



California Department of Fish and Wildlife
Bay Delta Region
2825 CORDELIA ROAD, SUITE 100
FAIRFIELD, CA 94534

California Endangered Species Act
Incidental Take Permit No. 2081-2019-008-03

CALAVERAS DAM REPLACEMENT 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 take¹ 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:	San Francisco Public Utilities Commission
Principal Officer:	Susan Hou, PM, (925) 862-1294
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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, 2030**.

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 7.8 of this ITP.

¹Pursuant 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"].)

²The 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.

Brief Overview:

This ITP is an update and re-issue of an expired ITP (2081-2010-033-03). This ITP describes work that was completed under the original ITP and Major Amendments 1 and 2, and work that was not yet completed when the ITP expired. This ITP also includes one additional Covered Species that was not contemplated at the time of the original ITP. Both the original and this re-issued ITP include work activities associated with the Calaveras Dam Replacement Project (CDRP) work activities associated with various habitat restoration (rehabilitation), establishment, and enhancement efforts at five (5) proposed Mitigation Sites. This ITP also includes work necessary to install a waterline on East Bay Regional Park District (EBRPD) property as part of a settlement agreement for the CDRP. The CDRP, the waterline, the monitoring and management actions, and the five Mitigation Sites comprise the Project (Project). The CDRP is included in the San Francisco Public Utilities Commission's (SFPUC)(Permittee) Water System Improvement Program (WSIP). The five proposed Mitigation Sites are included in the SFPUC's Bioregional Habitat Reserve (BHR). The BHR is comprised of a number of SFPUC-owned and purchased properties. The five proposed BHR Mitigation Sites included in this ITP are Sheep Camp Creek Site, San Antonio Creek, Goldfish Pond, Goat Rock, and Grimes. Each of the Mitigation Sites may contribute compensation for CDRP impacts to biological resources.

The following is a summary of the work that has been conducted. The construction duration is 10 years.

In the first construction season (2011), work included:

- Mobilization (e.g., site preparation, establishing staging areas);
- Demolition of existing site facilities (exclusive of the dam);
- Preparation of haul roads and access roads;
- Installation of wildlife exclusion fence;
- Trapping for California tiger salamander in DS7; and
- Implementation of temporary wintertime stabilization measures each year.

In the second construction season (2012), work included:

- Construction of the West Haul Route;
- Construction of the dikes for Disposal Sites 3 and 7;
- Excavation of the stilling basin and left abutment, and placement of the excavated materials in disposal areas;
- Importation of 20,800 cubic yards (cy) of filter and drain materials for Disposal Sites 3 and 7 finger drains;
- Start of excavation of the right abutment dam foundation;
- Stabilization of the right abutment landslide;

- Development of Borrow Area B; and
- Excavation of the intake shaft and adits.

In the third construction season (2013), work included:

- Continued excavation of the left abutment, spillway, dam foundation and stilling basin;
- Constructing the intake shaft and tower;
- Constructing the crest electrical building; and
- Beginning excavation of the spillway foundation.

In the fourth construction season (2014), work included:

- Foundation grouting of the left abutment;
- Development of Borrow Area E; and
- Completion of left abutment, spillway and stilling basin and foundation excavation.

In the fifth construction season (2015), work included:

- Starting importation of filter and drain materials;
- Beginning construction of the replacement dam; and
- Installation of downstream outlet pipe.

In the sixth construction season (2016), work included:

- Continued importation of filter and drain materials for dam construction;
- Importing hard rock to replace unsuitable material in Borrow Area B;
- Construction of spillway and chute; and
- Construction of stilling basin.

In the seventh construction season (2017), work included:

- Restoration of disposal sites, borrow areas, and
- Repaving Calaveras Road.

In the eighth construction season (2018), work included:

- Completing construction of replacement dam;
- Restoration and removal of west haul road; and
- Restoration of Borrow Area B staging areas and roads.

In the ninth construction season (2019), work included:

- Restoration of site staging area;
- Hydroseeding of all upland areas for erosion protection and restoration;
- Completing rock riprap throughout the site;
- Paving final access road;
- Finishing electric controls;
- Removing Active Treatment System; and
- Removing Wildlife Exclusion Fence.

During the tenth construction season (2020), work will primarily include:

- Installing the EBRPD Sunol Regional Wilderness waterline;
- Installing distribution piping and connecting to existing EBRPD buildings;
- Installing new fire hydrants and connection to the Calaveras Pipeline;
- Ongoing fish monitoring in Alameda Creek;
- Ongoing monitoring of BHR sites;
- Operation and maintenance of the Calaveras Dam and Reservoir; and
- Completion of dam survey equipment.

Project Location:

The CDRP is located on Calaveras Creek, a tributary of Alameda Creek, in the Diablo Mountain Range in Alameda County, California, approximately 12 miles south of the City of Pleasanton and 7.5 miles east of the City of Fremont at approximately latitude 37.4931, longitude -121.8206 using the NAO 83 Datum (Figure 1). Calaveras Dam forms Calaveras Reservoir, which is situated astride the border between Alameda and Santa Clara counties. The Project also includes Calaveras Creek and Alameda Creek downstream of CRDP and Arroyo Hondo, upstream of CDRP in Santa Clara County.

San Antonio Creek is situated approximately 6.4 miles from Calaveras Dam. San Antonio Creek is a tributary to San Antonio Reservoir at the northeast end of the Reservoir. The Mitigation Site extends east from the Reservoir approximately 1.8 miles. The north and south boundaries of the Mitigation Site roughly follow unnamed ranch roads. The site includes approximately 625 acres along a 1.8-mile reach of San Antonio Creek and approximately 3,105 feet of Indian Creek.

Goldfish Pond is located in the Calaveras Creek watershed, south of Calaveras Reservoir, approximately 3 miles from Calaveras Dam in Santa Clara County and is approximately 22.6 acres in size. The western boundary of the proposed Mitigation Site is approximately 1,000 feet east of the intersection of Marsh and Felter roads.

Sheep Camp Creek is located 7.5 miles northwest of Calaveras Dam. Interstate 680 roughly bounds the 463-acre Site on the west and State Route (SR) 84 borders the south side. The

northern border of the site is adjacent to private properties. Koopmann Ranch, the western-most property adjacent to the northern border, is preserved under an existing conservation easement.

Goat Rock is located north of Geary Road (approximately 0.2 miles) and west of Welch Creek Road (less than 0.1 miles) approximately 4.7 miles from the dam. The site is adjacent to the Sunol and Ohlone Regional Wilderness and includes 535 acres.

The Permittee purchased the Grimes Property in 2011. The Grimes Property is 7.5 miles southeast of the State Route 84/Interstate 680 interchange and includes 195 acres. The west, north, and east boundaries of the site adjoin SFPUC (public) land, while the south boundary of the site adjoins undeveloped private property.

Sunol Regional Wilderness Project Location. The EBRPD Waterline repair extends from the High Valley Camp in the East Bay Regional Park, Sunol Regional Wilderness (EBRPD-SRW) to the Headquarters Area. This site can be reached via Welch Creek Road or Geary Road, respectively. This site is approximately 12 miles south of the City of Pleasanton and 7.5 miles east of the City of Fremont.

Project Description:

The overall purpose of the CDRP is to replace the existing dam with a new earth and rockfill dam that would accommodate a public water supply reservoir of the same size as the original 1920s plans [96,850-acre feet (af)] in order to meet Division of Safety of Dams (DSOD) requirements. When the replacement dam is completed, DSOD restrictions will be lifted and the original reservoir pool can be restored. The objective of the CDRP is to restore the reservoir to its historic capacity and thereby restore the water supply and improve water delivery reliability in the event of an interruption of supply from the Hetch Hetchy system supply or during a drought.

The CDRP footprint is defined by the location of the new dam and spillway, support buildings, haul roads, road improvements, and staging, stockpile, and borrow and disposal areas. The historic inundation area, defined by the normal maximum water surface elevation of 756 feet, would be restored.

Replacement Dam

The replacement dam is located on Calaveras Creek immediately downstream of the existing dam. With the new dam, the reservoir capacity will be restored to its historic level of 96,850 af, about 58,750 af greater than the current storage volume due to the DSOD-mandated reduction in 2001.

The new spillway, a 60 to 80-foot-wide concrete structure is located at the western end (left abutment) of the dam at a crest elevation of 756.2 feet. The lower part of the spillway will end in a stilling basin that will dissipate the energy as it discharges into Calaveras Creek. The

stilling basin is 80 feet wide by 155 feet in length and 14 feet deep and located at elevation 542 feet. Below the stilling basin is a discharge channel, approximately 50 feet wide by 400 feet long that will discharge into Calaveras Creek immediately downstream of the existing stream gauge and approximately 1,200 feet below the original spillway discharge location. The overall length of the spillway, including crest, chute, stilling basin, and discharge channel, is about 1,950 feet.

Intake Structure

A new intake structure at the dam consists of a circular shaft excavated in rock to a depth of 163 feet and lined with reinforced concrete. A concrete tower extends above ground surface to a height of approximately 30 feet. Existing screens on the lower intake adits (Adits #1 and #2) were replaced with new screens to protect fish against entrainment/impingement.

The three existing adits and the existing drain connect to the new intake shaft by four lateral tunnels excavated in rock. Another tunnel was excavated in rock to accommodate a new pipeline connecting the new intake shaft to the existing outlet pipeline.

Sources of Material for Construction

There are four on-site areas used for obtaining construction materials: Borrow Areas B and E, the spillway excavation, and the existing dam.

Borrow Area B is located north of the proposed dam site above the west bank of Calaveras Creek. Borrow Area B is approximately 9.6 acres. This area was excavated to a depth of approximately 200 to 280 feet. Borrow Area B contains approximately 1.3 million cubic yards consisting of the hardest, strongest rocks encountered in the project area and is used for coarse filter, rockfill, and riprap. Topsoil, as available, was removed and stockpiled for reuse during restoration of this area. Rock outcrops were also placed in this area as potential species refuge habitat.

Borrow Area E is located at the south end of the reservoir in the floodplain of Calaveras Creek. It is approximately 73.5 acres in area and was excavated to a depth of 10 to 20 feet. After construction, this area will be shaped to drain, as all but about 22 acres will be submerged when the reservoir is refilled.

The Left Abutment and Spillway Cuts generated approximately 6.1 million cy of material in the temblor sandstone formation and was stockpiled for reuse in the dam construction. This material was placed in Disposal Site 10 (see below) for eventual reuse. This temblor sandstone material makes up the downstream shell of the dam.

Disposal Sites

Disposal sites were required for unsuitable and excess material generated from the excavation associated with the dam foundation, spillway, borrow areas, haul roads, and

staging areas, and from partial removal of the existing dam fill material. The CDRP moved approximately 12 million cy and disposed of approximately 8 million cy at nine disposal: Disposal Sites 2, 3, 5, and 7, A/D (10), F, G, H, and I.

Disposal Site 3 is located west of the existing dam above the northwestern corner of the reservoir east of Calaveras Road. This disposal site slopes upward to the northeast to a maximum elevation of 960 feet. Disposal Site H overlays the western portion of Disposal Site 3. In addition, the contractor temporarily stockpiled soil above Disposal Site 3 in Disposal Site A/D (10) and the final elevation of Disposal Site A/D (10) was matched with the original elevation of Observation Hill, approximately 1,200 feet. Springs and seeps within the footprint of the disposal site were collected and conveyed under the disposal site to the reservoir through sand and gravel finger drains. The final grade of the site was configured to allow revegetation and includes a recontoured drainage channel at the west side of the fill; the fill approximates the contours of the adjacent hilly topography. Restoration of Disposal Site 3 included installation of willow riparian vegetation. The dike at the southern margin of the disposal site protects the slope from wave erosion.

Disposal Site 7 is located on a terrace on the east side of the reservoir at Corral Point. This disposal site slopes upward to the east to a maximum elevation of 950 feet. Disposal Site G was added to Disposal 7 with an additional acreage of 0.49 acre. The disposal site was revegetated by hydroseeding with a native grass seed mix.

Disposal Site F is located along the eastern margin of Calaveras Reservoir between the existing Calaveras Dam and Disposal Site 7. Disposal Site F includes areas currently inundated by the Calaveras Reservoir below the 715-foot ordinary high water elevation as well as disturbed areas of shoreline below the restored 756-foot normal maximum reservoir surface elevation. This disposal site provided access for transportation of materials to and from the dam construction site and Disposal Site 7/G.

Disposal Site I is located within the reservoir, south and east of the southern margin of Disposal Site 3. The western portion of this disposal site slopes upward to the northwest from elevation 640 feet to 700 feet at a 2:1 slope and then flatten to as little as a 20:1 slope rising from elevation 700 feet to 756 feet where it butts up against Disposal Site 3. The eastern portion of this disposal site slopes upward to the north from elevation 640 feet to 756 feet at a variable slope that is no steeper than 2:1.

Staging Areas

Eleven construction staging areas were required for office trailers, an on-site soil testing laboratory, equipment and maintenance yards, construction materials storage, and for stockpiling imported filter, drain, and aggregate materials.

Roads

The CDRP construction used existing public roads and SFPUC roads in the SFPUC watershed area for importing materials, transporting construction equipment, and workers commuting to the site. Some of the SFPUC roads required improvements, and temporary roads have been constructed.

Temporary haul roads are gravel-surfaced and sprinkled with water for dust control. Speed limits are 15 miles per hour in areas with naturally occurring asbestos. Some access roads will become permanent access road. Temporary roads will be re-graded, and the natural topography of their location restored when construction is completed. Exposed surfaces will be hydro-seeded for erosion control. Temporary roads near the dam will be located within the temporary work areas. The specific location and alignment of the temporary haul roads used for dam and spillway excavations and to provide access to Disposal Sites 2 and 3 was determined during construction.

An existing road located on the northeast side of the reservoir was used for access between the staging areas and Disposal Site 7. Upon completion of the CDRP this road will be repaved to the watershed keepers house on the east side of the reservoir. Once the Disposal Site F was created, this road became the main access road to Disposal Site 7.

The current dirt access road from Calaveras Road to the Calaveras Reservoir Boat Ramp required paving due to this Project. Asphalt will be used above the future maximum elevation of the reservoir (756) and concrete below. There are two boat turn arounds in the roadway at elevation 730 and one at elevation 766.

The longest haul distance was from the Dam to Borrow Area E along western shore of the reservoir.

The west haul road route consists of a new temporary haul road located mostly below the restored reservoir pool water line at the 756-foot elevation of the filled reservoir. It is approximately 3.4 miles long and disturbed approximately 1.7 acres above elevation 756 feet and 35.7 acres below elevation 756 feet and crosses several minor drainages which required culverts.

Portions of the haul roads required temporary fill of seasonal wetlands, perennial and intermittent streams, ephemeral drainages, and portions of the reservoir. Temporary impacts to aquatic habitats located above the 756-foot elevation will be restored after construction is complete.

Survey monuments, additional slope excavation (east of downstream toe buildings), minor road widening, scaling for rock fall hazards, Calaveras Creek rock removal, and Calaveras Road Slide repair were proposed and completed as part of minor changes throughout the duration of the CDRP. These changes were incorporated after Amendments 1 or 2 of

2081-2010-033-03. Total impact acreages referenced below for the CDRP include all impacts and changes that occurred over the course of the project.

Refilling of the Reservoir

The channels of several small perennial, intermittent, and ephemeral streams that drain to the reservoir were extended through the formerly inundated area. Once the reservoir is refilled these features will be inundated. Other areas affected during the construction phase that will be inundated include most portions of the west haul route, Disposal Site 3, I and F, and Borrow Area E. Re-establishing the reservoir surface elevation will expand the surface area of the reservoir from 1,003 acres to an estimated 1,456 acres under the restored 756-foot maximum surface elevation.

The reservoir began refilling during the 2018-2019 water year through natural runoff from the watershed and from the upper Alameda Creek diversions at the Alameda Creek Diversion Dam (ACDD) so it is difficult to predict when it will reach the 756-foot elevation.

Reservoir Operation

After the reservoir is refilled, Calaveras Reservoir will be operated in accordance with established flow and storage objectives. Flows below Calaveras Dam will be released from the low-flow valves installed for this purpose (Refer to CDFW 1602 Notification No. 1600-2010-0322-03 for more details). See Appendix A, "Final Instream Flow Schedules included in the Calaveras Dam Replacement Project Biological Assessment," for more detail on the releases from Calaveras Dam to meet flow objectives.

Long-term maintenance and monitoring of the dam will be required by the DSOD. Survey monuments were installed around the dam and surveys will be periodically performed throughout the site to assess whether there is any movement or settlement in the dam. Ground squirrel burrows and other fossorial mammal activity will be monitored and burrows collapsed due to DSOD requirements to keep the dam face free of burrows

Fishery Releases

Extensive coordination with CDFW and National Marine Fisheries Service (NMFS) resulted in development of the "Final Instream Flow Schedules to be included in the Calaveras Dam Replacement Project Biological Assessment". Additionally, SFPUC committed to constructing facilities and implementing monitoring measures that are described in the Adaptive Management Implementation Plan (SFPUC 2010). These two documents include commitments to; maintain perennial fishery releases below Calaveras Dam to provide spring and summer cold water spawning and rearing habitat in Alameda Creek; construct and operate new fish passage and bypass facilities at ACDD; and, modify the diversion operations at ACDD (ITP No. 2081-2015-006-03). The SFPUC modified the CDRP to include construction of a fish ladder at ACDD to provide increased flows for trout and steelhead

spawning habitat. Furthermore, the revised operation of the ACDD will result in the passage of more storm flow events down Alameda Creek. The instream flow schedules described in Appendix A supersedes the flows previously described in the 1997 Memorandum of Understanding between the SFPUC and CDFW.

Power Line Upgrade

Electrical power was provided to the Calaveras Dam facilities via an existing above ground Pacific Gas and Electric Company (PG&E) 12 kilovolt (kV), 56-amp electrical distribution line, supported on poles along its route. However, the existing line did not have sufficient capacity to support all construction-related electrical supply needs. The distribution lines were upgraded through the replacement of existing conductors and replacement and/or installation of up to 12 wood poles between the dam site limit of work and the City of Milpitas. Each pole is approximately 19 inches in diameter (2 square feet). Poles are typically set by mechanically digging a hole up to 10 feet deep, mechanically placing the pole into the hole and backfilling while holding the pole in the desired alignment.

Smolt Trapping, Electrofishing and other Surveys

The Permittee conducts annual smolt trapping and surveys in accordance with the *Calaveras Dam Replacement Project Adaptive Management Implementation Plan for Central California Coast Steelhead*, dated July 16, 2010, for the purposes of monitoring biological responses related to Calaveras Reservoir environmental water releases and reduced diversions at the ACDD and as required by the Lake and Streambed Alteration (LSA) Agreement (Notification No. 1600-2010-0322-R3 and Amendments) and the NMFS Biological Opinion (No. 2005/07436) for the CDRP in Alameda and Santa Clara counties. Smolt trapping includes both use of Fyke nets and rotary screw traps. Surveys include electrofishing, snorkeling, and visual encounter.

Mitigation and Project Sites

Anticipated operations, maintenance and survey activities associated with mitigation and Project sites include:

- Clearing dam faces of shrubs and woody material
- Resurfacing or otherwise maintaining or repairing access roads to dams
- Rodent control and burrow removal
- Erosion control, including dam face and access roads
- Facility and instrumentation maintenance and repairs
- Repair and re-establish pond depth
- Berm maintenance
- Maintenance and repair of cattle infrastructure and irrigation systems
- Pathogen management of restoration areas

- Vegetation management
- Road maintenance
- Culvert repair and other required maintenance in order to conform to the Sunol Mitigation and Monitoring Plan and the Long-Term Management Plans
- Channel restoration
- Maintenance of low water cattle crossing
- Temporary staging near restoration sites
- Operation of monitoring equipment including fish traps and boats for surveys
- Monitoring and maintenance activities associated with invasive species control

Heavy equipment to perform remedial actions will consist of both tracked and wheeled excavation and earth moving machinery that is required to transport, grade, and repair infrastructure such as cattle watering systems, stock ponds, recruitment caging and fencing that is all needed to meet the conservation goals of mitigation sites.

EBRPD Sunol Regional Wilderness Waterline System Project (EB-SRW Waterline)

Project Background

As part of the Calaveras Dam Replacement Project Settlement and Release Agreement (Feb. 18, 2011) between the EBRPD and the City and County of San Francisco, the Permittee agreed to develop a water supply system to replace the existing non-operational system at EB-SRW Waterline.

Construction will occur in the Summer of 2021 and is expected to last 8 months, although the ground disturbance associated with excavation for the pipeline is estimated to only require 2-3 months. This area will be restored prior to the winter of 2021. The only permanent impact will be related to the installation of poles for the communication tower. Habitat permanently or temporarily lost because of construction of the waterline includes upland grassland habitat. Most of the affected habitat will be disturbed by excavation of a trench to place the two-inch waterline.

Detailed Scope:

Modify Existing High Valley Well System (HV) to serve as the primary source of water for Headquarters facilities.

- Deepen the pump column at HV Well and place the pump intake at 138 feet below ground surface.
- Install a new electric shut off valve on the discharge line from the HV Tank #1
- Install a new level sensor in HV Tank #1
- Install a flow meter between HV Well and HV Tank #1.

- Expand HV Tank #1 concrete pad and fence to install angle restraint on the HV Tank #1 for seismic safety.
- Install backflow prevention at the bottom of HV Tank #1 to prevent potential contamination from the four concrete troughs.
- Replace existing solar arrays on the same foundation and install one new solar array and foundation and a battery backup (within the enclosure) to provide sustained production of the HV Well pump.

Install New High Valley Camp Pipeline

- Install a new connection to HV Tank #1 and build a new two-inch supply pipeline (High Valley Camp Pipeline) to transport HV Well water to Headquarters (HQ) Tank #1. The pipeline alignment will generally follow existing Hayfield Fire Road.
- Install two pressure reducing valves to avoid over-pressurizing the pipeline at lower elevations. Install two air valves and one blow-off valve.
- Protect the new pipeline above an existing culvert as Hayfield Road crosses a drainage.
- Insulated above ground crossing of Alameda Creek Foot Bridge.
- Maintain separation from and protect adjacent 12kv electric line.

Modify Existing Headquarters Water System

- HQ1 well will be left in place for use as a secondary/emergency supply source.
- Install a new automatic control valve at HQ Tank #1.
- Install a new flow meter and recorder at the entry points of water to HQ Tank #1 from both HQ1 and High Valley (total 2 new flow meters and 2 recorders).
- Install seismic bracing on the two existing storage tanks.
- Replace existing distribution pipelines to park facilities with new PVC pipelines.
- The existing treatment system will be removed and be replaced by new water treatment system (chlorination system) with a metering pump and new 50-gallon hypochlorite tank on the existing concrete pad.
- Provide a backup generator for the HQ1 Pump and the new treatment facilities.

Install New Fire System

- Tap into the existing Calaveras Pipeline and install new pipelines and three (3) new hydrants to meet fire flow requirements.

Install New Control System

- Install new control systems to receive water levels with an uninterruptible power source.

Install communication equipment to the existing fences around the High Valley and Headquarters Tanks.

Culverts

- Replace four (4) culverts, three along Hayfield Road and one along the Canyon View Trail. These culverts are between 18-inch and 30-inch in diameter and approximately 40 feet long.

Staging Areas

- Two staging areas will be installed, one near the HV Well and one at the HQ developed corral. An additional staging area will be installed in a developed turnout on the side of Calaveras Road and Welch Creek Road.

Covered Species Subject to Take Authorization Provided by this ITP:

This ITP covers the following species:

Name	CESA Status
1. Alameda whipsnake (<i>Masticophis lateralis euryxanthus</i>) also known as Alameda striped racer (<i>Coluber lateralis euryxanthus</i>)	Threatened ³
2. California tiger salamander (<i>Ambystoma californiense</i>)	Threatened ⁴
3. Foothill yellow-legged frog (<i>Rana boylei</i>)	Endangered ⁵

These species and only these species are the “Covered Species” for the purposes of this ITP.

Impacts of the Taking on Covered Species:

Project activities (CDRP, BHR, EBRPD-SRW Waterline and fish monitoring) and their resulting impacts are expected to result in the incidental take of individuals of the Covered Species. The activities described above that are expected to result in incidental take of individuals of the Covered Species at the CDRP include excavation, trenching, grading, blasting, equipment and vehicle operation and vegetation removal associated with construction of the new dam and spillway, support buildings, haul roads, road improvements, temporary access, staging, stockpiling, borrow and disposal areas, power line upgrades within the area identified in the Project description above, as well as temporary loss of habitat from fencing construction zones and permanent loss of breeding habitat for foothill yellow-legged frog from refilling the reservoir. In addition, this ITP includes incidental take of

³ See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(4)(D).

⁴ See *Id.*, subd. (b)(3)(G).

⁵ See *Id.*, subd. (a)(3)(E).

Covered Species associated with the maintenance of the dam including vegetation management and rodent control and other repair and maintenance activities on the dam.

The activities expected to result in incidental take of individuals of the Covered Species during construction at the BHR Mitigation Sites include excavation, trenching, grading, staging, temporary access, and equipment operation for creek restoration, bridge construction, grade control structure installation, spoils disposal, installation of buried water lines stream bank stabilization, channel restoration, gully stabilization, grade control structure installation, spillway/pond stabilization pond re-contouring and new spillway installation, road drainage improvements, cattle ford crossings, gully erosion fill, water trough placement, and vegetation installation. In addition, long-term BHR site management, maintenance, and monitoring activities may result in incidental take of the Covered Species. Activities include all of the BHR site management, maintenance, and monitoring activities described in the Sunol Region Mitigation and Monitoring Plan (Sunol MMP). These activities could include remedial actions, as needed, repair and re-establishment of pond depth and berms, maintenance, reconfiguration, and repair of cattle infrastructure, roads, culverts, and irrigation systems, pathogen management of restoration areas, vegetation management, and other required management of the BHR in order to conform to the Sunol MMP and the Long-Term Management Plan (upon approval by CDFW). This ITP covers the annual monitoring at BHR and reference sites, and maintenance activities at BHR sites for the term of the ITP.

The activities expected to result in take of individuals of the Covered Species during installation of the EB-SRW Waterline include vehicle and equipment operation, trenching, grading, excavating, clearing and grubbing, temporary vehicle and equipment access, and culvert replacement.

The activities expected to result in take of individuals of the Covered Species foothill yellow-legged frog during long-term monitoring of Alameda Creek as required for the Project include seining, dip netting, fish trapping (use of smolt traps or fyke nets), and electrofishing.

Project activities for the CDRP, BHR, EBRPD-SRW Waterline and fish monitoring described above are collectively, the Covered Activities.

Incidental take of individuals of the Covered Species may occur from the Covered Activities in the form of mortality ("kill") from ground- or vegetation-disturbing construction activities for the following: crushing or entombment during excavation, grading, and fill activities (stockpiling and excess material disposal), crushing in burrows or entombment due equipment and blasting operations, crushing or smashing from vehicle strikes and equipment operations, trauma and injury from blasting operations, and injury from excavation and grading, electrofishing, and operation of fish traps. 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 during pre-construction surveys, electrofishing, dip netting, seining, operation of fish traps, ongoing monitoring and survey work at impact, mitigation and reference sites, and relocation procedures if an individual is detected within an active Project

area (including during ongoing maintenance and restoration activities at Mitigation Sites). Impacts of the proposed 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: stress resulting from capture and relocation, noise and vibrations from blasting and equipment operations and long-term effects due to Covered Species habitat degradation, displacement from preferred habitat, increased competition for food and space, and increased vulnerability to predation.

The areas where authorized take of the Covered Species is expected to occur include: Calaveras Dam and the area surrounding the reservoir, Calaveras Creek, Arroyo Hondo from Marsh Creek Road bridge to the inundation zone at Calaveras Reservoir, Alameda Creek from the confluence with Calaveras Creek to San Antonio Creek, and a reference census reach upstream of ACDD; the EBRPD-SRW Waterline repair site from the High Valley Camp to the Headquarters Area; and the BHR Mitigation Sites (collectively, the Project Area).

This ITP corrects impact totals from Table 2 of the original ITP (2081-2010-033-03). The impacts are separated into above the reservoir impacts and below reservoir (elevation 756) impacts. Some impact areas have both above reservoir impacts and below reservoir impacts. The original ITP inadvertently included both above reservoir and below reservoir impacts in the above reservoir section at two impact areas (Borrow Area E and West Haul Road). In addition, the impacts for California tiger salamander (CTS) were calculated using a dispersal distance of 0.7 mile from known breeding ponds habitat rather than all potentially suitable breeding habitat. This ITP includes the calculated and corrected impacts and includes CTS habitat within 1.3 miles of potential breeding ponds.

The CDRP including all amendments and modification requests, results in permanent impacts to 603.16 acres of Alameda whipsnake (AWS) and CTS upland habitat, 0.11 acre of CTS aquatic habitat, and temporary impacts to 1.04 acre of AWS and CTS upland habitat.

The CDRP will result in permanent impacts to 4.07 acres of foothill yellow-legged frog (FYLF) and AWS stream and riparian habitat due to inundation.

The impacts from BHR are 14.71 acres of permanent impacts, 108.12 acres of temporary impact, and 7.00 acres of semi-permanent impacts to CTS and AWS habitat.

The EBRPD-SRW project will result in 0.009 (rounded up) acre of permanent impact and 3.545 acres of temporary impacts to CTS and AWS. Culvert replacements at the EBRPD will impact AWS and FYLF habitat near Alameda Creek near the Sunol Regional Park Headquarters. The culvert replacement will temporarily impact 1,600 square feet (approximately 0.035 acre) and permanently impact 0.005 acre of habitat.

The total impacts from this Project to Covered Species habitat is 741.69 acres of permanent impacts (including 4.075 acre of FYLF habitat), 7.00 acres of semi-permanent impacts, and

112.74 acres of temporary Impacts (including 0.005 acre of FYLF habitat). This does not include Project impacts in developed areas.

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 the 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 vehicular ingress and egress, staging and parking, and noise and vibration generating activities that may/will cause take. 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 Environmental Impact Report (SCH Number: 2005102102) adopted by the lead agency, City and County of San Francisco Planning Department, Major Environmental Analysis, on March 16, 2011 and the Addendums 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 LSA Agreement (Notification No. 1600-2010-0322-R3 and Amendments) for the Project executed by CDFW pursuant to Fish and Game Code section 1600 et seq.
- 4. ESA Compliance:** Permittee shall implement and adhere to the terms and conditions related to the Covered Species in) the San Francisco Public Utilities Commission Calaveras Dam Replacement Project in Alameda and Santa Clara Counties issued by the U.S. Fish and Wildlife Service (Biological Opinion No. 81420-2009-F-1339) and the Formal Consultation on the East Bay Regional Park Sunol Regional Wilderness Water System Improvement Project in Alameda County, California (U.S. Army Corps of

Engineers file number 2020-00036S) (Biological Opinion No. 08ESMF00- 2020-F-1398) for the Project pursuant to the Federal Endangered Species Act (ESA). For purposes of this ITP, where the terms and conditions for the Covered Species in the federal authorization are less protective of the Covered Species or otherwise conflict with this ITP, the conditions of approval set forth in this ITP shall control.

5. 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.

6. General Provisions:

- 6.1. 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.
- 6.2. Designated Biologist. Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information of the biological monitor(s) (collectively, "Designated Biologist") at least 30 days before starting Covered Activities. Permittee shall ensure that all Designated Biologists are 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.
- 6.3. 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.
- 6.4. Education Program. 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.

- 6.5. Construction Monitoring Binder. The Designated Biologist shall maintain a construction-monitoring binder 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 binder is available for review at the Project site upon request by CDFW.
- 6.6. Trash Abatement. Permittee shall initiate a trash abatement program before starting Covered Activities and shall continue the program for the duration of the Project. Permittee shall ensure that trash and food items are contained in animal-proof containers and removed at least once a week to avoid attracting opportunistic predators such as ravens, coyotes, and feral dogs. Plastic water bottles and plastic bags shall be removed and disposed of daily.
- 6.7. Dust Control. Permittee shall implement dust control measures during Covered Activities to facilitate visibility for monitoring of the Covered Species by the Designated Biologist. Permittee shall keep the amount of water used to the minimum amount needed and shall not allow water to form puddles.
- 6.8. 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.
- 6.9. Delineation of Property Boundaries. Before starting Covered Activities along each part of the route in active construction, 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.
- 6.10. 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.

- 6.11. Project Access. Project-related personnel shall access the Project Area using existing routes, or 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 on dirt roads do not exceed 15 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. Use of an ATV for off-road access at BHR sites for ongoing monitoring and small maintenance activities does not require approval in writing by CDFW. 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.
- 6.12. Access Roads. If burrows are present, as determined by the Designated Biologist access shall be only by rubber tracked or lightweight rubber-tired vehicles, (e.g. pick-up trucks) to reduce collapse of burrows. Access roads shall be clearly marked and shall avoid sensitive plants.
- 6.13. 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 unless provided for as described in Condition of Approval 6.11 of this ITP.
- 6.14. 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. Refueling of equipment and vehicles will not occur within 100 feet of surface waters. All hazardous materials shall be properly stored and labeled according to the manufacturer and shall not be kept closer than 100 feet from surface waters.
- 6.15. CDFW Access. Permittee shall provide CDFW staff with reasonable access to the Project sites, and mitigation lands under Permittee control and shall otherwise fully cooperate with CDFW efforts to verify compliance with or effectiveness of mitigation measures set forth in this ITP.
- 6.16. Refuse Removal. Upon completion of Covered Activities, Permittee shall remove from the Project Area and properly dispose of all 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.

6.17. Firearms and Dogs. Permittee shall prohibit firearms and domestic dogs from the Project Area and site access routes during Covered Activities, except those in the possession of authorized security personnel or local, state, or federal law enforcement officials or with specific approval by CDFW.

7. Monitoring, Notification and Reporting Provisions:

- 7.1. Before Commencement. The Designated Representative shall notify CDFW 14 calendar days before starting Covered Activities and shall document compliance with all pre-Project Conditions of Approval before starting Covered Activities.
- 7.2. 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.
- 7.3. Compliance Monitoring. The Designated Biologist shall be on-site daily when Covered Activities occur, excluding refilling the reservoir and releases as well as routine monitoring associated with BHR sites and fish surveys. 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. The Designated Representative or Designated Biologist shall prepare daily written observation and inspection records summarizing: oversight activities and compliance inspections, weather conditions, observations of Covered Species and other wildlife species, and their sign, survey results, and monitoring activities required by this ITP.
- 7.4. Weekly Construction Compliance Monitoring. During periods of inactivity or after clearing, grubbing, and grading are completed compliance inspections by the Designated Biologist may be reduced to a minimum of one day per week only after Permittee obtains written approval from CDFW. Daily compliance inspections shall resume if the Designated Biologist or CDFW finds the Permittee is out of compliance with any conditions of this ITP including the failure to maintain the temporary barrier described in Condition of Approval 8.3.
- 7.5. Quarterly Compliance Report. The Designated Representative or Designated Biologist shall compile the observation and inspection records identified in Conditions of Approval 7.3, 7.4, 8.21 and 8.22 into a Quarterly 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. Quarterly Compliance Reports

shall be submitted to CDFW's Regional Office at the office listed in the Notices section of this ITP and via e-mail to CDFW's Regional Representative. At the time of this ITP's approval, the CDFW Regional Representative is Marcia Grefsrud (Marcia.Grefsrud@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.

- 7.6. Annual Construction 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 Quarterly Compliance Reports for that year identified in Condition of Approval 7.5; (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 since ITP issuance; and (7) information about other Project impacts on the Covered Species.
- 7.7. CNDDDB Observations. The Designated Biologist shall notify the CDFW Representative immediately when a Covered Species is seen in a previously undocumented area or taken (killed or injured). The Designated Biologist shall submit all new observations of Covered Species to CDFW's California Natural Diversity Database (CNDDDB) within 60 calendar days of the observation and recurring observations annually by January 31, and the Designated Biologist shall include copies of the submitted forms with the next Quarterly Compliance Report or ASR, whichever is submitted first relative to the observation.
- 7.8. 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 Quarterly 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.

7.9. Notification of Take or Injury. Permittee shall notify the Designated Biologist by the end of the business day if a Covered Species is taken (killed 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 (707) 482-2002 and the CDFW Representative at (707) 644-2812 by the end of the business day. The initial notification to CDFW shall include information regarding the location, species, and number of animals taken or injured and the ITP Number. If the take is a result of Covered Activities then following initial notification, Permittee shall send CDFW a written report within two calendar days of the discovery. The report shall include the date and time of the finding or incident, GPS location of the Covered Species, photographs of the location and the Covered Species, explanation as to cause of take or injury, and any other pertinent information.

7.9.1. If a California tiger salamander is found recently deceased, a ½- inch portion of the tail tip shall be removed and placed in a labeled tissue tube with 95% ethanol. The remaining carcass, if salvageable, shall be immediately bagged, labeled, and preserved in a freezer. The label shall include time and date, GPS location, circumstances surrounding death (if known), and ITP tracking number. Tail specimens shall be delivered to:

CDFW Bay Delta Region
Attention: Marcia Grefsrud
2825 Cordelia Road, Suite 100
Fairfield, CA 94534

The remaining carcasses shall be delivered to the following address within two days of discovery:

CDFW Wildlife Investigations Lab
Attention: Deana Clifford
1701 Nimbus Road Suite D
Rancho Cordova, CA 95670

OR

The remaining carcass shall be sent to Berkeley Natural History Museum at <https://mvz.berkeley.edu/deadanimal/> or California Academy of Sciences, at Herpetology, (415) 379-5292, or at LScheinberg@calacademy.org.

7.9.2. If an Alameda whipsnake is found recently deceased, a 3 mm portion of the tail

tip shall be removed and placed in a labeled tissue tube with 95% ethanol. The remaining carcass, if salvageable, shall be immediately bagged, labeled, and preserved in a freezer. The label shall include time and date, GPS location, circumstances surrounding death (if known), and ITP tracking number. The tail tip shall be sent to the following address:

U.S. Geological Survey
 Attention: Jonathan Richmond
 4165 Spruance Road, Suite 200
 San Diego, CA 92101

The remaining carcass shall be sent to Berkeley Natural History Museum at http://mvz.berkeley.edu/Find_Animal.html or California Academy of Sciences, at Herpetology, (415) 379-5292, or at LScheinberg@calacademy.org.

- 7.9.3. If a foothill yellow-legged frog is found recently deceased the remaining carcass shall be immediately sent to Berkeley Natural History Museum at http://mvz.berkeley.edu/Find_Animal.html or California Academy of Sciences, at Herpetology, (415) 379-5292, or at LScheinberg@calacademy.org.
- 7.10. Temporary Impact Criteria. To be considered a temporary impact, all temporary impacts must meet the following criteria: (1) recontouring and seeding of each temporary impact area shall occur by October 31 of the year of the temporary impact; and (2) temporary impact sites have achieved vegetation success as described in the Vegetation Restoration Plan (see Condition of Approval 9.6).
- 7.11. Temporary Impact Restoration Schedule. Prior to initiating any temporary impacts, Permittee shall ensure that a Temporary Impact Restoration Schedule has been developed that ensures: (1) recontouring and seeding of temporary impact areas shall occur prior to October 31 of each year where the impacts occur; and (2) all temporary impacts from prior years have met the October 31 recontouring and seeding criteria and have achieved vegetation success as described in the Vegetation Restoration Plan (See Condition of Approval 9.6).
- 7.12. Photo Monitoring. No less than one photo monitoring station shall be established at each temporary impact site to provide representative views of temporary impacts and restoration activities. These sites include: San Antonio Creek where restoration is implemented, San Antonio Creek Site temporary staging and temporary access locations, Sheep Camp Creek (SCC) Site gully stabilization locations, SCC Site temporary staging and access locations, SCC Site abandoned road locations, SCC Site streambank stabilization/channel restoration locations, the SCC off-channel pool enhancement, Goldfish Pond temporary staging and access locations and the Goldfish Pond wetland enhancement location. Photo monitoring stations should be located in areas that allow for unobstructed views and a field of vision. As applicable,

each station should provide 360° views. Photo monitoring station results shall contribute to the assessment of temporary impacts and site restoration efforts by CDFW, therefore Permittee should ensure that photo monitoring stations numbers and locations are sufficient to document temporary impact restoration success.

- 7.12.1. Photo Monitoring at all stations shall occur prior to groundbreaking activities, immediately after site restoration has been implemented, and every three months thereafter until construction and initial restoration is complete and until success criteria are reached.
- 7.12.2. If CDFW or the Designated Biologist(s) determines that additional monitoring stations are necessary, the locations shall be added to the inventory of photo monitoring stations.
- 7.12.3. During each photo monitoring cycle all stations shall be visited within 15 days.

8. 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:

- 8.1. Time of Day Work Restriction. Permittee shall restrict work activities to between sunrise and sunset, (except for activities related to bullfrog removal) based on times established by the U.S. Naval Observatory Astronomical Applications Department. The Permittee may access staging areas up to 30 minutes prior to sunrise if escorted onto the project site by a Designated Biologist. Any variation in time of day restriction must be approved in writing by the CDFW Representative.
- 8.2. Seasonal Work Window. Permittee shall limit ground-disturbing Covered Activities involving excavation and heavy equipment use to between April 30 and October 31 until the expiration of this ITP.
- 8.3. Seasonal Work Window Extension. Permittee shall adhere to the seasonal work windows required in Condition 8.2 unless no or low rainfall conditions persist (refer to Condition of Approval 8.4). Permittee shall submit notices of work past October 31 to the CDFW Regional Representative at least 14 days prior to the expiration of the seasonal work window. Permittee shall submit a description of all Covered Activities conducted past October 31 to the CDFW Regional Representative on a weekly basis. If work is expected to continue, Permittee shall submit a 7-day weather forecast to the CDFW Regional Representative for the following week. If such work past October 31 results in areas previously considered temporarily-disturbed (for example, staging areas) to be restored past October 31 of the year of the impact, then these areas shall be considered semi-permanent or permanent depending on the timing of

restoration and achievement of performance standards (see Condition of Approval 7.10) and an amendment to the ITP may be required. If work during dry conditions is extended past October 31, the following conditions shall apply:

- 8.3.1. Non-linear work sites located within 0.5 miles of Covered Species aquatic habitat, including where equipment will be stored overnight, shall be completely fenced with wildlife exclusion fencing. All construction work shall take place within the fenced area. Installation of exclusion fencing does not apply to graveled or well-traveled roads. The Designated Biologist shall survey the fence line for the Covered Species during evening or night-time low rainfall events.
- 8.3.2. All work and vehicle travel shall be limited to the daylight hours from 30 minutes after sunrise until 30 minutes before sunset, to the maximum extent feasible. Permittee shall provide notification to CDFW at least 24 hours prior to conducting night-time activities. Notification and restrictions in vehicle travel does not apply to monitoring activities and/or non-native species control activities at BHR sites.
- 8.3.3. All steep-walled holes or trenches more than 6 inches deep shall be covered overnight with boards or metal plates placed flush to the ground.
- 8.3.4. Erosion control such as straw wattles or silt fencing shall not be placed where they create a barrier to Covered Species movement between upland and aquatic habitat.

If Permittee requests ground-disturbing work to be conducted past October 31 when rainfall has exceeded amounts described in Condition of Approval 8.4 then an Amendment to the ITP shall be required.

- 8.4. Dry Season Work Restriction. During the dry season of April 30 to October 31 of each year until the expiration of this ITP, Permittee shall limit Covered Activities involving ground disturbance and heavy equipment use (such as excavation, grading and contouring) to periods of low rainfall (less than 0.10 inches per 24-hour period). If rain exceeds 0.10 inches during a 24-hour period, work shall cease. Construction may resume 24 hours after the rain ceases when there is a less than a 60 percent chance of precipitation in the 24-hour forecast, and humidity, as measured locally on-site under the supervision of the Designated Biologist, has fallen below 75 percent. Both rainfall and humidity records shall be kept on-site and subject to inspection.
- 8.5. Temporary Covered Species Barrier. Prior to commencing any other Covered Activities, Permittee shall install a temporary barrier to prevent the Covered Species from dispersing into the Project Area unless a Designated Biologist is on-site during all work activities. The barrier shall be designed to allow the Covered Species to leave the Project Area using a one-way funnel or other method approved by CDFW.

The barrier shall remain in place until the Project is complete. The Designated Biologist (or other trained staff during periods when no Covered Activities occur) shall inspect the barrier daily, and before, during and after storm events. The Permittee shall maintain and repair the barrier immediately to ensure that it is functional and without defects. Vegetation shall be managed on the opposite side of the work area at least three feet outward to prevent the possibility of Alameda whipsnake from using vegetation to climb over the fence. Permittee shall provide refuge opportunities, such as cover boards (3-foot x 3-foot plywood), along the exclusion fence on both sides of the fence. Permittee shall submit to CDFW for approval, the location and design of the barrier and refuge opportunities no less than 30 days prior to the proposed start of Covered Activities. The Designated Biologist shall inspect refuge areas each morning during and after rain events. Animals found within the interior fence shall be relocated outside the fence line no more than 300 feet from the Project boundary. California tiger salamanders found shall be relocated by the Designated Biologist per the Relocation Plan described in Condition of Approval 8.12.

- 8.6. Dewatering. Sediment-laden water from dewatering shall be held in a settling container or discharged in an upland location where it will not drain directly into a stream or into small mammal burrows.
- 8.7. Trench Escape and Inspection. The Designated Biologists and trained construction foreman/manager, supervised by the Designated Biologist shall inspect all open holes, sumps, and trenches within the Project Area at the beginning of each day for trapped animals. To prevent inadvertent entrapment of Covered Species, the Designated Biologist(s) shall oversee the covering of all trenches, holes, sumps, or other excavations with a greater than 1:1 (45 degree) slope of any depth with barrier material (such as hardware cloth) at the close of each working day such that Covered Species are unable to dig or squeeze under the barrier and become entrapped. The outer two feet of excavation cover shall conform to solid ground so that gaps do not occur between the cover and the ground and secured with soil staples or similar means to prevent gaps. Each morning prior to beginning Covered Activities and immediately before trenches, holes, sumps, or other excavations are back-filled, the Designated Biologist(s) and/or construction foreman/manager shall thoroughly inspect them for Covered Species. Trenches, holes, sumps, or other excavations that are covered long-term shall be inspected at the beginning of each working day to ensure inadvertent entrapment has not occurred. Permittee shall cease all Covered Activities in the vicinity and notify the Designated Biologist(s) immediately if any worker discovers that Covered Species have become trapped. If at any time a trapped California tiger salamander is discovered by the Designated Biologist or anyone else, the Designated Biologist shall capture and relocate the animal to a safe nearby location per the California Tiger Salamander Relocation Plan described in Condition of Approval 8.12 and 8.14.

- 8.7.1. If the open holes, sumps, trenches or excavations cannot be covered then a temporary barrier shall be installed around any trenches, holes, sumps, or other excavations to prevent Covered Species from becoming trapped. Refuge opportunities, such as cover boards (3-foot x 3-foot plywood), shall be provided on the outside perimeter of the barrier.
- 8.8. Inspection of Pipes and Culverts. All construction pipes, culverts, or similar structures that are stored at the Project site for one or more overnight periods shall be securely capped prior to storage or inspected by the Designated Biologist before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a Covered Species is discovered inside a pipe by the Designated Biologist or anyone else, the Covered Species shall be allowed to leave its own accord, or if it can be safely captured, it shall be relocated by the Designated Biologist to a suitable location outside of the Project Area and in accordance with the Conditions of Approval 8.12 and 8.14 below.
- 8.9. Vehicle and Equipment Inspection. Workers shall inspect for Covered Species under vehicles and equipment before the vehicles and equipment are moved. If a Covered Species is present, the worker shall wait for the Covered Species to move unimpeded to a safe location. Alternatively, the Permittee shall contact the Designated Biologist to determine if the Designated Biologist can safely move the Covered Species in Accordance with Conditions of Approval 8.12 and 8.14 below.
- 8.10. Erosion Control. All erosion and sediment control measures shall be installed prior to earth moving Covered Activities on any phase of the Project. Permittee shall utilize erosion control measures throughout all phases of Project where sediment runoff from exposed slopes could leave the Project Area and/or enter a stream or pond. Permittee, Designated Representative, or other trained staff shall monitor erosion control measures before, during, and after each storm event and repair and/or replace ineffective measures immediately.
- 8.11. Prohibited Plant Species. Permittee shall not plant, seed or otherwise introduce invasive exotic plant species. Prohibited exotic plant species include those identified in the California Exotic Pest Plant Council's database, which is accessible at: <http://www.cal-ipc.org/paf/>.
- 8.12. Covered Species Relocation Plan. The Designated Biologist(s) shall prepare a Covered Species Relocation Plan (Relocation Plan). The Relocation Plan shall include, but not be limited to pre-activity survey methodology appropriate for the season, hand excavation, capture, handling, and relocation methods; and identification of where the individuals will be relocated to. The relocation areas shall be identified by the Designated Biologist based upon best suitable habitat available and time of year and approved by CDFW prior to the start of Covered Activities. The Relocation Plan shall be submitted to CDFW for approval prior to the beginning of

Covered Activities. Covered Activities anywhere within the Project Area may not proceed until the Relocation Plan is approved in writing by CDFW. Only the approved Designated Biologist(s) are authorized to capture and handle the Covered Species.

8.13. Covered Species Handling and Injury. California tiger salamanders and foothill yellow-legged frogs shall be handled and assessed according to the Restraint and Handling of Live Amphibians USGS, National Wildlife Health Center (D. Earl Greene, ARMI SOP NO. 100; 16 February 2001) (Attachment 2). If an injured Covered Species is found during the Project term, the individual shall be evaluated by the Designated Biologist who shall then immediately contact the CDFW Regional Representative, via email and telephone, to discuss the next steps. If the CDFW Regional Representative cannot be contacted immediately, the injured Covered Species shall be placed in a shaded container and kept moist. If the CDFW Regional Representative is not available or has not responded within 15 minutes of initial attempts then the following steps shall be taken by the Designated Biologist:

- a) If the injury is minor or healing and the Covered Species is likely to survive, the Covered Species shall be released immediately in accordance with the Condition of Approval 8.12 and 8.14.
- b) If it is determined that the Covered Species has major or serious injuries as a result of Project-related activities the Designated Biologist or Representative shall immediately take it to the Lindsay Wildlife Experience or another CDFW approved facility. If taken into captivity the individual shall remain in captivity and not be released into the wild unless it has been kept in quarantine and the release is authorized by the CDFW and U.S. Fish and Wildlife Service. Permittee shall bear any costs associated with the care or treatment of such injured Covered Species. The circumstances of the injury, the procedure followed, and the final disposition of the injured animal shall be documented in a written incident report as described in Condition of Approval 7.9.

California tiger salamander specific measures

8.14. California Tiger Salamander Relocation. The Designated Biologist shall relocate any California tiger salamander found within the Project Area to be impacted to an active rodent burrow system located no more than 300 feet outside of the Project Area and in accordance with the Relocation Plan described in Condition of Approval 8.12 above unless otherwise approved by CDFW in writing. The Designated Biologist shall document both the capture and relocation areas by photographs and GPS positions. The Covered Species shall be photographed and measured (Snout-Vent) for identification purposes prior to relocation. All documentation shall be provided to the CDFW within 24 hours of Covered Species relocation.

- 8.15. Augering and Excavation. The Designated Biologist shall survey all augering and excavation soils material for California tiger salamanders. The Permittee shall ensure auger bits are cleaned by shaking the soil loose and not cleaned by spinning. The Permittee shall ensure excavation is coordinated with the Designated Biologist to allow sufficient time to survey the excavated soil.
- 8.16. Pre-activity Surveys. The Designated Biologist shall inspect all ruts and holes near root structures, foundations, abutments, etc. for California tiger salamander immediately prior to and during excavation or removal. The Designated Biologist shall conduct pre-activity surveys per Condition of Approval 8.12 A Designated biologist shall survey the open areas adjacent to ongoing construction. Multiple biologists may be necessary to survey the area appropriately. If a California tiger salamander is discovered by the Designated Biologist or anyone else, the Designated Biologist shall move the animal to a safe nearby location (e.g. mouth of ground-squirrel burrow outside of the temporary barrier) per the Relocation Plan described in Condition of Approval 8.12 and monitor it until it is determined that it is not imperiled by predators or other dangers.
- 8.17. Notification of Non-Native Tiger Salamanders or Hybrids. The Designated Biologist shall immediately notify CDFW if a non-native barred tiger salamander (*Ambystoma tigrinum mavortium*) or California tiger salamander hybrid is found or suspected within the Project Area within 24 hours by calling CDFW's Regional Representative. The Designated Biologist shall not release any non-native or hybrid salamanders back to the wild until directed to do so by CDFW. The Designated Biologist shall follow the Covered Species Handling and Injury measures outlined in this ITP (see Condition of Approval 7.9). Results of studies suggest that the main phenotypic difference will be the larger size of hybrid/non-native larvae as all observed differences were in the direction of hybrids being larger than pure California tiger salamanders⁶.

Alameda whipsnake specific measures

- 8.18. Access Roads. The Designated Biologist shall inspect the entire access route for Covered Species each day when Covered Activities are occurring between March 15 and October 31 of each year. Inspections shall occur in the morning prior to Project related vehicle access (unless Project related vehicle traffic occurs prior to sunrise) and in the afternoon prior to Project related vehicles exiting the Project Area. If a Designated Biologist finds a dead Covered Species on the access route, Permittee shall consult with CDFW to determine appropriate contingency measures and shall implement the measures determined appropriate by CDFW.

⁶ See Santa Clara Valley Habitat Plan Appendix K and Invasive hybrid tiger salamander genotypes impact native amphibians Maureen E. Ryan, Jarrett R. Johnson, Benjamin M. Fitzpatrick Proceedings of the National Academy of Sciences Jul 2009, 106 (27) 11166-11171; DOI: 10.1073/pnas.0902252106

8.19. Vegetation Marked for Protection. Vegetation shall be removed prior to grading. Prior to clearing and grubbing operations, the Designated Biologist shall clearly mark vegetation within the Project Area that shall be avoided. Vegetation outside the Project Area shall not be removed.

8.20. Vegetation Removal Methods. Where possible hand tools (e.g., trimmer, chain saw, etc.) shall be used to trim or remove vegetation. All vegetation removal shall be monitored by the Designated Biologist to minimize impacts to the Covered Species.

Foothill yellow-legged frog specific measures

8.21. Foothill Yellow-Legged Frog Monitoring. Permittee shall develop and implement a foothill yellow-legged frog monitoring plan for CDFW review and approval.

8.21.1. The monitoring shall include Arroyo Hondo from Marsh Creek Road bridge to the inundation zone, i.e. areas to be directly impacted by the refill, as well as 0.6-mile of upstream reference and/or indirect impacts of foothill yellow legged frog displacement, and the reaches that reverted to stream channel and were colonized by frogs when reservoir elevations were low. Beginning with the first full breeding season after commencement of refilling the reservoir, Permittee shall conduct a minimum of three, and up to five, consecutive breeding seasons of monitoring in Arroyo Hondo to track how the population may move or be impacted by the inundation of the refilled habitat, and to determine whether foothill yellow-legged frogs return to the lek site(s), colonize new lek site(s) and have successful egg deposition and hatching, and have habitat and conditions suitable for metamorphosis.

8.21.2. The monitoring plan shall include clutch surveys of foothill yellow-legged frog clutches in Alameda Creek from the confluence with Calaveras Creek to San Antonio Creek, and a reference census reach upstream of ACDD. Census reaches shall be monitored for spring clutch development and hatching success, and late summer metamorph presence and channel connectivity. Surveys shall be conducted for five consecutive breeding seasons after initiation of releases from Calaveras Reservoir to determine foothill yellow-legged frog population abundance-distribution downstream of the hydrologic influence of the reservoir. Surveys shall continue every four years unless CDRP is removed or the species is delisted by the California Fish and Game Commission.

8.22. Electro-fishing. Electrofishing for fish in foothill yellow-legged frog habitat shall only be conducted after October 1 and prior to March 1 unless approved in writing by CDFW. An electrofishing protocol shall be provided to CDFW for review and approval prior to conducting surveys. The protocol shall provide proposed technique, type of electrofishing unit and settings taking into consideration avoiding harm to sympatric species.

- 8.22.1. Foothill yellow-legged frog surveys shall be conducted prior to the start of electrofishing. If any frogs appear lethargic or unhealthy electrofishing shall not be conducted in that station. Any frogs found prior to and during the electrofishing shall be captured and placed in individual containers until the electrofishing in that station is completed.
- 8.22.2. Foothill yellow-legged frogs captured as a result of shocking shall be kept in individual containers and monitored for a minimum of three hours
- 8.22.3. All foothill yellow-legged frogs found prior to and during the electrofishing shall be swabbed for chytrid and swabs sent to lab for analysis.
- 8.22.4. Take limit: If one foothill yellow-legged frog metamorph/juvenile or 1% of the total foothill yellow-legged frog metamorphs/juveniles collected per reach do not fully recover (based on observations by a biologist familiar with foothill yellow-legged frog behavior) or perish within 3 hours, the electrofishing shall cease for that site. If one adult female or 1% of the reproductive population (based on the spring egg mass counts) of female foothill yellow-legged frog per station perishes within 3 hours of being shocked then the electrofishing shall cease ¼ mile upstream and downstream from that station. If a total of two adult foothill yellow-legged frogs perish within 3 hours of being shocked in the same season then electrofishing shall cease until equipment is inspected and protocol reviewed to determine if adjustments are necessary. CDFW shall be notified within 24 hours if any foothill yellow-legged frog are taken (causing injury and/or mortality) while electrofishing (see Condition of Approval 7.9).

8.23. Smolt Trap. If possible, screw traps and Fyke-nets should be installed in stream reaches where foothill yellow-legged frogs have not been documented.

- 8.23.1. CDFW shall be notified within 24 hours if any foothill yellow-legged frogs are found in the smolt traps or are taken (causing injury and/or mortality) (see Condition of Approval 7.9).
 - 8.23.1.1. Take Limit: Permittee shall deactivate the rotary screw trap once the take limit of three (3) foothill-legged frog mortalities is reached over a period of two survey seasons. The trap shall not be reactivated until Permittee shows to be enhancing habitat for foothill yellow-legged frog in Alameda Creek below ACDD or below Calaveras Reservoir.
- 8.23.2. Bullfrogs (*Lithobates catesbeianus*) found in smolt traps shall be euthanized and the stomach contents examined to provide data on the scope of bullfrog predation on foothill yellow-legged frog and other native species.

8.24. Non-native Invasive Aquatic Species. All non-native invasive aquatic species captured during covered monitoring, surveying, or management activities shall be dispatched immediately. Carcasses shall be buried on site or disposed of in accordance with state and local laws. Invasive aquatic species include those identified in the California Aquatic Invasive Species website, which is accessible at: <https://ucanr.edu/sites/calais/>.

Mitigation sites

8.25. Aquatic Vegetation Management Timing. All aquatic vegetation management required through mechanical methods or burning at the BHR Mitigation Sites shall be done only after ponds are dry, or spring fed ponds are pumped and maintained in a dewatered state while work occurs. Herbicides shall be restricted from directly or indirectly contaminating aquatic habitat at the BHR Mitigation Sites.

8.26. Pond Dewatering Timing. All dewatering activities associated with pond draining for bullfrog and non-native fish control and BHR Mitigation Sites work activities shall be done between July 15 and October 15. Work activities required within ponds associated with the BHR Mitigation sites shall not begin until ponds have been completely dewatered, or spring fed ponds are maintained in a dewatered state.

8.27. Non-native Aquatic Species Control. All ponds at the Sheep Camp Creek Site and San Antonio Creek Site shall either be drained or allowed to dry naturally a minimum of once every 24 months to manage bullfrogs in perpetuity. As an alternative, SFPUC may provide evidence to CDFW that bullfrogs are not present or are present in very low numbers in a given year. Any pumps used to drain ponds shall be screened with screens that meet CDFW screening criteria. Ponds that are drained or allowed to dry shall remain empty for a minimum of 30 days to ensure bullfrog tadpoles do not survive. If groundwater recharge prevents ponds from being completely dried, ponds will be monitored for 30 days for the presence of bullfrogs and any individuals encountered will be humanely dispatched. Drained ponds shall be surveyed visually for surviving bullfrogs after ponds have been completely drained.

8.28. Use of Rodenticide and Poison. At no time during the term of the ITP shall rodenticides or other poisons used in the control of burrowing animals be used by Permittee on the Project site or Mitigation Sites.

8.29. Screens on Pumps. All pumps used in ponds for water supply purposes at the Mitigation Sites shall be screened. Fish screens and associated flow velocities shall meet CDFW screening criteria.

8.30. Ground Disturbance Limitations. Grading, excavation, placement of fill or diking associated with temporary access and staging at each of the Mitigation Sites shall be minimized.

8.31. Minimization of Covered Species Habitat Degradation From Grazing. Permittee shall provide a grazing management plan for each Mitigation Site developed by a Certified Rangeland Manager for CDFW written authorization no later than December 31, 2019. The plan shall include sufficient monitoring of riparian areas if those areas are to be grazed such that riparian vegetation is not degraded and sycamore recruitment is not prevented by grazing.

8.32. Spoils Pile Stabilization. Non-active spoil piles (2 weeks or greater) shall be stabilized with hydro-seed, erosion control fabric, straw/crimps or other bio-degradable material. Plastic and other synthetic materials should be avoided to prevent attracting the Covered Species to the spoils piles. Fiber rolls and wildlife exclusion fencing shall be placed around the perimeter of non-active spoil piles and slope breaks shall be utilized on the slopes of non-active spoil piles. Active spoil piles shall be covered/stabilized adequately when rainy conditions are evident or anytime piles need to be covered to prevent any spoil material from entering an aquatic resource.

9. Habitat Management Land Acquisition and Restoration:

CDFW has determined that permanent protection and perpetual management of compensatory 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, and CDFW's estimate of the acreage required to provide for adequate compensation.

To meet this requirement, the Permittee shall either purchase 1,277.9 acres of Covered Species credits from a CDFW-approved mitigation or conservation bank (Condition of Approval 8.2) within the East Alameda County Conservation Strategy (EACCS) CTS South mitigation area (Chapter 3, Figure 3-10, dated October 2010) OR shall provide for both the permanent protection and management of 1,277.9 acres of Habitat Management (HM) lands pursuant to Condition of Approval 8.3 below and the calculation and deposit of the management funds pursuant to Condition of Approval 8.4 below. The HM lands shall include no less than 12.26 acres of documented foothill yellow-legged frog habitat or other combination of enhancement and HM lands approved by CDFW. HM lands shall be monitored and managed for the benefit of foothill yellow-legged frog in perpetuity. The foothill yellow-legged frog habitat shall include a combination of both breeding and adult dispersal habitat.

Additional credits may be required if the CDFW-approved conservation bank site is outside the EACCS CTS South mitigation area described above. Additional credits may also be required if the Project is not within the Service Area of the CDFW-approved conservation bank. Permittee shall provide CDFW with a copy of the credit purchase agreement for the required credits prior to commencing Covered Activities.

Purchase of Covered Species credits at a CDFW-approved conservation bank must be complete before starting Covered Activities, or within 18 months of the effective date of this ITP if Security is provided pursuant to Condition of Approval 9 below for all uncompleted obligations. If Permittee is unable to purchase credits within allowed timeframe CDFW may require an Amendment to this ITP. If a CDFW-approved conservation bank with Covered Species credits is not available, Permittee shall fulfill the mitigation obligations of this ITP with permanent protection and perpetual management of compensatory habitat through land acquisition.

Permanent protection and funding for perpetual management of compensatory habitat must be complete before starting Covered Activities, or within 18 months of the effective date of this ITP if Security is provided pursuant to Condition of Approval 9 below for all uncompleted obligations.

Permittee shall also restore on-site 119.74 acres of temporarily and semi-permanently impacted Covered Species habitat pursuant to Condition of Approval 9.6. If any temporary impacts do not meet the criteria identified in ITP Conditions of Approval 6.10 and 6.11, then CDFW shall require compensatory mitigation to offset the additional Project temporal impacts. If Permittee does not complete seeding of temporary impact areas by October 31, unless otherwise approved by CDFW, of the year of the impact, but restores impact areas within two years of the impact consistent with Conditions of Approval 6.10 and 6.11, then CDFW shall consider those disturbed areas as semi-permanent, and require compensatory mitigation at a 2:1 ratio (acres of mitigation: acres of impact). If Permittee does not restore areas considered temporarily-disturbed within two years, then CDFW shall consider those areas as permanent impacts, and require compensatory mitigation at a 3:1 ratio (acres of mitigation: acres of impact).

No take beyond the 741.69 acres of habitat for the Covered Species authorized in this ITP shall occur unless this ITP is amended by CDFW prior to additional impacts. This mitigation requirement will be identified by CDFW in writing and shall be subject to an amendment as provided by California Code of Regulations, Title 14, section 783.6, subdivision (c), and other applicable regulations and law.

9.1. Cost Estimates. CDFW has estimated the cost of acquisition, protection, and perpetual management of the HM lands and restoration of temporarily disturbed habitat as follows:

9.1.1. Land acquisition costs for HM lands identified in Condition of Approval 9.3 below, estimated at \$20,000.00/acre for 1,277.9 acres: **\$25,558,000.00**. Land acquisitions costs are estimated using local fair market current value for lands with habitat values meeting mitigation requirements;

- 9.1.2. Start-up costs for HM lands, including initial site protection and enhancement costs as described in Condition of Approval 9.3.5 below, estimated at **\$100,000.00**;
- 9.1.3. Interim management period funding as described in Condition of Approval 9.3.6 below, estimated at **\$670,000.00**;
- 9.1.4. Long-term management funding as described in Condition of Approval 9.4 below, estimated at \$2,460.74/acre for 1,277.9 acres: **\$3,144,579.65**. Long-term management funding is estimated initially for the purpose of providing Security to ensure implementation of HM lands management.
- 9.1.5. Related transaction fees including but not limited to account set-up fees, administrative fees, title and documentation review and related title transactions, expenses incurred from other state agency reviews, and overhead related to transfer of HM lands to CDFW as described in Condition of Approval 9.5, estimated at **\$3,000.00**.
- 9.1.6. Restoration of on-site temporary effects to Covered Species habitat as described in Condition of Approval 9.6, calculated at \$400.00/acre for 119.74 acres: **\$47,896.00**.
- 9.2. Covered Species Credits. Permittee shall purchase 1,277.9 acres of Covered Species credits with a minimum of 12.26 acres of foothill yellow-legged frog credits from a CDFW-approved mitigation or conservation bank prior to initiating Covered Activities, or no later than 18 months from the issuance of this ITP if Security is provided pursuant to Condition of Approval 10 below.

OR:

- 9.3. Habitat Acquisition and Protection. To provide for the acquisition and perpetual protection and management of the HM lands, the Permittee shall:
 - 9.3.1. Fee Title/Conservation Easement. Transfer fee title to the HM lands to CDFW pursuant to terms approved in writing by CDFW. Alternatively, CDFW, in its sole discretion, may authorize a governmental entity, special district, non-profit organization, for-profit entity, person, or another entity to hold title to and manage the property provided that the district, organization, entity, or person meets the requirements of Government Code sections 65965-65968, as amended. If CDFW does not hold fee title to the HM lands, CDFW shall act as grantee for a conservation easement over the HM lands or shall, in its sole discretion, approve a non-profit entity, public agency, or Native American tribe to act as grantee for a conservation easement over the HM lands provided that the entity, agency, or tribe meets the requirements of Civil Code section 815.3.

If CDFW does not hold the conservation easement, CDFW shall be expressly named in the conservation easement as a third-party beneficiary. The Permittee shall obtain CDFW written approval of any conservation easement before its execution or recordation. No conservation easement shall be approved by CDFW unless it complies with Government Code sections 65965-65968, as amended and includes provisions expressly addressing Government Code sections 65966(j) and 65967(e);

- 9.3.2. HM Lands Approval. Obtain CDFW written approval of the HM lands before acquisition and/or transfer of the land by submitting, at least three months before acquisition and/or transfer of the HM lands, a formal Proposed Lands for Acquisition Form (see Attachment 3B) identifying the land to be purchased or property interest conveyed to an approved entity as mitigation for the Project's impacts on Covered Species;
- 9.3.3. HM Lands Documentation. Provide a recent preliminary title report, initial hazardous materials survey report, and other necessary documents (see Attachment 3A). All documents conveying the HM lands and all conditions of title are subject to the approval of CDFW, and if applicable, the Wildlife Conservation Board and the Department of General Services;
- 9.3.4. Land Manager. Designate both an interim and long-term land manager approved by CDFW. The interim and long-term land managers may, but need not, be the same. The interim and/or long-term land managers may be the landowner or another party. Documents related to land management shall identify both the interim and long-term land managers. Permittee shall notify CDFW of any subsequent changes in the land manager within 30 days of the change. If CDFW will hold fee title to the mitigation land, CDFW will also act as both the interim and long-term land manager unless otherwise specified.
- 9.3.5. Start-up Activities. Provide for the implementation of start-up activities, including the initial site protection and enhancement of HM lands, once the HM lands have been approved by CDFW. Start-up activities include, at a minimum: (1) preparing a final management plan for CDFW approval (see <https://wildlife.ca.gov/Conservation/Planning/Banking>); (2) conducting a baseline biological assessment and land survey report within four months of recording or transfer; (3) developing and transferring Geographic Information Systems (GIS) data if applicable; (4) establishing initial fencing; (5) conducting litter removal; (6) conducting initial habitat restoration or enhancement, if applicable; and (7) installing signage;
- 9.3.6. Interim Management (Initial and Capital). Provide for the interim management of the HM lands. The Permittee shall ensure that the interim land manager implements the interim management of the HM lands as described in the final

management plan and conservation easement approved by CDFW. The interim management period shall be a minimum of three years from the date of HM land acquisition and protection and full funding of the Endowment and includes expected management following start-up activities. Interim management period activities described in the final management plan shall include fence repair, continuing trash removal, site monitoring, and vegetation and invasive species management. Permittee shall either (1) provide a security to CDFW for the minimum of three years of interim management that the land owner, Permittee, or land manager agrees to manage and pay for at their own expense, (2) establish an escrow account with written instructions approved in advance in writing by CDFW to pay the land manager annually in advance, or (3) establish a short-term enhancement account with CDFW or a CDFW-approved entity for payment to the land manager.

- 9.4. Endowment Fund. If the Permittee will permanently protect and perpetually manage compensatory habitat as described in Condition of Approval 9.3, the Permittee shall ensure that the HM lands are perpetually managed, maintained, and monitored by the long-term land manager as described in this ITP, the conservation easement, and the final management plan approved by CDFW. After obtaining CDFW approval of the HM lands, Permittee shall provide long-term management funding for the perpetual management of the HM lands by establishing a long-term management fund (Endowment). The Endowment is a sum of money, held in a CDFW-approved fund that provides funds for the perpetual management, maintenance, monitoring, and other activities on the HM lands consistent with the management plan(s) required by Condition of Approval 9.3.5. Endowment as used in this ITP shall refer to the endowment deposit and all interest, dividends, other earnings, additions and appreciation thereon. The Endowment shall be governed by this ITP, Government Code sections 65965-65968, as amended, and Probate Code sections 18501-18510, as amended.

After the interim management period, Permittee shall ensure that the designated long-term land manager implements the management and monitoring of the HM lands according to the final management plan. The long-term land manager shall be obligated to manage and monitor the HM lands in perpetuity to preserve their conservation values in accordance with this ITP, the conservation easement, and the final management plan. Such activities shall be funded through the Endowment.

- 9.4.1. Identify an Endowment Manager. The Endowment shall be held by the Endowment Manager, which shall be either CDFW or another entity qualified pursuant to Government Code sections 65965-65968, as amended. Permittee shall submit to CDFW a written proposal that includes: (i) the name of the proposed Endowment Manager; (ii) whether the proposed Endowment Manager is a governmental entity, special district, nonprofit organization, community foundation, or congressionally chartered foundation; (iii) whether the proposed

Endowment Manager holds the property or an interest in the property for conservation purposes as required by Government Code section 65968(b)(1) or, in the alternative, the basis for finding that the Project qualifies for an exception pursuant to Government Code section 65968(b)(2); and (iv) a copy of the proposed Endowment Manager's certification pursuant to Government Code section 65968(e). Within thirty days of CDFW's receipt of Permittee's written proposal, CDFW shall inform Permittee in writing if it determines the proposal does not satisfy the requirements of Fish and Game Code section 2081(b)(4) and, if so, shall provide Permittee with a written explanation of the reasons for its determination. If CDFW does not provide Permittee with a written determination within the thirty-day period, the proposal shall be deemed consistent with Section 2081(b)(4).;

- 9.4.2. Calculate the Endowment Funds Deposit. After obtaining CDFW written approval of the HM lands, long-term management plan, and Endowment Manager, Permittee shall prepare a Property Analysis Record (PAR) or PAR-equivalent analysis (hereinafter "PAR") to calculate the amount of funding necessary to ensure the long-term management of the HM lands (Endowment Deposit Amount). The Permittee shall submit to CDFW for review and approval the results of the PAR before transferring funds to the Endowment Manager.
- 9.4.2.1. Capitalization Rate and Fees. Permittee shall obtain the capitalization rate from the selected Endowment Manager for use in calculating the PAR and adjust for any additional administrative, periodic, or annual fees.
- 9.4.2.2. Endowment Buffers/Assumptions. Permittee shall include in PAR assumptions the following buffers for endowment establishment and use that will substantially ensure long-term viability and security of the Endowment:
- 9.4.2.2.1. 10 Percent Contingency. A 10 percent contingency shall be added to each endowment calculation to hedge against underestimation of the fund, unanticipated expenditures, inflation, or catastrophic events.
- 9.4.2.2.2. Three Years Delayed Spending. The endowment shall be established assuming spending will not occur for the first three years after full funding.
- 9.4.2.2.3. Non-annualized Expenses. For all large capital expenses to occur periodically but not annually such as fence replacement or well replacement, payments shall be withheld from the annual disbursement until the year of anticipated need or upon request to Endowment Manager and CDFW.

- 9.4.3. Transfer Long-term Endowment Funds. Permittee shall transfer the long-term endowment funds to the Endowment Manager upon CDFW approval of the Endowment Deposit Amount identified above. The approved Endowment Manager may pool the Endowment with other endowments for the operation, management, and protection of HM lands for local populations of the Covered Species but shall maintain separate accounting for each Endowment. The Endowment Manager shall, at all times, hold and manage the Endowment in compliance with this ITP, Government Code sections 65965-65968, as amended, and Probate Code sections 18501-18510, as amended.
- 9.5. Reimburse CDFW. Permittee shall reimburse CDFW for all reasonable expenses incurred by CDFW such as transaction fees, account set-up fees, administrative fees, title and documentation review and related title transactions, expenses incurred from other state agency reviews, and overhead related to transfer of HM lands to CDFW.
- 9.6. Habitat Restoration. Permittee shall restore on-site the 119.74 acres of Covered Species habitat that will be temporarily disturbed during construction to pre-project or better conditions. Within 6 months of issuance of this ITP, the Permittee shall prepare a Vegetation Restoration Plan to facilitate revegetation of the 119.74 acres of temporary construction disturbance on-site and shall ensure that the Plan is successfully implemented by the contractor. The Plan shall include detailed specifications for restoring all temporarily disturbed areas, such as seed mixes and application methods. The plan shall also indicate the best time of year for seeding to occur. Plantings undertaken between April 15 and October 31 shall include regular watering to ensure adequate growth.

10. 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 9 that has not been completed before Covered Activities begin. Permittee shall provide Security as follows:

- 10.1. Security Amount. The Security shall be in the amount of **\$29,523,475.65**. This amount is based on the cost estimates identified in Condition of Approval 9.1 above.
- 10.2. Security Form. The Security shall be in the form of an irrevocable letter of credit (see Attachment 4) or another form of Security approved in advance in writing by CDFW's Office of the General Counsel.
- 10.3. Security Timeline. The Security shall be provided to CDFW before Covered Activities begin or within 30 days after the effective date of this ITP, whichever occurs first.

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

10.5. Security Transmittal. If CDFW holds the Security, Permittee shall transmit it to CDFW with a completed Mitigation Payment Transmittal Form (see Attachment 5) or by way of an approved instrument such as escrow, irrevocable letter of credit, or other.

10.6. 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.

10.7. 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:

- Written documentation of the acquisition of the HM lands;
- Copies of all executed and recorded conservation easements;
- Written confirmation from the approved Endowment Manager of its receipt of the full Endowment; and
- Timely submission of all required reports.

Even if Security is provided, the Permittee must complete the required acquisition, protection and transfer of all HM lands and record any required conservation easements no later than 18 months from the effective date of this ITP. CDFW may require the Permittee to provide additional HM lands and/or additional funding to ensure the impacts of the taking are minimized and fully mitigated, as required by law, if the Permittee does not complete these requirements within the specified timeframe.

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 (2081-2019-008-03) in a cover letter and on any other associated documents.

Original cover with attachment(s) to:

Gregg Erickson, Regional Manager
California Department of Fish and Wildlife
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
R3CESA@wildlife.ca.gov

and a copy to:

Habitat Conservation Planning Branch
California Department of Fish and Wildlife
Attention: CESA Permitting Program

Incidental Take Permit
No. 2081-2019-008-03
SAN FRANCISCO PUBLIC UTILITIES COMMISSION
CALAVERAS DAM REPLACEMENT PROJECT

Post Office Box 944209
Sacramento, CA 94244-2090
CESA@wildlife.ca.gov

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

Marcia Grefsrud
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
(707) 644-2812
Marcia.Grefsrud@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, City and County of San Francisco Planning Department, Major Environmental Analysis. (See generally Pub. Resources Code, §§ 21067, 21069). The lead agency's prior environmental review of the Project is set forth in the Calaveras Dam Replacement Project EIR, (State Clearinghouse #2005102102) dated October 6, 2009 that the City and County of San Francisco Planning Department, Major Environmental Analysis adopted for the Calaveras Dam Replacement Project on March 16, 2011 and subsequent Addendums. At the time the lead agency adopted the EIR and approved the Project it also adopted all mitigation measures described in the EIR 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 EIR 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 and Game Code § 2081, subs. (b)-(c); Cal. Code Regs., tit. 14, §§ 783.4, subs, (a)-(b), 783.5, subd. (c)(2)].

Incidental Take Permit
No. 2081-2019-008-03
SAN FRANCISCO PUBLIC UTILITIES COMMISSION
CALAVERAS DAM REPLACEMENT PROJECT

CDFW finds based on substantial evidence in the ITP application, Calaveras Dam Replacement Project, the previously issued ITP No. 2081-2010-033-03, the Quarterly Reports, the Alameda Creek and Arroyo Hondo Foothill Yellow-legged Frog Baseline Assessment and Monitoring Recommendations (McBain Associates, 2019), 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) permanent habitat protection; (2) establishment of avoidance zones; (3) worker education; and (4) Quarterly 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, and CDFW's estimate of the acreage required to provide for adequate compensation. Based on this evaluation, CDFW determined that the protection and management in perpetuity of 2,200.6 acres of compensatory habitat that is contiguous with other protected Covered Species habitat and/or is of higher quality than the habitat being destroyed by the Project, 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; and
- (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

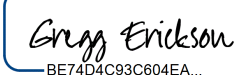
impacts on the species from other related projects and activities. Moreover, CDFW's finding is based, in part, on CDFW's express authority to amend the terms and conditions of this ITP without concurrence of the Permittee as necessary to avoid jeopardy and as required by law.

Attachments:

- FIGURE 1 Maps of Project Area
- ATTACHMENT 1 Mitigation Monitoring and Reporting Program
- ATTACHMENT 2 Restraint and Handling of Live Amphibians
- ATTACHMENT 3A, 3B Habitat Management Lands Checklist; Proposed Lands for Acquisition Form
- ATTACHMENT 4 Letter of Credit Form
- ATTACHMENT 5 Mitigation Payment Transmittal Form

ISSUED BY THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

on 12/15/2020

DocuSigned by:

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 Gregg Erickson, Regional Manager
 Bay Delta 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:  _____ Date: 12/23/2020

Printed Name: Susan Hou Title: Regional Project Manager

 Incidental Take Permit
 No. 2081-2019-008-03
SAN FRANCISCO PUBLIC UTILITIES COMMISSION
CALAVERAS DAM REPLACEMENT PROJECT