Access to the disposal areas is on dirt roads with adequate space for turn-around by large trucks.

The excavated material will be placed as engineered fill in accordance with generally accepted geotechnical engineering practices; it will be dumped and spread out in loose lifts not exceeding 12 inches in depth and compaction will be based on a maximum lift thickness (12 inches) and a two passes with a Cat D6 or equivalent. The need for ground surface preparation prior to material placement, such as stripping and grubbing of existing vegetation, excavation of benches into sloping ground, and subsurface and surface drainage, will be determined after the material volume is known and the specific sediment disposal area is selected for stockpiling. The final stockpile dimensions will also be dependent on the volume of material excavated. The stockpile slope inclinations will not exceed 2 to 1 (horizontal to vertical).

YCWA will retain the services of a materials testing laboratory to perform field density testing of compacted fill to confirm that the minimum relative compaction was achieved.

Silt fencing will be installed at the perimeter of the stockpile area to mitigate the potential for migration of sediment. At the completion of the stockpiling, the surface of the stockpile will be compacted and hydro seeded for long term erosion control.

3.3.8 Demobilization

Once removal of sediment is complete, the work will demobilize by removing all equipment from the site (including the laydown areas); restoring minimum flow by gravity[13] through the impoundment to the fish release valve; removing sediment control measures within the impoundment; and removing all water control (diversion) measures. The site will essentially be returned to its original state (except for the impoundment) at the end of excavation.

[13] YCWA will make a good faith effort not to disrupt flow, but short periods of interruption may occur when the diversion of inflows is established and removed.

YCWA will invite FERC, USACE, USFWS, Forest Service, SWRCB, CVRWQCB and Cal Fish and Wildlife to inspect the work area when the work is complete.

3.3.9 Final Report

Within 60 days of completing the sediment removal, YCWA will provide to FERC, USACE, USFWS, Forest Service, SWRCB, CVRWQCB, and Cal Fish and Wildlife a report that summarizes the work, including the amount of material excavated, the results of field density tests, and a description of measures implemented to avoid and minimize impacts to fish, wildlife, plants, habitat, and water quality.

3.4 Emergency Mechanical Removal of Sediment

In the event of the need for emergency activities,[14] YCWA will apply for and follow the terms of the appropriate permits and approvals from the responsible agencies. These may include the USACE Regional General Permit Number 60, which includes a Clean Water Act (CWA) Section 401 certification as part of its parameters (USACE 2009), or other appropriate permitting. Pursuant to California Fish and Game Code section 1610(a)(1) and (2), notification of lake or streambed alteration to Cal Fish and Wildlife is not necessary prior to performing: 1) immediate emergency work necessary to protect life or property and 2) immediate emergency repairs to public service facilities necessary to maintain service as a result of a disaster in an area in which a state of emergency has been proclaimed by the Governor. Although notification is not required before beginning emergency work, notification of the emergency work must be submitted within 14 days after beginning the work (Fish and Game Code §1610(b)). The Forest Service will be notified in writing of the emergency activities. Where possible, the nature of the emergency activities, with the exception of permitting, will follow those described in this Plan, under Mechanical Removal of Sediment.

[14] Defined by the USACE (2009) and Cal Fish and Wildlife (CDFW n.d.) as "*clear, sudden, unexpected, and imminent threat to life or property demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property or essential public services*." This definition may be subject to change.

Attachment 2

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)
CALIFORNIA ENDANGERED SPECIES ACT

INCIDENTAL TAKE PERMIT NO. 2081-2017-047-02

PERMITTEE: Yuba County Water Agency

PROJECT: Log Cabin and Our House Diversion Dams Sediment Management Project

PURPOSE OF THE MMRP

The purpose of the MMRP is to ensure that the impact minimization and mitigation measures required by the Department of Fish and Wildlife (CDFW) for the above-referenced Project are properly implemented, and thereby to ensure compliance with section 2081(b) of the Fish and Game Code and section 21081.6 of the Public Resources Code. A table summarizing the mitigation measures required by CDFW is attached. This table is a tool for use in monitoring and reporting on implementation of mitigation measures, but the descriptions in the table do not supersede the mitigation measures set forth in the California Incidental Take Permit (ITP) and in attachments to the ITP, and the omission of a permit requirement from the attached table does not relieve the Permittee of the obligation to ensure the requirement is performed.

OBLIGATIONS OF PERMITTEE

Mitigation measures must be implemented within the time periods indicated in the table that appears below. Permittee has the primary responsibility for monitoring compliance with all mitigation measures and for reporting to CDFW on the progress in implementing those measures. These monitoring and reporting requirements are set forth in the ITP itself and are summarized at the front of the attached table.

VERIFICATION OF COMPLIANCE, EFFECTIVENESS

CDFW may, at its sole discretion, verify compliance with any mitigation measure or independently assess the effectiveness of any mitigation measure.

TABLE OF MITIGATION MEASURES

The following items are identified for each mitigation measure: Mitigation Measure, Source, Implementation Schedule, Responsible Party, and Status/Date/Initials. The Mitigation Measure column summarizes the mitigation requirements of the ITP. The Source column identifies the ITP condition that sets forth the mitigation measure. The Implementation Schedule column shows the date or phase when each mitigation measure will be implemented. The Responsible Party column identifies the person or agency that is primarily responsible for implementing the mitigation measure. The Status/Date/Initials column shall be completed by the Permittee during preparation of each Status Report and the Final Mitigation Report, and must identify the implementation status of each mitigation measure, the date that status was determined, and the initials of the person determining the status.

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
BEFORE DISTURBING SOIL OR VEGETATION					
1	Before starting Covered Activities, Permittee shall designate a representative (Designated Representative) responsible for communications with CDFW and overseeing compliance with this ITP. Permittee shall notify CDFW in writing before starting Covered Activities of the Designated Representative's name, business address, and contact information, and shall notify CDFW in writing if a substitute Designated Representative is selected or identified at any time during the term of this ITP.	ITP Condition # 5.1	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
2	Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information of a biological monitor (Designated Biologist) at least 30 days before starting Covered Activities. Permittee shall ensure that the Designated Biologist is knowledgeable and experienced in the biology, natural history, collecting, and handling of the Covered Species. The Designated Biologist shall be responsible for monitoring Covered Activities to help minimize and fully mitigate or avoid the incidental take of individual Covered Species and to minimize disturbance of Covered Species' habitat. Permittee shall obtain CDFW approval of the Designated Biologist in writing before starting Covered Activities, and shall also obtain approval in advance in writing if the Designated Biologist must be changed.	ITP Condition # 5.2	Before commencing ground- or vegetation-disturbing activities	Permittee	
3	The Permittee shall conduct an education program for all persons employed or otherwise working in the Project Area before performing any work. The program shall consist of a presentation from the Designated Biologist that includes a discussion of the biology and general behavior of the Covered Species, information about the distribution and habitat needs of the Covered Species, sensitivity of the Covered Species to human activities, its status pursuant to CESA including legal protection, recovery efforts, penalties for violations and Project-specific protective measures described in this ITP. Permittee shall provide interpretation for non-English speaking workers, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project Area. Permittee shall prepare and distribute wallet-sized cards or a fact sheet handout containing this information for workers to carry in the Project Area. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees that will be conducting work in the Project Area.	ITP Condition # 5.5	Before commencing ground- or vegetation-disturbing activities Entire Project	Permittee	
4	Permittee shall clearly delineate the boundaries of the Project Area with fencing, stakes, or flags. Permittee shall restrict all Covered Activities to within the fenced, staked, or flagged areas. Permittee shall maintain all fencing, stakes, and flags until the completion of Covered Activities in that area.	ITP Condition # 5.7	Before commencing ground- or vegetation-disturbing activities / Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
5	Permittee shall clearly delineate habitat of the Covered Species within the Project Area with posted signs, posting stakes, flags, and/or rope or cord, and place fencing as necessary to minimize the disturbance of Covered Species' habitat.	ITP Condition # 5.8	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
6	The Designated Representative shall notify CDFW three (3) calendar days before starting Covered Activities and shall document compliance with all pre-Project Conditions of Approval before starting Covered Activities.	ITP Condition # 6.1	Before commencing ground- or vegetation-disturbing activities / Entire Project	Permittee	
7	Covered Species shall be relocated out of the Project Area both prior to and during Covered Activities per the CDFW approved 2018 Aquatic Vertebrate Relocation and Exclusion Plan (Attachment 3). If Covered Species are found during Covered Activities, the biologist identified in Attachment 3, shall capture and move them out of harm's way, where no work will occur.	ITP Condition # 7.4	Before commencing ground-or vegetation-disturbing activities /Entire Project	Permittee	
8	Prior to entering the stream or initiating any aquatic species removal, all gear and equipment will be decontaminated in a designated location where runoff can be contained and not allowed to pass into water courses and other sensitive habitat areas.	ITP Condition # 7.6	Before commencing ground-or vegetation-disturbing activities / Entire Project	Permittee	
9	The Permittee may proceed with Covered Activities only after the Permittee has ensured funding (Security) to complete any activity required by Condition of Approval 8 that has not been completed before Covered Activities begin. Permittee shall provide Security as follows: 9.1 Security Amount. The Security shall be in the amount of $234,650.00. This amount is based on the cost estimates identified in Condition of Approval 8.2 above. 9.2 Security Form. The Security shall be in the form of an irrevocable letter of credit or another form of Security approved in advance in writing by CDFW's Office of the General Counsel. 9.3. Security Timeline. The Security shall be provided to CDFW within 45 days after the effective date of this ITP. 9.4. Security Holder. The Security shall be held by CDFW or in a manner approved in advance in writing by CDFW.	ITP Conditions #9.1-9.4	Within 45 days of the effective date of this ITP Entire Project	Permittee	
	DURING CONSTRUCTION				
10	To ensure compliance with the Conditions of Approval of this ITP, the Designated Biologist shall have authority to immediately stop any activity that does not comply with this ITP, and/or to order any reasonable measure to avoid the unauthorized take of an individual of the Covered Species.	ITP Condition #5.3	Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
11	A qualified biologist for Covered Species monitoring is an individual who is experienced with construction level biological monitoring, who is able to recognize all potential age classes of Covered Species relative to other amphibians in the project area, and who is familiar with the habits and behavior of the Covered Species. A qualified biologist shall have academic and professional experience in biological sciences and related resource management activities as it pertains to this species. The names and qualifications of all qualified biologists for the Covered Species shall be provided to CDFW for review and approval prior to commencement of activities.	ITP Condition # 5.4	Entire Project	Permittee	
12	The Designated Biologist shall maintain a construction monitoring notebook on-site throughout the construction period, which shall include a copy of this ITP with attachments and a list of signatures of all personnel who have successfully completed the education program. Permittee shall ensure a copy of the construction monitoring notebook is available for review at the Project area, upon request by CDFW.	ITP Condition # 5.6	Entire Project	Permittee	
13	Permittee shall confine all Project-related parking, storage areas, laydown sites, equipment storage, and any other surface-disturbing activities to the Project Area using, to the extent possible, previously disturbed areas. Additionally, Permittee shall not use or cross Covered Species' habitat outside of the marked Project Area	ITP Condition #5.9	Entire Project	Permittee	
14	Project-related personnel shall access the Project Area using routes identified in the Project Description and shall not cross Covered Species' habitat outside of or en-route to the Project Area. Permittee shall restrict Project-related vehicle traffic to established roads, staging, and parking areas. Permittee shall ensure that vehicle speeds do not exceed 10 miles per hour to avoid Covered Species on or traversing the roads. If Permittee determines construction of routes for travel are necessary outside of the Project Area, the Designated Representative shall contact CDFW for written approval before carrying out such an activity. CDFW may require an amendment to this ITP, among other reasons, if additional take of Covered Species will occur as a result of the Project modification.	ITP Condition # 5.10	Entire Project	Permittee	
15	If maintenance or refueling of vehicles or equipment must occur on-site, use a designated area and/or a secondary containment, located away from drainage courses to prevent the runoff of storm water and the runoff of spills. Place drip pans or absorbent materials under vehicles and equipment when not in use. Equipment shall be stored in areas that any possible contamination from the equipment would not flow or be washed back into the channel.	ITP Condition # 5.11	Entire Project	Permittee	
16	Permittee shall immediately stop and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so. Permittee shall exclude the storage and handling of hazardous materials from the Project Area and shall properly contain and dispose of any unused or leftover hazardous products off-site.	ITP Condition # 5.12	Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
17	Permittee shall provide CDFW staff with reasonable access to the Project and shall otherwise fully cooperate with CDFW efforts to verify compliance with or effectiveness of mitigation measures set forth in this ITP.	ITP Condition # 5.13	Entire Project	Permittee	
18	Permittee shall prohibit use of erosion control materials potentially harmful to Covered Species and other species, such as monofilament netting (erosion control matting) or similar material, in potential Covered Species' habitat.	ITP Condition # 5.14	Entire Project	Permittee	
19	Upon completion of Covered Activities, Permittee shall remove from the Project Area and properly dispose of all temporary fill and construction refuse, including, but not limited to, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, and boxes.	ITP Condition # 5.15	Entire Project	Permittee	
20	The Designated Representative shall immediately notify CDFW in writing if it determines that the Permittee is not in compliance with any Condition of Approval of this ITP, including but not limited to any actual or anticipated failure to implement measures within the time periods indicated in this ITP and/or the MMRP. The Designated Representative shall report any non-compliance with this ITP to CDFW within 24 hours.	ITP Condition # 6.2	Entire Project	Permittee	
21	The Designated Biologist shall be on-site daily when Covered Activities occur. The Designated Biologist shall conduct compliance inspections to (1) minimize incidental take of the Covered Species; (2) prevent unlawful take of species; (3) check for compliance with all measures of this ITP; (4) check all exclusion zones; and (5) ensure that signs, stakes, and fencing are intact, and that Covered Activities are only occurring in the Project Area, and outside of the boundaries of the realigned channel. The Designated Representative or Designated Biologist shall prepare daily written observation and inspection records summarizing: oversight activities and compliance inspections, observations of Covered Species and their sign, survey results, and monitoring activities required by this ITP.	ITP Condition # 6.3	Entire Project	Permittee	
22	The Designated Representative or Designated Biologist shall compile the observation and inspection records identified above, into a Monthly Compliance Report and submit it to CDFW along with a copy of the MMRP table with notes showing the current implementation status of each mitigation measure. Monthly Compliance Reports shall be submitted to the CDFW offices listed in the Notices section of this ITP and via e-mail to CDFW's Regional Representative and Headquarters CESA Program. At the time of this ITP's approval, the CDFW Regional Representative can be contacted by emailing R2CESA@wildlife.ca.gov or calling 916-358-2930 and Headquarters CESA Program email is CESA@wildlife.ca.gov. CDFW may at any time increase the timing and number of compliance inspections and reports required under this provision depending upon the results of previous compliance inspections. If CDFW determines the reporting schedule must be changed, CDFW will notify Permittee in writing of the new reporting schedule.	ITP Condition # 6.4	Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
23	Permittee shall immediately notify the Designated Biologist if a Covered Species is taken or injured by a Project-related activity, or if a Covered Species is otherwise found dead or injured within the vicinity of the Project. The Designated Biologist or Designated Representative shall provide initial notification to CDFW by calling the Regional Office at 916-358-2930 and R2CESA @ wildlife.ca.gov. The initial notification to CDFW shall include information regarding the location, species, and number of animals taken or injured and the ITP Number. Following initial notification, Permittee shall send CDFW a written report within two calendar days. The report shall include the date and time of the finding or incident, location of the animal or carcass, and if possible provide a photograph, explanation as to cause of take or injury, and any other pertinent information.	ITP Condition # 6.8	Entire Project	Permittee	
21	Work within Covered Species habitat shall be confined to the period for each of the two Covered Activities: a. For Sediment Passage- November 1 to March 15 (if approved by the FERC Agency Partners) b. For Mechanical Removal of Sediment- September 15 to November 15 (if approved by the FERC Agency Partners, and with an approved Routine Maintenance Agreement and Verification Request Form from CDFW). CDFW may, if necessary, extend the work window for a number of weeks if weather conditions remain dry.	ITP Condition # 7.1	Entire Project	Permittee	
22	The Designated Biologist shall be on-site daily while construction and/or surface-disturbing activities are taking place to minimize impacts to the Covered Species; to check for compliance with all Agreement measures; to check all exclusion zones; and to ensure fencing are intact, and that human activities are restricted to outside of protective zones. The Designated Biologist shall prepare written records summarizing: oversight activities and compliance inspections, observations of Covered Species, survey results, and monitoring activities required by this Agreement. In addition, a qualified biologist(s) will survey the area each morning prior to the start of work activities and again at the end of the work day for the duration of the Project.	ITP Condition # 7.2	Entire Project	Permittee	
23	Every day, prior to beginning construction where equipment or material may come in contact with water, gravel bars, riparian areas, and any other Covered Species or their habitat, a qualified biologist shall brief equipment operators (daily) about site-specific protective and avoidance and minimization measures.	ITP Condition # 7.3	Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
24	Permittee shall conduct Project activities in a manner that prevents the introduction, transfer and spread of aquatic, riparian, and terrestrial invasive species from one work site and/or water body to another. Prevention BMP's and guidelines for invasive plants can be found on the California Invasive Plant Council's website at: http://www.cal-ipc.org/ip/prevention/index.pho and for invasive mussels and aquatic species can be found at the Stop Aquatic Hitchhikers website: http://www.protectyourwaters.net/. Permittee shall notify the Department immediately if an invasive species not previously known to occur within the work site is discovered during work activities by contacting the Department's Invasive Species Program by email at Invasives@wildlife.ca.gov.	ITP Condition # 7.5	Entire Project	Permittee	
25	No equipment shall operate, or any excavation take place, in the portion of the stream where flowing water is present. Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily to prevent leaks of materials that could be deleterious to aquatic and terrestrial life or riparian habitat.	ITP Condition # 7.7	Entire Project	Permittee	
	Post Construction				
26	Permittee shall provide CDFW with an Annual Status Report (ASR) no later than January 31 of every year beginning with issuance of this ITP and continuing until CDFW accepts the Final Mitigation Report identified below. Each ASR shall include, at a minimum: (1) a summary of all Monthly Compliance Reports for that year identified in Condition of Approval 6.4; (2) a general description of the status of the Project Area and Covered Activities, including actual or projected completion dates, if known; (3) a copy of the table in the MMRP with notes showing the current implementation status of each mitigation measure; (4) an assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing and mitigating Project impacts; (5) all available information about Project-related incidental take of the Covered Species; (6) an accounting of the number of acres subject to both temporary and permanent disturbance, both for the prior calendar year, and a total since ITP issuance; and (7) information about other Project impacts on the Covered Species.	ITP Condition # 6.5	Post-construction	Permittee	
27	The Designated Biologist shall submit all observations of Covered Species to CDFW's California Natural Diversity Database (CNDDB) within 60 calendar days of the observation and the Designated Biologist shall include copies of the submitted forms with the next Monthly Compliance Report or ASR, whichever is submitted first relative to the observation.	ITP Condition # 6.6	Post-Construction	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
28	No later than 45 days after completion of all mitigation measures, Permittee shall provide CDFW with a Final Mitigation Report. The Designated Biologist shall prepare the Final Mitigation Report which shall include, at a minimum: (1) a summary of all Monthly Compliance Reports and all ASRs; (2) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species; (4) information about other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an assessment of the effectiveness of this ITP's Conditions of Approval in minimizing and fully mitigating Project impacts of the taking on Covered Species; (7) recommendations on how mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future projects on the Covered Species; and (8) any other pertinent information.	ITP Condition # 6.7	Post-Construction	Permittee	
29	The Permittee shall submit to CDFW, within 90 days from the effective date of this ITP, a detailed Restoration Plan which shall include invasive species removal, and other activities to enhance Covered Species and their habitat.	ITP Condition 8.1	Within 90 days from the effective date of this ITP	Permittee	

Figure 1

Log Cabin Project Location Map

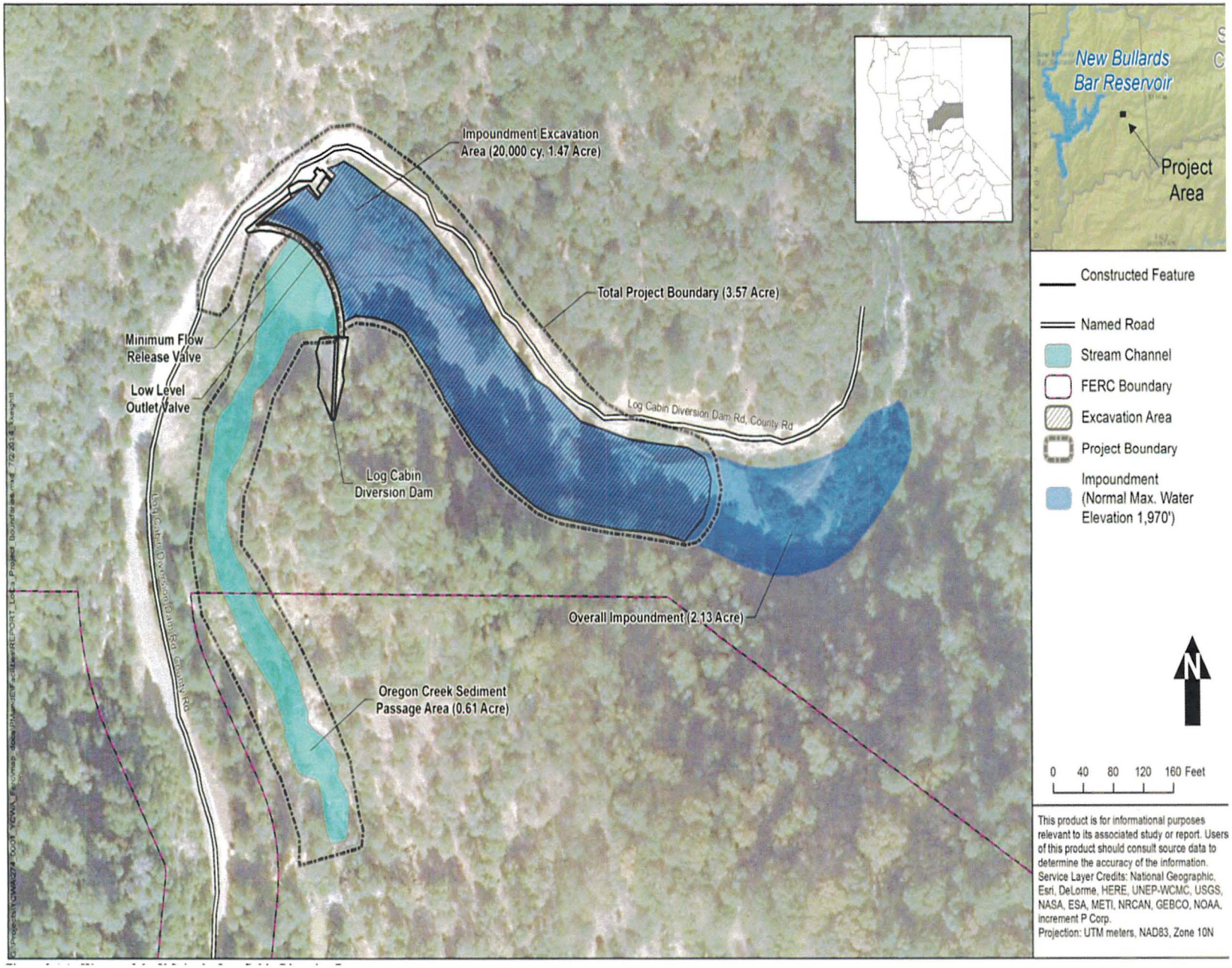

Impoundment Excavation Area (20,000 cy, 1.47 Acre)
Total Project Boundary (3.57 Acre)
Minimum Flow Release Valve
Low Level Outlet Valve
Log Cabin Diversion Dam
Log Cabin Diversion Dam Rd, County Rd
Overall Impoundment (2.13 Acre)
Oregon Creek Sediment Passage Area (0.61 Acre)
New Bullards Bar Reservoir
Project Area
Constructed Feature
Named Road
Stream Channel
FERC Boundary
Excavation Area
Project Boundary
Impoundment (Normal Max. Water Elevation 1,970')
N
0 40 80 120 160 Feet
This product is for informational purposes relevant to its associated study or report. Users of this product should consult source data to determine the accuracy of the information.
Service Layer Credits: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.
Projection: UTM meters, NAD83, Zone 10N

Figure 2

Our House Project Location Map

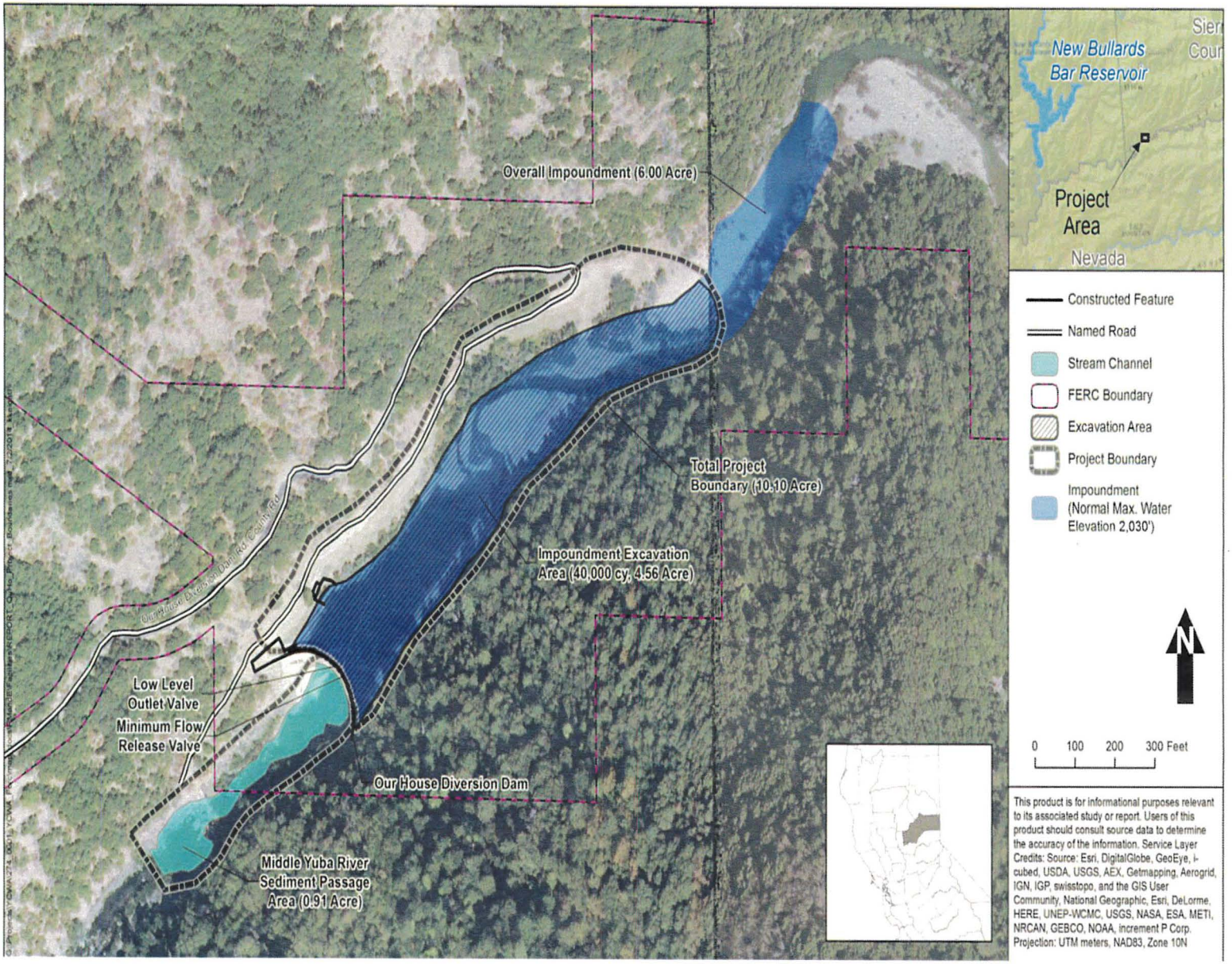

Overall Impoundment (6.00 Acre)
Total Project Boundary (10.10 Acre)
Impoundment Excavation Area (40,000 cy, 4.56 Acre)
Low Level Outlet Valve
Minimum Flow Release Valve
Our House Diversion Dam
Middle Yuba River Sediment Passage Area (0.91 Acre)
Our House Diversion Dam Road
New Bullards Bar Reservoir
Project Area
Nevada
Constructed Feature
Named Road
Stream Channel
FERC Boundary
Excavation Area
Project Boundary
Impoundment (Normal Max. Water Elevation 2,030')
N
0 100 200 300 Feet
This product is for informational purposes relevant to its associated study or report. Users of this product should consult source data to determine the accuracy of the information. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.
Projection: UTM meters, NAD83, Zone 10N

Figure 3

Log Cabin Temporary Laydown Area

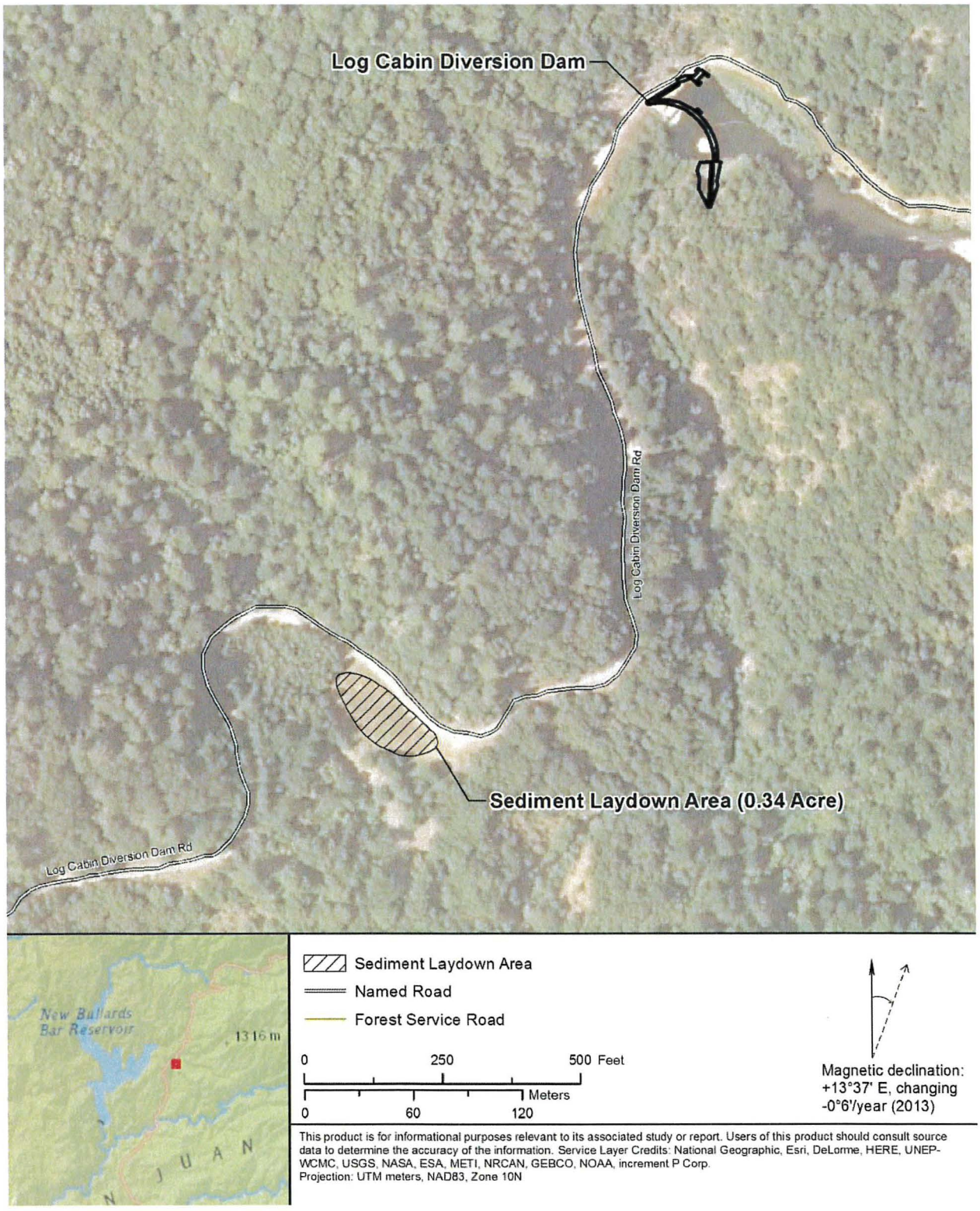
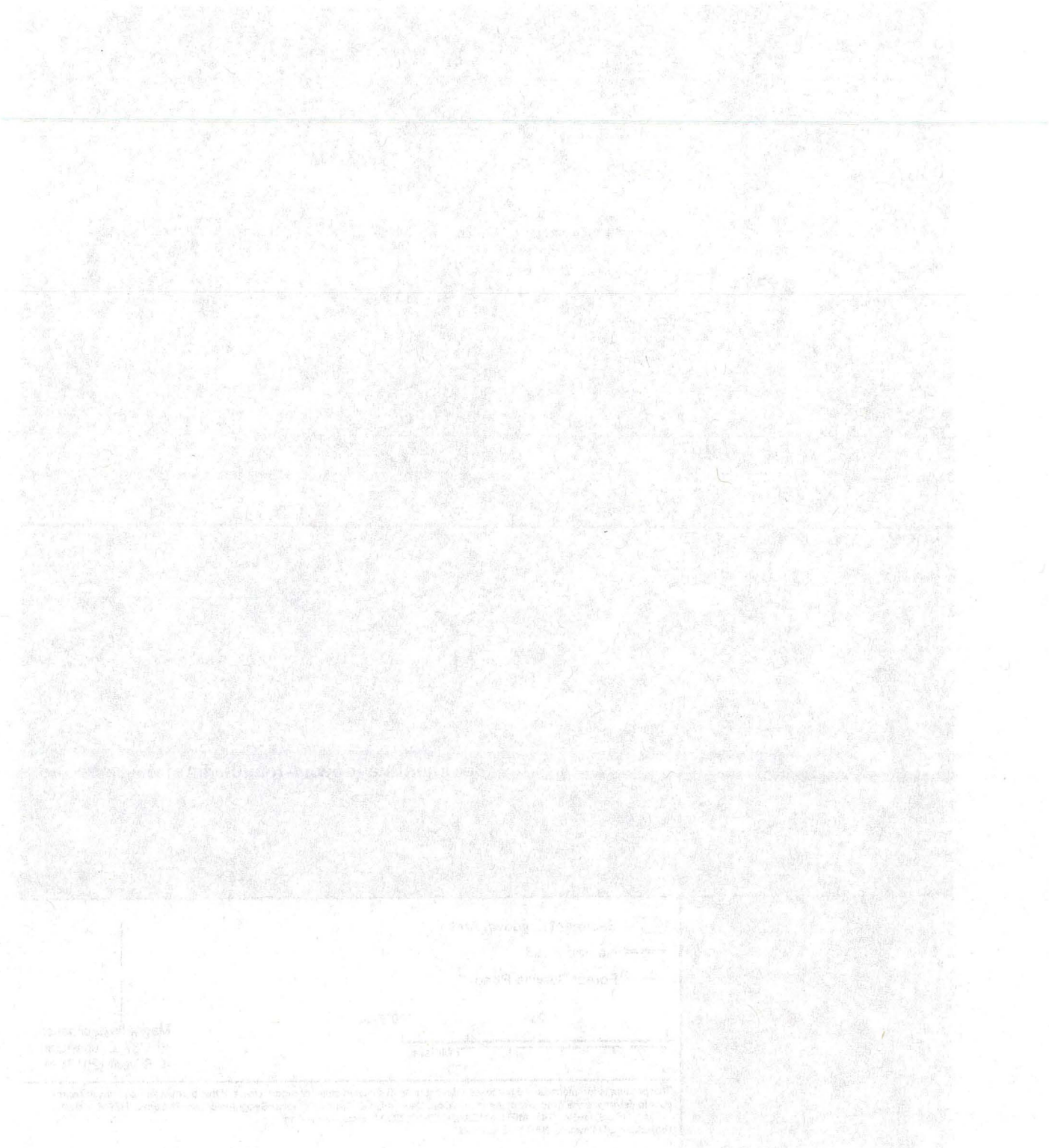
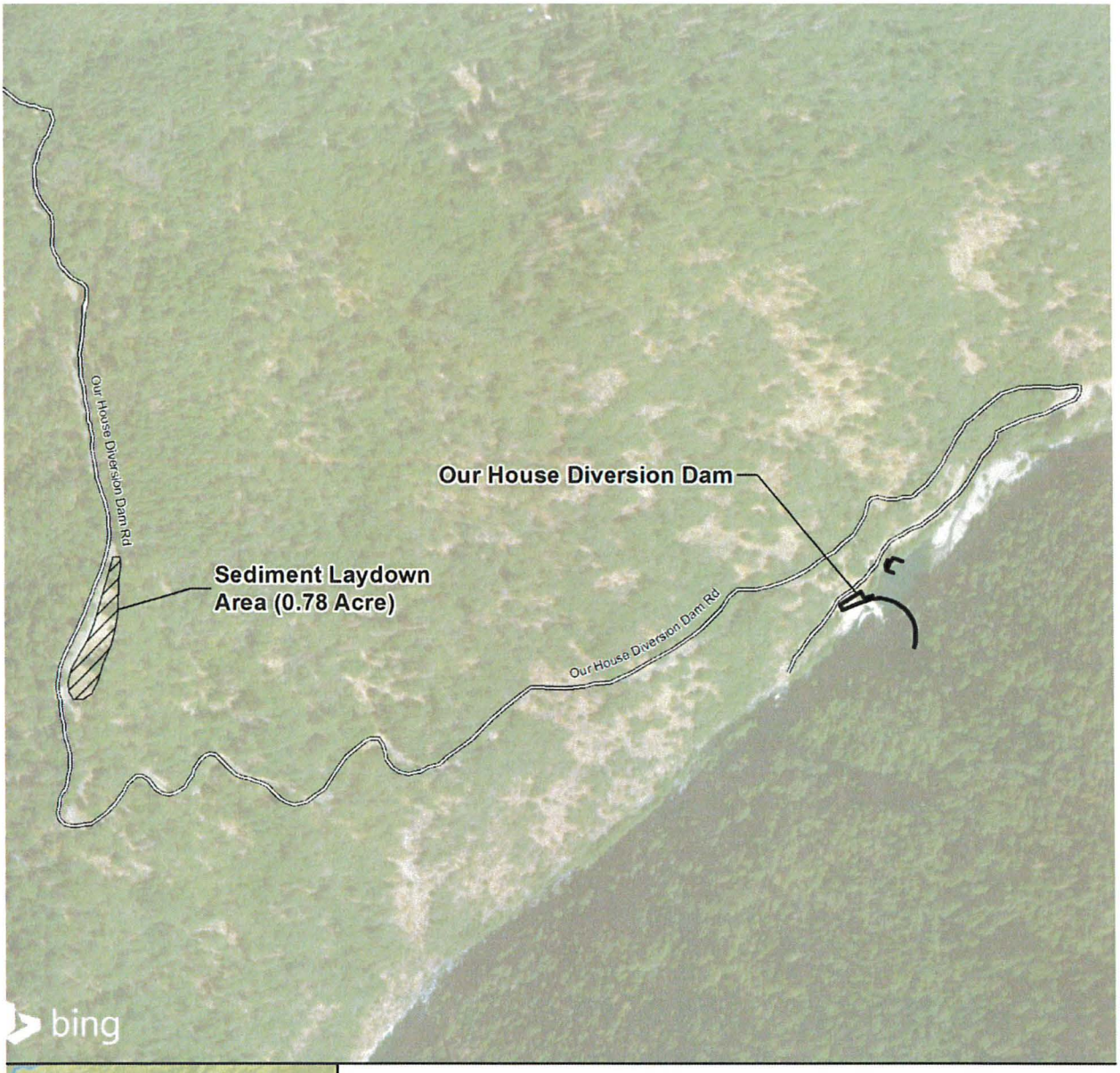
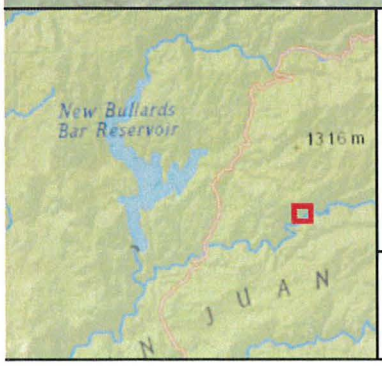


Figure 4

Our House Temporary Laydown Area







Sediment Laydown Area

Named Road

0 500 1,000 Feet

0 150 300 Meters

Magnetic declination: +13°37' E, changing -0°6'/year (2013)

This product is for informational purposes relevant to its associated study or report. Users of this product should consult source data to determine the accuracy of the information. Service Layer Credits: Image courtesy of USGS Earthstar Geographics SIO © 2017 Microsoft Corporation , Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.
Projection: UTM meters, NAD83, Zone 10N

Attachment 3

AQUATIC VERTEBRATE RELOCATION AND EXCLUSION PLAN

Introduction

In 2014, at the direction of the Federal Energy Regulatory Commission (FERC), the Yuba County Water Agency (YCWA) wrote and filed, with FERC, a Sediment Management Plan for Log Cabin and Our House Diversion Dams (the Plan). These facilities are part of YCWA's Yuba River Development Project (FERC Project # 2246). Amongst the provisions of the Plan is a 5-10 year permit package to mimic natural sediment flushing for downstream habitat improvement and for the mechanical removal of up to 100,000 cubic yards (yd^3) of sediment from the two impoundments in order to keep the inlets for the low level outlet valves free of blockage. Sediment removal will occur in late summer/early fall when inflow into the impoundments is low. Immediately prior to the start of work, YCWA will draw down the pool in the impoundments as low as possible and divert inflows around the excavation area so that sediment can be excavated in the dry. The water will be drained in a way to avoid unseasonal increases to instream flow downstream of the dams, such as allowing it to drain naturally through the valve or pumping it into the diversion tunnels. YCWA does not propose to perform mechanical excavation work below the waterline.

Prior to and during all diversion and dewatering of the stream channel a qualified aquatic biologist will capture and relocate all fish, frogs, turtles and other aquatic vertebrate species to safe and suitable habitat using methods approved by the California Department of Fish and Wildlife (CDFW). Additionally, the biologist shall monitor dewatered areas for stranded aquatic species and relocate them as well. Handling of aquatic species will be minimized to the greatest extent feasible.

The qualified biologist will be onsite during all project activities that involve excavation, grading, vegetation removal, or other ground disturbing activities to ensure impacts to fish and wildlife resources are minimized. The biologist shall be familiar with fish, plant, wildlife, and habitats found within and adjacent to the work site.

This plan describes the methods of relocation and exclusion to be used in conjunction with any mechanical sediment removal at Log Cabin or Our House diversion dams.

Species Likely to be Encountered

All aquatic vertebrates will be captured and relocated out of the sediment removal area. Of primary concern are all fish species, foothill yellow-legged frogs and western pond turtles. FYLF are a Bureau of Land Management (BLM) sensitive species, a United States Department of Agriculture's Forest Service (USFS) sensitive species, a CDFW species of special concern, an International Union for Conservation of Nature (IUCN) near threatened species and as of June 2017, a Candidate Species under CESA. WPT are a BLM sensitive species, a USFS sensitive

species, a CDFW species of special concern, and an IUCN vulnerable species (BLM 2010, CDFW 2018, USFS 2013).

The list of fish species likely to be encountered during the sediment removal project is based on a recent stream fish population study completed by YCWA in 2012 and 2013 and the fish rescues performed in 2014 and 2017. A total of four species were observed in Oregon Creek (Table 1) and five in the Middle Yuba River (Table 2).

Table 1. Overview of fish species captured during electrofishing surveys on Oregon Creek in 2012 and 2013 and 2014 and 2017 fish rescue.

Species		Oregon Creek Upstream of Log Cabin Diversion Dam (RM 4.5)	Oregon Creek Upstream of Middle Yuba River (RM 0.3)
Common Name	Scientific Name		
Rainbow trout	*Oncorhynchus mykiss*	•	•
Sacramento pikeminnow	*Ptychocheilus grandis*	•	–
Sacramento sucker	*Catostomus occidentalis*	•	•
Smallmouth bass	*Micropterus dolomieu*	--	•

• = species was captured.

Table 2. Overview of fish composition collected or observed during electrofishing and snorkeling in the Middle Yuba River Sub-basin in 2012 and 2013 and fish rewcue in 2017.

Species		Middle Yuba River Upstream of Our House Diversion Dam (RM 13.3)	Middle Yuba River Downstream of Our House Diversion Dam (RM 12.5)	Middle Yuba River Upstream of Oregon Creek (RM 5.0)
Common Name	Scientific Name			
Rainbow trout	*Oncorhynchus mykiss*	•	•	•
Brown trout	*Salmo trutta*	•[1]	--	--
Sacramento pikeminnow	*Ptychocheilus grandis*	•	--	--
Sacramento sucker	*Catostomus occidentalis*	•	•	•
Smallmouth bass	*Micropterus dolomieu*	--	•	•

[1] Incidental collection during entrainment sampling.

• = species was captured or observed.

In 2011 and 2012 YCWA performed VES for foothill yellow-legged frogs at sites on stream reaches that may potentially be affected by Yuba River Development Project flows. Results from the VES as well as historical records reveal that foothill yellow-legged frogs are present at both Log Cabin and Our House Diversion Dam impoundments (YCWA 2012a). Results from the aquatic species recue in 2014 and 2017 reveal that FYLF are present at both Log Cabin and Our House Diversion Dam impoundments.

Similarly, in 2012, YCWA mapped potentially suitable habitat for western pond turtles, assembled information associated with incidental observations of western pond turtles reported during various YCWA relicensing studies, and performed surveys for basking western pond turtles at nine sites inside the Yuba River Development Project's FERC Project Boundary (YCWA 2012b). Survey results at Log Cabin Diversion Dam impoundment indicated the presence of one adult western pond turtle repeatedly observed in 2012. Two adult western pond turtles were also trapped ~0.4 river miles upstream of the impoundment during efforts conducted under a YCWA entrainment study (YCWA 2012c). Combined with historical sightings by USFS employees (USFS 2011), and an incidental observation of a juvenile western pond turtle in a puddle near the impoundment, this information suggests that small numbers of western pond turtles may occur with regularity in the vicinity of the impoundment. There are no historical

records of western pond turtles at Our House Diversion Dam impoundment and no western pond turtles were detected during YCWA's 2012 surveys. Two adult WPT were relocated from Log Cabin during aquatic species rescue in 2017.

METHODS

Fish Relocation and Exclusion

The relocation and exclusion of fish in Oregon Creek and the Middle Yuba River will occur at Log Cabin Diversion Dam and Our House Diversion Dam respectively. In general the following steps will be followed: (1) identify project extent, (2) install block nets, (3) complete fish relocation, (4) monitor and maintain block nets and (5) remove block nets upon Project completion. Each of the steps is discussed in additional detail below.

Identify Project Extent

Prior to the start of sediment removal, YCWA will identify the upstream extent of Project impacts, including the location of any equipment used to divert the flow of Oregon Creek or the Middle Yuba River. The upstream extent of the Project will extend approximately another 25 yards upstream or at a location where block nets will be most effective at excluding fish from entering the Project area.

The downstream extent of the Project will be the area where flows are being reintroduced into the channel or the diversion dam, whichever is further downstream.

Install Block Nets

Block nets will span the full width and depth of Oregon Creek or the Middle Yuba River and be installed in such a way to limit debris loading and possible failure. The location of block nets will be identified prior to the start of sediment removal. GPS coordinates and photographs will document the location and setup of each block net.

Complete Fish Relocation

Fish relocation in the riverine portions of Oregon Creek and the Middle Yuba River from the upper Project extent to the diversion pool will occur using standard backpack electrofishing methods. Prior to electrofishing at a site that has been previously selected; biologists will walk the stream-bank to directly observe the presence of any western pond turtles (WPT) or foothill yellow-legged frog (FYLF). Due to the narrow channel and low flows expected during the sediment removal it is anticipated that a single backpack electrofishing crew will be sufficient to complete this work. The team will begin at the downstream extent of the Project and electrofish to the upstream extent of the Project. Captured fish will be held in an aerated bucket or holding pen until the pass is complete. Following each pass, captured fish will be released in suitable habitat at a safe distance, upstream of the Project. This process should be repeated until no fish are captured or observed for 2 electrofishing passes.

If pooling areas persist, fish relocation will occur using multiple methods. Prior to fish relocation, the diversion pool will be dewatered until the entire pool can safely be waded. As the diversion pool water surface elevation decreases, biologists will monitor for any fish being stranded and immediately relocate these fish upstream in an aerated bucket. Once the diversion pool reaches a level suitable for backpack electrofishing, Biologists will make multiple passes through the pool to ensure all fish have been captured and removed. Dip netting and seining will be used if turbidity or depth reduces the effectiveness of backpack electrofishing. All fish will be held in aerated buckets and released upstream of the Project as soon as possible.

Fish will be relocated to an area that encourages recolonization once the sediment removal is complete. In the case of Log Cabin and Our House Diversion dams, these locations are upstream of the Project site.

Table 3. Approximate location of fish relocation areas.

Project Location	Coordinates for Approximate Start to Relocation	
	Latitude	Longitude
Our House Diversion Sediment Removal	39.414121	-120.993228
Log Cabin Diversion Sediment Removal	39.441604	-121.056549

Working in an upstream direction, fish will be dispersed into pool habitats beginning at the first pool encountered at a minimum of 0.2 mile from project activities. No more than five fish greater than 10 inches, will be released in each pool to avoid crowding related stress and resource competition. Fish less than 10 inches in length will be relocated to pool habitats upstream of the project extent in densities determined to be appropriate by on-site biologists.

Monitor and Maintain Block Nets

Once the block nets have been installed, biologists will inspect the net at a minimum of three times daily in order to ensure it is functioning properly. In particular, biologists will remove sticks and other debris as well as ensuring the net spans the full width and depth of the stream. Additional weights or support will be added as needed.

Remove Block Nets

Upon completion of the sediment removal, YCWA will remove the block nets only after flow has been returned to the dewatered channel and the diversion pool has sufficient water. Any natural products used in the construction of the block nets (i.e. rocks and sticks) will be returned to the area.

FYLF and WPT Relocation and Exclusion

Qualified biologists will survey the area prior to the removal of sediment. In addition, biologists will survey the area each morning prior to the start of work activities and again at the end of the work day for the duration of the Project.

All fish, frogs, turtles, and other aquatic vertebrates will be captured and relocated to suitable habitat outside of the sediment removal area. Techniques for locating frogs, turtles, and other aquatic vertebrates will be adopted from the VES standard protocols developed by Pacific Gas & Electric Company (PG&E) for hydroelectric project applications (PG&E and NID 2009), which were modified from Seltenrich and Pool (2002). Specifically, a surveyor walks slowly and searches for aquatic species continuously along stream margins, back channel areas, and potential instream habitats, scanning the immediate area and ahead. In water too deep to be surveyed by wading or where swift flow, substrate configuration, or other factors render viewing from above the water's surface ineffective, snorkeling will be employed to search safely accessible habitats.

When aquatic species such as frogs and turtles are located, disinfected fine mesh dip nets will be used to capture the animal. When necessary, sterile gloves will be used for hand capture techniques and other handling. Sterile gloves should prevent the spread of diseases such as chytrid fungus (*Batrachochytrium dendrobatidis*). Upon capture, organisms will be placed in disinfected five-gallon buckets and relocated out of the work area to their predetermined locations (Table 3).

FYLF will only be relocated once the Incidental Take Permit has been issued for the project. For the Log Cabin and Our House Sediment Removal, all captured FYLF will be dispersed at least 0.2 mile upstream from the project extent, into suitable habitats or at areas agreed to onsite with the CDFW. Under supervision of qualified biologists, areas with ample suitable habitat will be used to minimize the potential that relocations will attract predators or exceed the carrying capacity of any one location. Additional relocation sites will be located if possible, to help avoid exceeding the carrying capacity of relocation sites. All captured adult and post metamorph FYLF will be released within one foot of the waters' edge. Release sites will be located in riffle and run habitats to avoid predation by released fish in pool habitats. Any captured tadpole FYLF will be released in appropriate calm, edgewater habitats. No tadpoles are anticipated to be captured at this time of year.

For the Log Cabin Sediment Removal all captured FYLF will be released in Grizzly Creek. Grizzly Creek is a small perennial tributary to Oregon Creek with the confluence being located approximately 50 meters upstream of the upper extent of the work area. Due to the smaller size of Grizzly Creek only one adult or post metamorph will be released per habitat unit. FYLF will be dispersed starting at least 50 meters upstream of the confluence with Oregon Creek (total of approximately 100 meters from project activities). All adult and post metamorph FYLF will be released on shore within one foot of the waters edge. Tadpole FYLF (if found) will be released in calm pools with available cover.

When WPT are located, disinfected fine mesh dip nets will be used to capture the animal. When necessary, sterile gloves will be used for hand capture techniques and other handling. Sterile gloves should prevent the spread of diseases. Upon capture, organisms will be placed in disinfected five-gallon buckets and released at the water's edge into the nearest suitable pool habitat with instream cover and appropriate basking habitat. This pool will be located at least 0.2-mi from all project activities.

Reporting and Monitoring

YCWA will adhere to all monitoring and reporting required as part of the permitted Project. Specifically, biologists will record the number of each species of fish, amphibian and turtle removed during the initial relocation event and during each day of sediment removal. Any individuals found to be injured or deceased will also be documented. A final report will be provided to CDFW within 30 days of the end of sediment removal.

QUALIFICATIONS

YCWA's consultant for this work, HDR, has many years of experience with the methodologies described above and in the specific watersheds. The aquatics team has performed studies at both Log Cabin and Our House diversion dams in support of the relicensing of the YRDP (FERC No, 2246) as well as additional experience in the Yuba Watershed working on the Yuba-Bear and Drum-Spaulding relicensings. The proposed staff is well qualified and currently holds or has held in the past a CDFW scientific collecting permit.

Kelly Bartron – Primary Designated Biologist
Kelly Barton has 7 years of experience working in the field of terrestrial biology and other related resource management programs. Kelly holds a Bachelor's of Science degree in Environmental Biology from Humboldt State University and a Masters Degree in Rangeland Ecology from Colorado State University. Ms. Bartron has worked on an assortment of local, state, federal, and private projects throughout the United States including CO, MT, NV, ID, CA, and UT. Although her experience is broad, she specializes in conducting and leading biological surveys and assessments across the western United States in the high mountain desert and rangeland in relation to the greater sage-grouse. She joined the terrestrial team at HDR four years ago and has participated in numerous biological monitoring and survey efforts including, but not limited to, fuels treatment, large woody debris removal, raptor activity, special-status plants, sediment removal, and hazard tree removal pre-construction surveys. In addition, she has aided the aquatics team on several studies, including BMI, water profiles, bullfrog surveys, redd surveys and eDNA sampling. Kelly is proficient with the identification and handling of western North American herptiles, birds, mammals and plants. She is also covered under the HDR Scientific Collecting Permit (SCP).

Brian Poxon- Lead of Aquatic Species Rescue
Brian Poxon has 14 years of experience working with freshwater fish assemblages in California and Oregon. After he received a Bachelor's of Science in Fisheries Biology from Humboldt State University in 2005, he went on to pursue graduate education at Humboldt State University and received his Master's of Science in Natural Resources with an emphasis in Fisheries Biology in 2012. Brian has worked extensively with all life stages of ESA-listed populations of Chinook and coho salmon and steelhead trout in California (North Coast and Central Valley) and Oregon (Mid-Columbia River region). He held positions with USGS (California Cooperative Fish and Wildlife Research Unit, Humboldt State University), Oregon Department of Fish and Wildlife, and Pacific States Marine Fisheries Commission before joining HDR, Inc. in 2018 as a Fisheries Biologist Lead. Brian has participated in California Department of Fish and Wildlife-lead fish

rescue and salvage operations in the Sacramento River bypass systems, has years of experience conducting electrofishing surveys for sensitive and listed fish species, and is proficient with identification of all fish species present in Central Valley main-stem and tributary river ecosystems. He works under the HDR SCP.

Chuck Vertucci
Charles Vertucci has 10 years of experience working as an aquatic biologist and holds a Master's Degree in Environmental and Forest Biology. In that time, he has served on the field crew of multiple stream fish studies and FYLF visual encounter surveys. He is proficient in boat and backpack electrofishing, spending hundreds of hours in the field as well as completing both the Smith-Root and NWETC electrofishing courses. He is comfortable identifying freshwater fishes, amphibians and turtles likely to be encountered. In addition, most of his experience has come in the Yuba River watershed including site specific work at both Log Cabin and Our House diversion dams. He held a California Scientific Collecting Permit from 2008 to 2012 in support of these studies and now works under the HDR SCP.

Nickolas Hood
Nickolas Hood has over 5 years of experience in fisheries and aquatic biology. With a Bachelors of Science in Aquatic Biology from the University of California Santa Barbara, he has applied his knowledge and field experience to projects involving aquatic resource management, conservation, and research. Nick previously worked for the California Department of Fish and Wildlife working on various projects and conducting a variety of different survey methods, including backpack and boat electrofishing on a regular basis. Before joining HDR, Nick worked for Pacific States Marine Fisheries Commission capturing, handling, and tagging Central Valley Steelhead on the Sacramento River and is well versed in safe handling practices of listed species. In addition, he has performed high profile fish rescues of North American green sturgeon and spring and winter run Chinook salmon. Nick is proficient with the identification and handling or western North American fish, herptiles, birds, mammals and plants.

Benjamin Onanian
Benjamin Onanian has 5 years of experience in fisheries and aquatic biology. Ben holds a Bachelors of Science degree in Marine Biology from the University of California Santa Cruz. Upon graduation, Ben worked for the California Department of Fish and Wildlife utilizing his knowledge and experience on various projects and management issues while conducting a variety of different fisheries surveys, including backpack and boat electrofishing, gill netting, seining and snorkeling on a regular basis. Prior to joining HDR, Ben worked for Pacific States Marine Fisheries Commission capturing, handling, and tagging Central Valley Steelhead on the Sacramento River and is well versed in safe handling practices and protocols for listed anadromous species. As a CDFW employee, he has performed high profile fish rescues of North American green sturgeon, spring and winter run Chinook salmon and various trout species. As an HDR employee, Ben has continued to apply his fisheries knowledge and experience in addition to participating in frequent water quality studies. Ben is proficient with the identification and handling or western North American fish, herptiles, birds, mammals and plants.

Sheila Pitts
Sheila Pitts has over 15 years of experience in the environmental consulting field, primarily working on protocol-level and general biological surveys, report writing, and the preparation of

documents in support of hydropower relicensing and permitting. Sheila currently is a field lead for raptor, non-native plant and aquatic invasive species studies and regularly assists with botanical and aquatic surveys. She has been an environmental monitor, conducted worker environmental training seminars, developed construction mitigation measures, and participated in numerous environmental monitoring efforts including large woody material removal, general construction monitoring, utility pipeline installation, as well as large- and small-scale fiber optic installations throughout the San Francisco Bay Area.

Scott Tidball
Scott Tidball has 6 years of experience working in the biological field. Scott holds a Bachelor's of Arts degree in Environmental Resources from Sacramento State University. Scott has previously worked for the California State Parks and Placer County Water Agency as a botanist and GIS technician. Since joining HDR 5 years ago, Scott has conducted surveys throughout California, including wetland delineations, general habitat delineations, invasive species identification, treatment, and monitoring, special-status plant surveys and monitoring, special-status invertebrate, amphibian, reptile, avian, and mammal surveys, in addition to construction monitoring.

If any changes are made to the list of qualified biologists, YCWA will provide updated qualifications to CDFW prior to changing staff in the field.

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Log Cabin and Our House Sediment Management Plan
Yuba River Development Project
FERC Project No. 2246

Aquatic Vertebrate Rescue

Attachment A
Aquatic Vertebrate Rescue Datasheet

Log Cabin and Our House Sediment Management: Aquatic Vertebrate Rescue Data

GENERAL INFORMATION

Site Name: _____ **Date:** _____ **Time:** _____

Crew Members: _____

Site Description: _____

_____

HERPTILE RESCUE INFORMATION

Date: _____ **Start Time:** _____ **End Time:** _____ **# Surveyors:** _____

Species:	# Observed:	# Captured and Relocated:	# Mortalities:
FYLF			
WPT			
OTHER:			

Release Location (WGS84; Decimal Degrees):
Latitude:_____ **Longitude:**_____

Pictures:
#(s) _____ **Description:** _____
#(s) _____ **Description:** _____
#(s) _____ **Description:** _____
#(s) _____ **Description:** _____
#(s) _____ **Description:** _____
#(s) _____ **Description:** _____
#(s) _____ **Description:** _____
#(s) _____ **Description:** _____
#(s) _____ **Description:** _____
#(s) _____ **Description:** _____

Comments: _____
_____
_____
_____
_____

FISH RESCUE INFORMATION

Block Nets (circle one):
None Both Upper Lower

Electro-fishing Settings: _____Hz/_____mS **Volts:** _____

 # Passes:_____ **# Shockers:** _____ **# Netters:** _____

Shock Time (seconds):
Pass #1: _____ **Pass #2:** _____ **Pass #3:** _____ **Pass #4:** _____ **Pass #5:** _____ **Total:** _____

Species:	# Observed:	# Captured and Relocated:	# Mortalities:
RBT			
SPM			
SS			
SMB			
SCULPIN			
OTHER:			

Release Location (WGS84;Decimal Degrees):
Latitude:_____ **Longitude:**_____

Pictures:
#(s) _____ **Description:** _____
#(s) _____ **Description:** _____
#(s) _____ **Description:** _____
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Log Cabin and Our House Sediment Management Plan
Yuba River Development Project
FERC Project No. 2246

Aquatic Vertebrate Rescue

Attachment B
Reply to Comments

Table B-1. Reply to Comments.

Commentor Name	Page No.	Comment	Reply
Tanya Sheya	4	I understand that field conditions are not constant, but we will need a description/ more information about the relocation site. See Sean's comment below.	Working in an upstream direction (downstream for Log Cabin Apron Work), fish will be dispersed into pool habitats beginning at the first pool encountered at a minimum of 0.2 miles from project activities. No more than five fish will be released in each pool to avoid crowding related stress and resource competition.
Sean Hoobler	5	What distance and where specifically (i.e., along the riparian zone, bank, pool, riffle). We don't what to relocate frogs into the same place we are releasing fish due to predation risks.	For the Log Cabin Apron and Our House Sediment Removal all captured FYLF will be dispersed at least 0.2 miles from the project extent (upstream for Our House Sediment Removal and downstream for the Log Cabin Apron). No more than five individuals will be released at each habitat site to avoid crowding and competition. All captured adult and post metamorph FYLF will be released within one foot of the waters edge. Release sites will be located in riffle and run habitats to avoid predation by released fish in pool habitats. Any captured tadpole FYLF will be released in appropriate calm edgewater habitats. No tadpoles are anticipated to be captured at this time of year. For the Log Cabin Sediment Removal all captured FYLF will be released in Grizzly Creek. Grizzly Creek is a small perennial tributary to Oregon Creek with the confluence being located approximately 50 meters upstream of the upper extent of the work area. Due to the smaller size of Grizzly Creek only one adult or post metamorph will be released per habitat unit. FYLF will be dispersed starting at least 50 meters upstream of the confluence with Oregon Creek (total of approximately 100 meters from project activities). All adult and post metamorph FYLF will be released on shore within one foot of the waters edge. Tadpole FYLF (if found) will be released in calm pools with available cover. Any WPT captured will be released at the waters edge into the nearest suitable pool habitat with instream cover and appropriate basking habitat. This pool will be located at least 0.2 miles from all project activities.

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Attachment 4

Incidental Take Permit 2081-2017-047-02 Attachment 4

Restoration Plan Cost Estimate

Bullfrog Suppression Efforts			
Cost	Quantity	Total	Description
$15,500	1	$ 15,500.00	Initial surveys for bullfrogs to determine location(s) for suppression, including travel and other expenses; two person team (one time)
$95	180	$ 17,100.00	Labor Costs (for an 8 hour days for a crew of 2for 5 days for 5 years
$5,000	5	$ 25,000.00	expenses- travel costs, equipment
$7,410	5	$ 37,050.00	prep/reporting- scheduling, assembling, data management, writing and edits, as well as consultation
		$ 94,650.00	
Alder Removal			
15,000	1	$ 15,000.00	one survey with Forest Service/CDFW to select trees, one removal event with trained tree crew
15,000			Sub-total Alder Removal
Riparian Revegetation - Planting 125 Trees			
$125,000	1	$ 125,000.00	Development of planting plan (including determining site and planting location(s) with agency consultation), one two-day planting effort including 3-person biologist team, 3 years one-day annual monitoring post-planting, no irrigation system, 4 years of reporting.
$		125,000.00	Sub-total Riparian Revegetation
$		**234,650.00**	**TOTAL**

Provide more detail for items highlighted in yellow...what kind of surveys? What kind of expenses? Travel? Prep/reporting..what does that include and what is it for..ITP required reporting?

Attachment 5

IRREVOCABLE STANDBY LETTER OF CREDIT
NO. [***Number issued by financial institution***]

Issue Date: [***date***]

Beneficiary:

Department of Fish and Wildlife
Post Office Box 944209
Sacramento, CA 94244-2090
Attn: HCPB Mitigation Account Coordinator

Amount: U.S. $[***dollar number***] [(***dollar amount***)]

Expiry: [***Date***] at our counters

Dear Sirs:

1. At the request and on the instruction of our customer, [***name of applicant***] ("Applicant"), we, [**Name of *financial institution***] ("Issuer"), hereby establish in favor of the beneficiary, the California Department of Fish and Wildlife("CDFW"), this irrevocable standby letter of credit ("Credit") in the principal sum of U.S. $[***dollar number***] [(***dollar amount***)] ("Principal Sum").

2. We are informed this Credit is and has been established for the benefit of the CDFW pursuant to the terms of the incidental take permit for the [***name of project***] issued by the CDFW to the Applicant on [***date***] (No. [***number***]) ("Permit").

3. We are further informed that pursuant to the Permit, the Applicant has agreed to complete certain mitigation requirements, as set forth in Conditions [***numbers***] in the Permit ("Mitigation Requirements").

4. We are finally informed that this Credit is intended by the CDFW and the Applicant to serve as a security device for the performance by the Applicant of the Mitigation Requirements.

5. The CDFW shall be entitled to draw upon this Credit only by presentation of a duly executed Certificate for Drawing ("Certificate") in the same form as Attachment A, which is attached hereto, at our office located at [***name and address of financial institution***].

6. The Certificate shall be completed and signed by an "Authorized Representative" of the CDFW as defined in paragraph 12 below. Presentation by the CDFW of a

completed Certificate may be made in person or by registered mail, return receipt requested, or by overnight courier.

7. Upon presentation of a duly executed Certificate as above provided, payment shall be made to the CDFW, or to the account of the CDFW, in immediately available funds, as the CDFW shall specify.

8. If a demand for payment does not conform to the terms and conditions of this Credit, we shall give the CDFW prompt notice that the demand for payment was not effected in accordance with the terms and conditions of this Credit, state the reasons therefore, and await further instruction.

9. Upon being notified that the demand for payment was not effected in conformity with the Credit, the CDFW may correct any such non-conforming demand for payment under the terms and conditions stated herein.

10. All drawings under this Credit shall be paid with our funds. Each drawing honored by us hereunder shall reduce, *pro tanto*, the Principal Sum. By paying to the CDFW an amount demanded in accordance herewith, we make no representations as to the correctness of the amount demanded.

11. This Credit will be cancelled upon receipt by us of Certificate of Cancellation, which: (i) shall be in the form of Attachment B, which is attached hereto, and (ii) shall be completed and signed by an Authorized Representative of the CDFW, as defined in paragraph 12 below.

12. An "Authorized Representative" shall mean either the Director of the Department of Fish and Wildlife, the General Counsel of the Department of Fish and Wildlife, or a Regional Manager of the Department of Fish and Wildlife.

13. This Credit shall be automatically extended without amendment for additional periods of one year from the present or any future expiration date hereof, unless at least sixty (60) days prior to any such date, we notify the CDFW in writing by registered mail, return receipt requested, or by overnight courier that we elect not to consider this Credit extended for any such period.

14. Communications with respect to this Credit shall be in writing and addressed to us at [**name and address of *financial institution***], specifically referring upon such writing to this credit by number. The address for notices with respect to this Credit shall be: (i) for the CDFW: Department of Fish and Wildlife, Habitat Conservation Planning Branch, 1416 Ninth Street, 12th Floor, Sacramento, California 95814-2090 Attn: HCPB Mitigation Account Coordinator; and (ii) for the Applicant: [***name and address of applicant***].

15. This Credit may not be transferred.

16. This Credit is subject to the International Standby Practices 1998 ("ISP 98"). As to matters not covered by the ISP 98 and to the extent not inconsistent with the ISP 98, this credit shall be governed by and construed in accordance with the Uniform Commercial Code, Article 5 of the State of California.

17. This Credit shall, if not canceled, expire on [***expiration date***], or any extended expiration date.

18. We hereby agree with the CDFW that documents presented in compliance with the terms of this Credit will be duly honored upon presentation, as specified herein.

19. This Credit sets forth in full the terms of our undertaking. Such undertaking shall not in any way be modified, amended or amplified by reference to any document or instrument referred to herein or in which this Credit is referred to or to which this Credit relates and any such reference shall not be deemed to incorporate herein by reference any document or instrument.

[***Name of financial institution***]

By: _____
Name: _____
Title: _____

ATTACHMENT A

IRREVOCABLE STANDBY LETTER OF CREDIT NO. [***Number issued by financial institution***]
CERTIFICATE FOR DRAWING

To:

[***Name and address of financial institution]***

Re: Incidental Take Permit No. 2081-2017-047-02

The undersigned, a duly Authorized Representative of the Department of Fish and Wildlife("CDFW"), as defined in paragraph 12 in the above-referenced Irrevocable Standby Letter of Credit ("Credit"), hereby certifies to the Issuer that:

1. [***Insert one of the following statements:*** "In the opinion of the CDFW, the Applicant has failed to complete the Mitigation Requirements referenced in paragraph 3 of the Credit." ***or*** "As set forth in paragraph 13, the Issuer has informed the CDFW that the Credit will not be extended and the Applicant has not provided the CDFW with an equivalent security approved by the CDFW to replace the Credit."]

2. The undersigned is authorized under the terms of the Credit to present this Certificate as the sole means of demanding payment on the Credit.

3. The CDFW is therefore making a drawing under the Credit in amount of U.S. $_____.

4. The amount demanded does not exceed the Principal Sum of the Credit.

Therefore, the CDFW has executed and delivered this Certificate as of the ___day of _____, _____.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

BY: _____
[Insert one of the following: "DIRECTOR" ***or*** "GENERAL COUNSEL" ***or*** "REGIONAL MANAGER, [***NAME OF REGIONAL OFFICE***]"]

ATTACHMENT B

IRREVOCABLE LETTER OF CREDIT NO. [***Number issued by financial institution***]
CERTIFICATE FOR CANCELLATION

To:

[***Name of financial institution and address***]

Re: Incidental Take Permit No. 2081-2017-047-02

The undersigned, a duly Authorized Representative of the California Department of Fish and Wildlife("CDFW"), as defined in the paragraph 12 in the above-referenced Irrevocable Standby Letter of Credit ("Credit"), hereby certifies to the Issuer that:

1. [***Insert one of the following statements:*** "The Applicant has presented documentary evidence of full compliance with the Mitigation Requirements referenced in paragraph 3 of the Credit." ***or*** "The natural expiration of this Credit has occurred."]

2. The CDFW therefore requests the cancellation of the Credit.

Therefore, the CDFW has executed and delivered this Certificate for Cancellation as of the ____ day of _____, _____.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

BY: _____
[Insert one of the following: "DIRECTOR" ***or*** "GENERAL COUNSEL" ***or*** "REGIONAL MANAGER, [***NAME OF REGIONAL OFFICE***]"]

Attachment 6

California Department of Fish and Wildlife

Mitigation Payment Transmittal Form

Project Applicant Instructions: Please fill out and attach this form to payment. For conservation banks, also attach the Bill(s) of Sale for credits sold. One form may be used for multiple transactions, **BUT YOU MUST USE A SEPARATE FORM FOR EACH CHECK YOU TRANSMIT**. Make sure to include Project Name, Project Tracking Number, and FASB Mitigation Tracking Number (if available) on the attached payment type.

(1) **DATE:** _____

TO: _____
Tina Bartlett

_____
1701 Nimbus Road
Rancho Cordova, CA 95670

(2) **FROM:** _____
Name

_____
Mailing Address

_____
City, State, Zip

_____
Telephone Number/FAX Number

(3) **RE:** _____
Log Cabin and Our House Diversion Dams Sediment Management Plan

(4) **AGREEMENT/ACCOUNT INFORMATION:**
(Check the applicable type)

☒ 2081 Permit ☐ Conservation Bank ☐ 1802 Agreement

☐ 2835 NCCP ☐ Other _____

2081-2017-047-02
[Project Tracking Number]

_____
[FASB Mitigation Tracking Number (if available)]

Index _____ PCA _____

(5) PAYMENT TYPE (One check per form only): The following funds are being remitted in connection with the above referenced project:

Check information:

Total $_____ Check No. _____

Account No. _____ Bank Routing No. _____

a. Endowment: for Long-Term Management Subtotal $_____

b. Habitat Enhancement Subtotal $_____

c. Security:

1. Cash Refundable Security Deposit Subtotal $_____

2. Letter of Credit Subtotal $_____

1. Financial Institution: _____

2. Letter of Credit Number: _____

California Department of Fish and Wildlife

Mitigation Payment Transmittal Form

3. Date of Expiration: _____