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

California Endangered Species Act
Incidental Take Permit No. 2081-2022-006-02

Sites Reservoir Project

I. Authority:

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

Permittee:	**Sites Project Authority**
Principal Officer:	**Jerry Brown, Executive Director**
Contact Person:	**Alicia Forsythe, (916) 880-0676**
Mailing Address:	**112 Old Highway 99 West** **Maxwell, CA 95955**

II. Effective Date and Expiration Date of this ITP:

This ITP is effective as of the date signed by CDFW below. Unless renewed by CDFW, this ITP and its authorization to take the Covered Species (defined below) shall expire on **December 31, 2034**.

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 Permittee's Final Phase Mitigation Report required by Condition of Approval 8.7 of this ITP.

III. Project Location:

The Sites Reservoir Project (Project) generally includes the inundation area of Antelope Valley (between 13,200 and 12,600 acres) in Glenn and Colusa counties located approximately 10 miles west of the town of Maxwell, and construction Project components located in Tehama County, Glenn County, Colusa County, and Yolo County.

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

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

IV. Project Description:

The Project includes the construction of a 1.5 million acre-feet off-stream reservoir (Sites Reservoir) to capture excess water from major storms and store the water until it is most needed during dry periods. Detail about constructing the reservoir and associated infrastructure appears in the numbered items below, a summary of the construction appears in the following bullet points:

- Construction of new facilities and improvements allowing the diversion of water from the Sacramento River at the existing Red Bluff Pumping Plant into the existing Tehama-Colusa Canal and at the existing Hamilton City Pump Station into the existing Glenn-Colusa Irrigation District Main Canal (GCID Main Canal), including addition of new pumps at the Red Bluff Pumping Plant and a new head gate structure on the GCID Main Canal as well as potential upgrades to the GCID canal itself, including several existing syphons.

- Modification of the existing Funks Reservoir and construction of the new Terminal Regulating Reservoir (TRR) pipelines, pumping generating plants (PGPs), switchyards, and administration and maintenance buildings to control the conveyance of water between Sites Reservoir, Tehama-Colusa Canal, and GCID Main Canal.

- Construction of an administration and operations building and a maintenance and storage building along the existing gravel access road to the Funks PGP.

- Construction of two main dams (Golden Gate Dam on Funks Creek and the Sites Dam on Stone Corral Creek) and a series of saddle dams along the eastern and northern rims of the Sites Reservoir to close off topographic saddles in the surrounding ridges.

- Construction of the Inlet/Outlet (I/O) Works for the reservoir south of the Golden Gate Dam in Sites Reservoir, including a low-level intake, multi-level I/O tower, and two I/O tunnels.

- Construction of the new approximately 4-mile long Dunnigan Pipeline to convey Sites Project water released into the Tehama-Colusa Canal into the Colusa Basin Drain (CBD) approximately 40 miles south of the reservoir.

- Development of two primary recreation areas, a day-use boat ramp, and a network of new roads and upgrades to existing roads for maintenance and local access.

- Construction/modification of approximately 46 miles of new paved and unpaved roads to provide construction and maintenance access to the proposed facilities, as well as public access to the proposed recreation areas.

- Surface geologic investigations, surface geophysical investigations, and subsurface geotechnical investigations to advance the design of the proposed facilities.

Geotechnical Explorations

Pre-activity geologic, geotechnical, and geophysical investigations and testing will occur various locations in and around the Antelope Valley. Three types of studies are required:

- Surface Geologic Investigations. The surface geologic investigations will be conducted via pedestrian surveys to map the existing geology of the Project region.
- Surface Geophysical Investigations. Surface geophysical studies include noninvasive surveys to determine stratification properties.
- Subsurface Geotechnical Investigations. The subsurface geotechnical investigations consist of underground exploration utilizing several methods including pavement borings, auger borings, rotary wash borings, cone penetration tests (CPTs), seismic CPTs, piezometers, wells, test pits, fault trenches, dozer trenches, and test fill construction.

Surface Geologic Investigations

Surface geologic investigations involve noninvasive physical methods of survey to determine soil and rock properties at the surface, including walking transects, soil mapping, and rock analyses using hand tools (i.e., small hammer).

Surface Geophysical Investigations

Geophysical investigations typically involve various noninvasive or minimally invasive physical methods, including seismic, gravitational, magnetic, electrical, and electromagnetic testing to determine the properties of the subsurface. Two types of geophysical surveys are proposed: (1) surface seismic refraction testing; and (2) electrical resistivity imaging/tomography.

Surface seismic refraction testing will be used to determine the properties of the subsurface. This method consists of seismic recorders and receiver groups (geophones), a seismic source, and various cables. The geophones are placed in the ground on spikes that are approximately 4 to 6 inches long. The seismic source may include sledgehammer or weight drop. Approximately three to five personnel will lay the array of cables and geophones parallel and perpendicular to the axis of each proposed embankment and other proposed associated features. The arrays will vary in length between 100 and 500 feet at a time and can be viewed easily by the crew to ensure no disturbance of the equipment occurs during an array test. Typically, no other ground disturbance will be necessary, although loose soil may be removed by shovel to a depth of approximately 3 inches to provide adequate contact for the geophones. Each linear geophysical survey test will typically be performed over a 1- or 5-day period of 10- to 12-hour days. Surveys are planned for both wet and dry weather

conditions. No equipment will be left onsite overnight. Upon completion of the investigation, equipment will be removed to return the sites to their original condition to the extent practicable.

Electrical resistivity imaging/tomography is a geophysical survey method to determine geo-electrical properties of the subsurface. Field measurements commonly use half-inch-diameter stainless steel electrodes, which are driven approximately 4 to 6 inches into the ground with a hand-sledge or other small sledgehammer. Electrodes are connected to the controller electronics by means of multi-channel resistivity cables that convey electrical current to a pair of electrodes and are used to measure voltages across other pairs of electrodes. The injected electrical current varies from tens of milliamps (10 mA) to about half an amp (500 mA) at approximately 400 volts direct current. A single test takes approximately 45 to 90 minutes to complete, depending upon the data acquisition parameters required to properly complete resistivity imaging for a particular location. Electrodes and cables are then moved to the next setup location, and the process is repeated. All equipment is picked up at the end of each day. Each linear survey test will typically be performed over a 1- to 5-day period of 10- to 12-hour days. Surveys are planned for both wet and dry weather conditions.

Subsurface Geotechnical Investigations

Geotechnical exploratory pavement borings, auger borings, rotary wash borings, Cone penetration Test (CPT) probes, seismic CPT probes, piezometers, wells, test pits, fault trenches, dozer trenches, and test fill construction will be used to collect subsurface data and samples, and to examine material processing requirements for the Project. Downhole testing and laboratory analysis will determine physical properties and conditions of the subsurface materials. Downhole testing will include permeability and aquifer testing, packer testing, dilatometer testing, pressure meter testing, seismic logging, televiewers, and caliper measurements.

In addition to the considerations listed above for site selection, accessibility for truck- or track-mounted drill rigs will also be evaluated. Helicopters may be used to deliver both mobile and stationary rigs and personnel in areas with limited or no existing improved public or private road access and where vehicle access will potentially result in impacts on sensitive resources. Track- or truck-mounted equipment, including drill rigs or similar equipment, will be used to advance both shallow and deep borings. Additional water for drilling operations will be transported to each investigation location via supply trucks using existing or new access roads or by helicopter.

All subsurface geotechnical investigation techniques will require some degree of ground disturbance to gain necessary geotechnical information, including spot leveling of areas directly below truck leveling jacks and holes measuring 2 to 10 inches in diameter through which augers and sampling equipment will be lowered to collect subsurface data and samples. Minor site surface grading will be necessary only at investigation areas with moderate to steep slopes or uneven terrain that could not be avoided (e.g., to identify

potential ridgeline seepage areas once reservoir is constructed). Work areas will be up to approximately 20 feet wide by 20 feet long for pavement borings, 50 feet wide by 50 feet long for test pits, 200 feet wide by 500 feet long for auger and rotary wash borings, and 50 feet wide by 100 feet long for CPTs, seismic CPTs, wells, and piezometers. Trenches for fault surveys will be up to approximately 40 feet wide and range from 100 to 1,000 feet long. Dozer trenches will be approximately 20 feet wide and range from 1,000 to 2,300 feet long. Test fill construction will require approximately 500-foot-wide by 500-foot-long work areas. Activities at most investigation areas will require up to 10 personnel, including a driller/operator and one to two assistants, a utility locator, a geologist/engineer to log the conditions encountered, and biological, cultural, and Tribal monitors should they be required, project managers and safety staff. Each geotechnical investigation site will be active for a period ranging from 1 day for pavement cores and CPT probes up to 21 days for deep boreholes, fault studies, and test fill construction.

Site Preparation

Site preparation will include demolition of structures within the Sites Reservoir inundation area, relocation of two private cemeteries, clearing, grubbing, and topsoil preservation.

Demolition will include 20 houses, 25 barns, and 40 other structures (i.e. sheds, silos, and a pump house); removal of existing septic tanks and other underground storage tanks; and removal of existing roads, fences, and other utilities. Demolition materials will be reused and recycled to the extent possible. Materials that cannot be reused or recycled will be disposed of in an approved landfill. Two private cemeteries within the inundation area will be relocated to a site approved for interment of human remains.

Clearing and grubbing will be required in the inundation area footprint and for most built facilities (i.e., dam facilities, I/O Works, Funks Reservoir facilities, TRR facilities, and the Dunnigan Pipeline) and will entail removing and disposing of woody vegetation. Cleared and grubbed materials will be composted, reused, placed in the reservoir inundation area for future fish habitat, or recycled to the extent possible.

Prior to construction, measures will be taken to preserve topsoil. In the inundation area where disturbance will occur, topsoil will be excavated, stockpiled, and used to restore temporarily disturbed areas outside the inundation area, for support of native or naturalized plant species around a facility following construction, or for placement in agricultural areas. In the irrigated agricultural areas around the TRR and Dunnigan Pipeline, topsoil will be removed, stored, and replaced in areas of orchards, row crops, and rice fields. In the rangeland areas between the TRR and Funks Reservoir along the TRR pipeline route, the topsoil will be removed, stored and replaced.

Construction Water Use and Facilities

Water for construction use will be obtained from three potential sources: existing surface water from the Storage Partners pursuant to existing water rights agreements and permitted uses; existing groundwater wells in the Sites Reservoir inundation area; and new groundwater wells in the Sites Reservoir inundation area. Water captured during dewatering for the construction of the Dunnigan Pipeline may be reused. Batch water treatment plants will be used to treat water, as necessary, for the intended use. Onsite water treatment plants are likely to be required to treat groundwater prior to its use in certain construction activities (e.g., mixing concrete). Construction water will be reused to the extent possible.

Water used for construction will be transferred to the facility footprints from the GCID Main Canal by trucks and/or pipes. The pipes are not expected to be buried except at crossings of heavily trafficked areas, where they may be installed several feet below ground surface. The Funks PGP, the TRR PGP, and their associated facilities will also obtain water from either the Tehama Canal or the GCID Main canal. The Dunnigan Pipeline will obtain water from wells or dewatering efforts required during pipeline construction.

Borrow Areas and Quarries

Earth and rockfill for the reservoir facilities will come from onsite and/or local sources. Aggregate for dam construction will be obtained from offsite commercial sources.

Tehama-Colusa Canal and GCID Main Canal Diversion Improvements

Construction of the Project will include improvements to existing diversion facilities at the Tehama-Colusa Canal and the GCID Main Canal.

Improvements at the Tehama-Colusa Canal Diversion will include the installation of two additional vertical axial-flow pumps operating at 250 cubic feet per second (cfs) into existing concrete pump bays at the Red Bluff Pumping Plant, increasing the capacity from 2,000 to 2,500 cfs.

The GCID system may require several different upgrades to support the operation of Sites Reservoir. The specific details of these upgrades will be confirmed during future hydraulic modeling and assessment of conditions. A new head gate structure will be constructed at the GCID Main Canal operating at 3,000 cfs about 0.25 mile downstream of the Hamilton City Pump Station. The existing head gate structure will be left in place to continue serving as a bridge between County Road 203 and County Road 205 in Glenn County. The new head gate structure will be constructed upstream of the existing structure and will include eight automated gates. The canal reaching immediately downstream of the new head gate structure will be lined with concrete for approximately 35 feet to prevent erosion.

The Walker Creek siphon and the Willow Creek siphon on the GCID Main Canal will be replaced and the siphon under the Union Pacific Railroad will be improved by adding an additional barrel. These changes will allow for increased capacity so that the winter maintenance shutdown period for the GCID Main Canal can be reduced from 6 weeks to 2 weeks.

The Project will entail GCID Main Canal improvements to increase the freeboard between Willow Creek and the TRR to a standard 2.5 feet; under existing conditions the freeboard range is 1 to 2 feet. Improvements will be made to approximately 17 miles of left bank canal road between the existing Willow Creek siphon and the existing Funks Creek siphon to provide an all-weather road surface. These road improvements will primarily consist of adding approximately 6 inches of aggregate base material.

Construction of improvements along with GCID Main Canal will occur in the winter during the regular shutdown period. For the additional siphons on the GCID Main Canal, a portion of the canal around the siphon will be dewatered using an earth coffer dam lined with geomembrane and sump pumps. Using a bore-and-jack procedure, a new barrel will be installed, and new headwalls on the upstream and downstream end will be installed to approximately match the existing headwall. Construction staging areas will be in the immediate area of the improvements.

Earthwork related to the GCID Main Canal will require a total fill of 5,000 CY to increase the freeboard to 2.5 feet. There will be no excavation and only minor reshaping and addition of fill to the sides of the canal. The fill will be sourced from other project spoils and there will be no net import. The roughly 17 miles of road improvements will require approximately 27,000 CY of aggregate base. It is anticipated the aggregate will be imported from a rock plant within 20 miles of the GCID Main Canal. GCID improvements along the Main Canal and existing road will occur within existing rights-of-way; construction will not permanently remove any existing rights-of-way, and construction will not permanently remove any existing crops.

Terminal Regulating Reservoir

Pumping from the GCID Main Canal to Sites Reservoir will require construction of the TRR facilities. There will be four primary facilities: the TRR, the TRR PGP, an electrical substation, and TRR pipelines.

The TRR facilities will be located in Colusa County west of the GCID Main Canal and east of Funks Reservoir. The approximately 150-acre site will be accessed by an all-weather gravel road from the Funks Dam/Tehama-Colusa Canal area. The TRR will encompass 100 acres between the GCID Main Canal and the Tehama-Colusa Canal. The new reservoir will include a main reservoir and an extension reservoir. This bifurcation of the reservoir into two parts will allow avoidance of an existing Pacific Gas and Electric (PG&E) transmission right-of-way that contains a pair of underground natural gas pipelines and overhead transmission lines running north to south through the site. The main and extension reservoirs will be

hydraulically connected through a tunnel corridor (four 12-foot-diameter pipes) passing under the PG&E transmission right-of-way.

The TRR PGP and electrical substation will encompass approximately 7 acres and will be enclosed by a security fence with access gates. The dual 12-foot-diameter TRR pipelines will cross Funks Reservoir, the Tehama-Colusa Canal, and an existing private drainage canal, but not the GCID Main Canal.

The TRR reservoir will be mass excavated and will be hydraulically connected to the existing GCID Main Canal. This connection will occur through the I/O canal facilities located adjacent to and west of the GCID Main Canal. The I/O canal will facilitate flow through several check structures into the main and extension reservoirs to the west.

Terminal Regulating Reservoir Pumping Generating Plant

A TRR PGP will pump water from the TRR to Sites Reservoir. The PGP will include hydroelectric turbines to generate electricity when water is released from Sites Reservoir to the TRR. The PGP will include the following three facilities in five buildings: one pump station, two turbine generator buildings, and two energy dissipating structures. The pumping plant will have a design capacity of 1,800 cfs, while both the generating plant and energy dissipation structures will have a design capacity of 1,000 cfs.

The pump station will support the pumps at the edge of the TRR and be designed to minimize pump vibration. A trash rack will be installed at the front of the wet well to exclude debris. Bulkhead slots will be provided at each wet well to allow bulkheads to be installed and isolate pump bays for maintenance. The pump station will contain 13 pumps in a single row. Six pumps each will feed into two 12-foot-diameter pipes connecting to the turbines, and there will be a single standby pump that could feed into either pipe.

The two turbine generator buildings will house the turbines, generator, draft tube, associated piping appurtenances, and other electrical equipment. There will be two 13-kilowatt turbines (one for each 12-foot-diameter pipe) that will have a horizontal laying flow pattern. The turbines will discharge water into a draft tube prior to exiting into the TRR. Because the discharge will need to be submerged, the turbines will be housed in an underground structure with a roof. The aboveground portion of the turbine generator buildings will consist of concrete masonry unit walls.

The two energy dissipation valve structures will allow release back to the TRR as backup to the hydroelectric turbine facilities. These structures will each contain a stilling basin and fixed cone valve to dissipate energy before water enters the TRR. There will be a 60-inch fixed cone valve on each of the two 12-foot-diameter pipes for a total of two 60-inch fixed cone valves and a total flow of 1,000 cfs.

Construction of the PGP will include construction of access roads and staging areas, foundation excavations, facility construction, reservoir testing, and testing and commissioning of pumps.

Terminal Regulating Reservoir Electrical Substation

The TRR PGP will require a substation to provide electricity to the associated facilities described above. The electrical substation will connect to existing PG&E or Western Area Power Administration (WAPA) lines. The facility will be constructed on approximately 1.5 acres within the TRR PGP footprint to the north of the TRR. The dimensions of the electrical substation will depend on whether it is connected with PG&E or WAPA lines. The substation will be approximately 460 feet long by 300 feet wide if connected to PG&E lines and be 300 feet long by 240 feet wide if connected to WAPA lines.

Construction of the substations will include clearing and grubbing the substation area, construction of the substation, testing, and connection to the PGP main load and other loads or the substation for the point of interconnection substation.

Terminal Regulating Reservoir Pipelines

Two underground TRR Pipelines will convey water approximately 4.5 miles between the TRR PGP and Sites Reservoir. The 12-foot diameter pipes will extend from the TRR PGP, under Funks Reservoir, and terminate at the transition manifold south of Funks Creek near the Golden Gate Dam. Both TRR pipelines will connect to a 32-foot-inside diameter I/O tunnel at the transition manifold.

The pipelines will parallel the Funks pipelines and Funks Creek and will generally be from 6 feet to 30 feet below ground after installation. Excavators will be used to dig pipeline trenches. Between the TRR and Funks Reservoir, the pipelines will cross the Tehama-Colusa Canal using a trenchless methos or open cut, depending on construction schedule. East of the Tehama-Colusa Canal, the TRR pipelines will run parallel to a drainage canal until they reach the GCID Main Canal where they will cross using a trenchless method or open cut, depending on construction schedule.

Construction of the TRR Pipelines will include clearing and grubbing; constructing temporary access roads and staging areas; constructing a dewatering system near Funks Reservoir and potentially along Funks Creek so that installation of the pipelines can be done in dry conditions; stringing pipe; excavating trenches; laying pipe; welding; backfilling trenches; restoring surfaces; using native material to make controlled low strength material (CLSM) for pipe trench backfill; installing appurtenances; and testing the pipeline.

Funks Reservoir

The Project will excavate accumulated sediment from the existing Funks Reservoir and will also construct three appurtenant facilities, including the Funks PGP, an electrical substation, and Funks Pipelines. These facilities will be constructed in Colusa County, west of the Tehama-Colusa Canal, on approximately 7 acres. The overall site will be enclosed by a security fence with access gates on the south and northwest sides.

Access to the Funks Reservoir-related facilities will be provided at the north and south ends of the site. A gravel parking area will be provided near the PGP. Onsite asphalt concrete paved vehicular access will be provided between the Funks PGP and electrical substation, with facility spacing to accommodate an operational crane. The facilities site will be accessed via an asphalt concrete paved road from Maxwell Sites Road to the south. Existing gravel roads will be widened to 30 feet, with asphalt concrete surfacing for the southern access route, and will be relocated through the site. A gravel bypass road may be constructed to the west of the site. On the north side of the facilities site, the existing dirt road will be converted to a gravel road that will follow the existing road alignment until it reaches the TRR pipeline, at which point a new access road will be built along the Funks and TRR pipelines to the connection with the I/O tunnels.

Onsite drainage at the Funks Reservoir facilities will be conveyed directly into Funks Reservoir through shallow swales or overland flow. Offsite stormwater runoff will be collected on the west side of the site in a ditch which will flow around the site and into Funks Reservoir.

The Project will not alter the footprint of Funks Reservoir but will excavate approximately 740,000 CY of accumulated sediment to restore the reservoir’s original capacity. The excavated sediment will be deposited next to Funks Reservoir.

Funks Pumping Generating Plant

The Funks PGP will be constructed on the northwest side of Funks Reservoir and will include a pump station, two turbine generator buildings, and two energy dissipating structures. The pump station will include an electrical building behind the pumps.

The Funks pump station will be similar to the TRR pump station except for the orientation of the 12-foot diameter pipelines. The pump station will have a flow rate of 2,100 cfs. The turbine generator buildings will be the same as described for the TRR PGP and each generator will have a design criterion of 1,000 cfs. There will be two turbines, one 20-megawatt and one 14.5-megawatt. Each of the two energy dissipation structures will consist of a single 60-inch fixed cone valve with a design criterion of 1,000 cfs. There will be a 60-inch fixed cone valve on each of the two 12-foot-diameter pipes for a total of two fixed cone valves and a total flow of 2,000 cfs (1,000 cfs each).

Construction of the PGP will include construction of access roads and staging areas, foundation excavations, facility construction, reservoir testing, and testing and commissioning of pumps.

Funks Electrical Substation

As with the TRR PGP, the Funks PGP will require a substation to provide electricity to the Funks PGP facilities. This substation will connect to either existing WAPA or PG&E lines. The substation will be located west of Funks Reservoir in the footprint of the Funks PGP and will encompass approximately 3 acres. The Funks electrical substation will be similar to the TRR electrical substation; it will be approximately 460 feet long by 300 feet wide if connected to PG&E lines or 300 feet long by 240 feet wide if connected to WAPA lines. There will be a point of interconnection substation for either WAPA or PG&E, located next to the transmission lines.

Construction of the substations will include clearing and grubbing the substation area, construction of the substation, testing, and connection to the PCP main load and other loads or the substation for the point of interconnection substation.

Funks Pipelines

Two underground Funks pipelines will convey water approximately 1 mile between the Funks PGP and Sites Reservoir. The 12-foot-diameter pipes will extend from the Funks Reservoir and Funks PGP and terminate at the transition manifold south of Funks Creek near the Golden Gate Dam. The Funks pipelines will generally run parallel to the TRR pipelines. After curving around Funks Creek and hilly areas, the Funks pipelines will run south, deviating from the TRR pipeline alignment to the Funks PGP. The Funks pipelines will connect to the 32-foot-diameter I/O tunnel at the transition manifold. After installation, the pipelines will generally be from 6 feet to 25 feet below ground surface.

Construction will include clearing and grubbing; constructing temporary access roads and staging areas; constructing a dewatering system near Funks Reservoir and potentially along Funks Creek so that installation of the pipelines can be done in dry conditions; stringing pipe, excavating trench, laying pipe, welding, backfilling trenches, restoring surfaces, utilizing native material to make CLSM for pipe trench backfill; installing appurtenances, and testing the pipeline.

Transition Manifold

The transition manifold will be constructed at the base of Golden Gate Dam to connect Sites Reservoir to Funks Reservoir and the TRR. It will be installed approximately 6 feet below ground and will be approximately 114 feet long by 92 feet wide. The structure will connect the four 12-foot-diameter conveyance pipelines from Funks Reservoir and TRR to one 32-foot-

diameter I/O tunnel. The transition manifold will have isolation valves to close off the pipelines and allow for maintenance.

In addition to the transition manifold structure, a 42-inch-diameter underground pipeline will extend 2,800 feet north from the manifold to Funks Creek, where it will discharge via an energy-dissipation structure/outlet into the creek. The pressure-reducing valve to dissipate energy before the water is discharged into Funks Creek is necessary because the water pressure will be equal to the Sites Reservoir elevation. The pipeline will be sized to accommodate a seasonal range of discharges to provide water for the approximately 1.8-mile stretch of Funks Creek below Golden Gate Dam to Funks Reservoir.

The transition manifold area will first be used on the east side as the portal for the I/O tunnel. Once the tunnel is completed, then the transition manifold construction will be completed. The staging area footprint will be used first by the tunneling contractor and then used by the transition manifold contractor. Construction will include clearing and grubbing the work and staging area of the transition manifold between reservoir tunnels and Funks pipelines, delivering pipe materials to the area, installing piping and valves, and welding them together, backfilling with combination of CLSM and native material, and regrading the area to smooth surface.

Electrical Transmissions Connections

New high-voltage transmission lines will be required to provide power to the Funks and TRR PGPs. Transmission lines connecting Funks and TRR substations will also be required. Interconnecting the existing transmission system will be necessary to provide the electricity needed to operate the large pumps at the TRR and Funks Reservoir. This interconnection will also enable the energy produced at the Funks and TRR PGPs to enter the transmission system during periods of operation that use their respective turbines/generators.

Construction will include clearing and grubbing for the inner connection line, forming and pouring tower foundations, erecting towers, installing conductors between the inner connection point and Funks/TRR substations, and energizing and testing lines.

North-South Transmission Connections

A new north-south transmission line originating between Funks Reservoir and TRR will connect to WAPA or PG&E existing facilities. Two 230-kilovolt (kV) lines owned and operated by WAPA are located east of Funks Reservoir, and four 230-kV lines owned and operated by PG&E are located west and north of the TRR. WAPA and PG&E are defined as the Transmission Owner and the Transmission Operator of their respective high-voltage transmission lines. Each of these lines is a potential point of interconnection (POI) location; a POI to a high-voltage electric transmission line will be required to provide power. The POI will require a third substation, which is expected to be located adjacent to either the WAPA or PG&E 230-kV transmission lines.

The location of the POI to the WAPA or PG&E 230- kV transmission lines will depend on the results of a system impact study completed by WAPA or PG&E in conjunction with the California Independent System Operator (CalISO).

East-West Transmission Lines

There will also be an interconnection between the Funks and TRR PGPs, and it is anticipated that the transmission lines will parallel the pipelines within the same easement. Up to four 230-kV transmission lines will be required: two for the source supply to either of the PGPs and two between the Funks and TRR electrical substations. The two looped source circuits will be installed on a set of common double circuit steel monopole structures and will require separate easements because they will not parallel any of the proposed pipelines. The two transmission lines between the Funks and TRR electrical substations will be installed on their own common set of double circuit steel monopole structures within the pipeline easement.

Administration, Operations and Maintenance, and Storage Buildings

The Project will include the construction of an administration and operations building and a maintenance and storage building. These buildings will be located along the existing gravel access road to the Funks PGP on approximately 0.15 acre. The one-story administration and operations building will encompass approximately 3,400 square feet. The one-story maintenance building will encompass approximately 2,700 square feet and will include space for equipment storage and maintenance rooms to support the reservoir facilities.

Utilities for these buildings will include a septic system at least 100 feet away from Funks Reservoir and Funks Creek, potable water provided via groundwater wells, and electricity obtained from the Funks Reservoir switchyard. An asphalt concrete paved onsite parking area and vehicular access will be constructed at the site.

Construction of the buildings will include clearing and grubbing; transporting materials and placing them at staging areas; constructing ancillary facilities; and performing site restoration after construction is complete.

Sites Reservoir and Related Facilities

The Project will impound water by the Golden Gate Dam on Funks Creek and the Sites Dam on Stone Corral Creek. A series of saddle dams along the eastern and northern rims of the reservoir will close off topographic saddles in the surrounding ridges to form Sites Reservoir. The 1.5 million acre-feet (MAF) Sites Reservoir will have a maximum normal WSE of 498 feet above mean sea level and will include I/O Works, seven saddle dams, and two saddle dikes. The dam crests will be 30 feet wide and will include asphalt paved or gravel maintenance roads. The nominal crest will be at elevation 517 feet for all dams. A helipad will be constructed near both Sites and Golden Gate Dams for emergency access.

Inlet/Outlet Works

The I/O Works for the reservoir will be generally located south of Golden Gate Dam and will consist of a low-level intake, a multi-level I/O tower, and two I/O tunnels. Construction of the I/O Works will disturb approximately 30 acres in the inundation area and a similarly sized area at the downstream tunnel portal. The construction of the tunnels that will connect the Sites Reservoir to the Funks and TRR pipelines will require excavating the tunnels, installing the tunnel support systems, and controlling groundwater.

Low-Level Intake

The low-level intake will be used for emergency drawdown releases and will also release water below the lowest ports in the I/O tower during drought conditions. It will be at an elevation of 300 feet to allow for sediment accumulation over a 100-year life of the Project. The intake channel will be excavated down to an elevation of approximately 290 feet. Bar-type trash racks will be installed to protect the I/O tunnels from damage and keep debris from clogging the flow streams.

I/O Tower

The 300-foot-tall, multi-level I/O tower will allow flows into and out of the reservoir through the use of ports around the tower's perimeter. The tower may be constructed with a "laid down" or "slanted" sloping intake. These ports will be at multiple elevations and will be equipped with roller gates or valves, which will allow for operational flexibility, including managing the temperature/quality of water released from the reservoir. The tower will also include moveable fish screens. Head gates at the bottom (below ground surface) of the I/O tower will allow access to the I/O tunnels. The lower portion of the I/O tower will be anchored in bedrock.

The I/O tower will include up to seven operating levels or tiers. The upper tiers will be spaced 20 feet on center, with centerlines at elevations ranging from 350 to 470 feet. The lowest tier will be located 10 feet on center below the next lowest tier at 340 feet. Each tier will have three ports on alternating faces of the hexagonally shaped tower. The ports will be constructed at different elevations to allow flexibility to withdraw water based on its quality needs. These ports will be controlled by roller gates or valves.

The head gates will be located in the I/O tower base below the ground surface to allow the isolation of its tunnels for maintenance, inspection, and operational needs.

An approximately 300-foot-long bridge will be constructed to access the I/O tower from the nearby access road.

One 32-foot-inside-diameter I/O tunnel will extend from the I/O tower through the existing ridge that is located south on the right abutment of Golden Gate Dam. It will daylight on the other side of the ridge and connect to the transition manifold. The tunnel will be about 3,110 feet long, connect to the multi-level tower at approximately 300 feet elevation, and have a downstream slope of 1%.

Construction of the I/O Works will disturb approximately 30 acres in the reservoir inundation area, and another 30-acre area outside of it at the downstream (eastern) tunnel portal. The construction disturbance will consist of the footprint of the two intake structures, the tunnel portals, the materials, spoils and equipment staging areas, and access roads. A portion of the footprint outside of the reservoir inundation area will overlap with the disturbance area for the conveyance system to Funks Reservoir.

Construction will include surveying and setting the work in the construction area; clearing, grubbing, and preparing materials laydown and equipment staging areas; building access roads, installing temporary infrastructure, and transporting construction materials and equipment to the site; excavating the hillside for the downstream and upstream tunnel portals 120 feet and 105 feet deep, respectively; dewatering the construction site with an onsite treatment facility that will likely include settling basins with treatment for oil/grease, settable solids, pH and turbidity; tunneling and hauling tunnel muck to a disposal area; constructing the multi-level tower of reinforced concrete; constructing and maintenance roads to the multi-level tower, and finishing grading and site clean-up.

The construction of the I/O Works will require excavation of the tunnel, installation of tunnel support systems, and control of groundwater. A combination of drill-and-blast and roadheader excavation is assumed to be the construction method for the I/O tunnel. Drill-and-blast will be used in areas where the rock strength is higher and the use of a roadheader is inefficient. Roadheader excavation will be used in soft to moderately strong rock. In both cases, the excavated tunnel muck will be loaded into mining cars by underground loaders for transportation to the portals and then for final disposal in disposal areas.

The I/O tunnels will be constructed using pre-excavation grouting to reduce groundwater inflow and help stabilize the ground, followed by a two-pass lining system. The first pass will be installed as part of the excavation process to support the ground and provide a safe work environment. The second pass will be installed once the tunnel excavation is complete and will accommodate all design loads while serving as the water conveyance line.

Dams and Dikes

The Project will include Sites Dam and Golden Gate Dam along with a number of saddle dams and saddle dikes.

Table 1: Main Dam, Saddle Dam, and Saddle Dike Summary

Dam/Dike	Maximum Height Above Streambed (feet)	Length (feet)
Sites Dam	267	781
Golden Gate Dam	287	2,221
Saddle Dam 1	27	318
Saddle Dam 2	57	250
Saddle Dam 3	107	3,422
Saddle Dam 5	77	1,894
Saddle Dam 6	47	362
Saddle Dam 8A	82	1,300
Saddle Dam 8B	37	475
Saddle Dike 1	12	122
Saddle Dike 2	12	198

Sites Dam and Diversion Tunnel

Sites Dam will be on Stone Corral Creek approximately 0.25 mile east of the community of Sites and 8 miles west of the community of Maxwell. Sites Dam will be an embankment dam consisting of a combination of earth and rockfill embankment zones with a central impervious core, exterior upstream rockfill shell, and downstream earthen shell. The upstream and downstream slopes of the dam embankment will be 2.25:1 (horizontal:vertical; H:V) and 2H:1V, respectively. The upstream and downstream slopes of the dam's central core will be 0.5H:1V.

Sites Dam will have a permanent diversion pipeline and tunnel that will be constructed in the left abutment of the dam. The approximately 1,600-foot-long tunnel will contain a 1,900-foot-long pipe with an internal diameter of 12 feet. The pipe will be fitted with one or more valves sized to release a seasonal range of discharges into Stone Corral Creek. The Sites Dam piping system is expected to include a bar trash rack, slide gate, separate fish screen and inlet valve to support Stone Corral Creek release flows, stoplog bulkhead, and permanent air vent assembly.

Stone Corral Creek will be diverted for construction of Sites Dam. A cofferdam will be installed to enable construction of the dam embankments in dry conditions. During construction, storm flows will be conveyed in the 12-foot-diameter diversion tunnel through the ridge at Sites Dam. This tunnel will prevent a potential seepage path from forming through the embankment. Water in Stone Corral Creek will be diverted directly from the creek into the creek diversion pipeline through the Sites Dam abutment and into Stone Corral Creek on the east side of the Sites Dam work area. The outlet tunnel with two 84-inch-diameter fixed cone valves will accommodate these releases, and an energy dissipating chamber will reduce the velocity of the water released.

Golden Gate Dam

Golden Gate Dam will be on Funks Creek approximately 1.8 miles west of Funks. The dam type and material, upstream slopes, and downstream slopes will be the same as described above for Sites Dam. Golden Gate Dam will not have a permanent diversion tunnel; all releases made will be through the I/O Works.

Funks Creek will be diverted for construction of Golden Gate Dam. A coffer dam will be installed to enable construction of the dam embankments in dry conditions. At Golden Gate Dam, a 48-inch-diameter diversion pipe will be placed in the foundation of the dam to divert Funks Creek but will be filled in and decommissioned after construction and prior to use of the dam. However, the coffer dam may be left in place and become part of the main dam.

During construction, water will pond behind the coffer dam on Funks Creek, flow through the temporary pipe underneath the Golden Gate Dam construction site to the east side of the dam, and then re-enter the Funks Creek channel. The coffer dam will be designed to provide enough residence for settling to occur for typical flows in Funks Creek.

Saddle Dams and Saddle Dikes

The saddle dam and saddle dike material will be the same as described above for the Sites Dam. The number and locations of the saddle dams are based on the size of the reservoir because the saddle dams will be needed at topographic saddle low points along the eastern ridge of the reservoir. The upstream and downstream slopes of saddle dams are 3H:1V and 2.5H:1V, respectively. The upstream slope of the central core for the saddle dams will be 1H:1V with a vertical downstream face. Saddle Dams 3, 5, and 8B will have slightly different design features that are discussed below.

Saddle dikes will be required at topographic saddle low points along the northern end of the reservoir. The saddle dikes will not retain water like the saddle dams but will raise two saddles that are below the minimum crest elevation to an elevation above the maximum reservoir elevation during the Probable Maximum Flood (PMF). The upstream and downstream slopes of saddle dikes will be 2H:1V. The saddle dikes will not have a central core.

Saddle Dam 8B will contain the reservoir spillway. The crest width for the dam will be designed to accommodate a 16-foot-wide crest road with suitable concrete or metal guardrails on both sides. The length of the spillway crest section will be based on flood routing analyses, and the crest elevation will be based on the size of the reservoir and normal operating water surface elevation. This elevation will allow storage of the PMF and have sufficient capacity to pass the volume of overpumping water in the unlikely event that over-pumping occurred for more than 10 days; it will enable emergency releases to the local receiving drainage, Hunters Creek.

Stream Diversion

Construction of the Golden Gate Dam diversion and the Sites Dam diversion/outlet will disturb approximately 5 acres in the reservoir inundation area and a similar area outside of it at the downstream tunnel portal. The construction disturbance will consist of the footprints of the intake structure; energy dissipation measures on the downstream side; the tunnel portals at Sites; the materials, spoils, and equipment staging areas; and access roads. Excavation for the diversion pipe at Golden Gate Dam is expected to be covered by the dam's footprint.

A 48-inch diameter diversion pipe on the order of 2,000 feet long will be trenched in the bedrock under the foundation of Golden Gate Dam using an alignment that minimizes excavation and interference with the dam foundation. The steel pipe will be encased in reinforced concrete. The pipe will be backfilled with concrete grout when decommissioned at the end of construction. There will be a short riser (5 to 10 feet tall) with a trash rack on the upstream end of the pipe. The riser will prevent sediment from the construction site being transported downstream. On the downstream end, a flow control valve will be installed along with riprap to provide energy dissipation to diverted flows.

The diversion for Sites Dam will consist of a 1,600-foot-long tunnel in the left abutment of the dam. The upstream 1,100 feet of the tunnel will be concrete lined with a 12-foot inside diameter and the downstream 500 feet will be steel lined with a 12-foot inside diameter due to the small amount of rock cover above the tunnel crown. The excavation will be a 16-foot-diameter horseshoe-shaped tunnel.

The Sites outlet will be constructed using a combination of drill-and-blast and roadheader excavation. Drill-and-blast will be used in areas where the rock strength is higher and the use of a roadheader is inefficient. Roadheader excavation will be used in soft to moderately strong rock. In both cases, the excavated tunnel muck will be loaded into mining cars by underground loaders for transportation to the portals and then for final disposal in disposal areas.

The intake system for the Sites Dam piping system is expected to include a bar trash rack, two 10-ft diameter knife-gate valves, a stoplog bulkhead, and a permanent air vent assembly. The intake system will be well above the creek thalweg, preventing sediment from the construction site being washed downstream.

The outlet works system at the tunnel outlet will include guard valves, combination air release and vacuum valves, two 114-inch diameter flow control valves for drawdown, and one flow control valve for creek release.

The upstream random zone of Golden Gate and Sites dams will function as the cofferdam and upstream toe berm, provides a convenient place to utilize suitable materials from foundation excavation work during the initial stages of construction, and will be used to divert Funks and Stone Corral creeks from the dam footprint.

Construction will include dewatering the construction site and an onsite water treatment facility, constructing cofferdams, trenching for the diversion pipeline at Golden Gate Dam, hillside excavation for the downstream and upstream tunnel portals for Sites Dam, excavating the tunnel and hauling tunnel muck to a disposal area for Sites Dam following tunnel portal construction, excavating for the intake structures and downstream energy dissipation structures, constructing the structures from reinforced concrete, and managing groundwater.

Cofferdams will be required along Stone Corral and Funks Creeks for construction of Sites Dam and Golden Gate Dam, respectively. The cofferdams will be incorporated into the upstream toe of the embankment dams and will be constructed of material likely derived from the excavation of the dam foundations. The crest of the cofferdams will be set at an elevation of 301 feet (5 feet above highwater during construction). The Sites Dam will require approximately 260,000 CY of Zone 4 (random materials) fill for the cofferdam in Stone Corral Creek, and the Golden Gate Dam will require approximately 800,000 CY of Zone 4 fill for the cofferdam in Funks Creek.

Developing Borrow Areas and Quarries

Borrow areas will first be developed by clearing, stripping, and grubbing the surface materials. The borrow areas for Zone 1 (finer materials) will be excavated with equipment consisting of excavators and loaded into dump trucks or excavated with scrapers and hauled directly to the dams. Moisture will be added in the borrow areas for both dust control and to adjust moisture for compaction. The quarries will be developed by first clearing, stripping, and grubbing. The quarries will then be stripped of weathered rock using bulldozers. This weathered rock will be used for Zone 4 within the dams. Moisture will be added to the material within the quarry for dust control and to adjust moisture for compaction. Benches will then be created from which a drilling and blasting operation will proceed. This operation will produce Zone 3 material (rockfill and riprap), riprap, and additional Zone 4 material. The materials from a blast will be separated within the quarry and rock processing area into the different Zone materials. They will then be transported to the dams. The rock processing operation will consist of sorting rock for either Zone 3, riprap, or Zone 4 materials. Stockpiled materials will be loaded by large excavators and loaders, and possibly conveyors, into large dump trucks and transported to the dam construction sites. Material excavation, processing, and stockpiling are anticipated to occur throughout the dam construction period.

Foundation Excavation

Recent and older alluvium and decomposed and intensely weathered bedrock will be excavated from the entire footprint of the main dam sites to reach a moderately weathered bedrock surface. In addition, moderately weathered bedrock will be excavated from the impervious core footprint down to the top of slightly weathered and/or fresh bedrock surface.

For the saddle dams, the foundation objectives are intensely weathered rock for the shell and

moderately weathered rock for the core. Additional shaping of the foundations will be done after these foundation objectives are achieved. Excavation depths are estimated to average approximately 15 feet, excluding the core foundation. It is anticipated that the core foundation will be reached at approximately 40 feet in depth.

Excavation will be performed by heavy equipment but limited controlled blasting may be required in the harder sandstone. For Golden Gate and Sites Dams, approximately 25 percent of the rock in the core foundation may require controlled blasting.

The current estimated quantity of rock in the dam foundations is about 206,000 CY. This material will be drilled and shot in a controlled manner to shape the foundation to meet foundation objectives. Blasting plans and resulting shots will vary in size, depth, and overall shape, with the average shot size between 2,000 and 4,000 CY. Blasting of the core trench will be ongoing, as the dam foundation is exposed from the abutments down to the central part or maximum section area of the dam, depending on excavation of overlying materials and rock formations within the dam footprint. Overall blasting operations will likely last the duration of the dam foundation excavation but will not occur daily. Given the overall quantity of 206,000 CY of material and an average blast size of 3,000 CY, this will involve approximately 70 shots.

A minimum bottom core trench width of 20 feet has been incorporated into the saddle dam foundation design. For the saddle dams, the average depth to intensely weathered bedrock was estimated at 12 feet below ground surface, the average depth to moderately weathered bedrock is 25 feet, and the average depth to slightly weathered bedrock is 35 feet.

No significant landslides have been mapped within the dam footprints. However, if any landslides are encountered, they will be removed within the dam foundation excavation.

Groundwater is present at the main and saddle dam sites, and dewatering will be required during excavations. Dewatering will occur within the dam footprints to get to the foundation level. The water generated through this dewatering will be kept onsite and will be used within the reservoir footprint or other construction locations; the water will be stored in sedimentation ponds upstream of the dam.

Additional grouting will be performed along the eastern rim of the reservoir north of Golden Gate Dam. Grouting will be in narrow rim areas and is intended to minimize seepage through the rim when the reservoir is full. Grouting will extend from the ground surface down into fresh rock.

Dam Embankment Construction

As mentioned above, all proposed dams composing the Sites Reservoir will be constructed as zoned earth rockfill embankment dams and will be constructed of four types of fill materials. The impervious core materials (finer material known as Zone 1), Zone 3 materials

(rockfill and riprap), and Zone 4 materials (random materials). These materials will be hauled in large dump trucks from the borrow areas and quarries, spread by graders or bulldozers, moisture conditioned with water trucks, and compacted with sheepsfoot rollers and vibratory compactors. Zone 2 materials (filter, drain, and transition materials) will potentially be hauled in highway-legal large dump trucks from offsite commercial sources approximately 40 miles from the reservoir site and then spread, watered, and compacted.

Dam Monitoring

Instrumentation will be installed in the dam abutments, dam embankments, and downstream of the dams. The objectives of instrumenting the dams include collecting data to compare with assumptions made for the design analyses and monitoring of dam performance during construction, first filling of the reservoir, and long-term operation of the Project.

The types and locations of instrumentation will be selected to measure specific engineering parameters, including deformation, seepage flows, piezometric levels, pore-water pressure, and seismic response. Types of instrumentation may include piezometers, inclinometers, extensometers, survey monuments, weirs, and strong motion accelerographs. A reservoir level indicator and meteorological station will also be included, and an automated data acquisition system will provide for remote data acquisition of the dams.

Conveyance to Sacramento River

Sites Reservoir will be built to allow water released from the reservoir to be conveyed south of the reservoir using the existing Tehama-Colusa Canal, a new Tehama-Colusa Canal Intake, and a new Dunnigan Pipeline.

Tehama-Colusa Canal Intake

A new intake will be constructed to allow water to move from the Tehama-Colusa Canal into the Dunnigan Pipeline. The Tehama-Colusa Canal intake site will encompass approximately 0.5 acre and be accessed from the existing Tehama-Colusa Canal access road. The intake will be a concrete structure sized for a flow of 1,000 cfs that supports the control gates and associated gate operators. Power will be needed for Supervisory Control and Data Acquisition control and gate operation to let water into the Dunnigan Pipeline; however, there will be a gravity outlet structure from the Tehama-Colusa Canal into the Dunnigan Pipeline, and no pumping will be required. A concrete bridge deck will provide vehicular access across the top of the intake. Stoplog slots at the inlet and outlet channels will enable isolation of the control gates for maintenance.

Construction will include clearing and grubbing the area along Tehama-Colusa Canal for the inlet structure, placing the cofferdam in Tehama-Colusa Canal and bypass pumping around the inlet site, transporting materials to the site, placing construction materials at staging areas, excavating the ground to accommodate placement of structural concrete and rebar to

build the inlet structure, and connecting the inlet structure to the Dunnigan Pipeline. Temporary disturbance for construction of the Tehama-Colusa Canal intake adjacent to the Tehama-Colusa Canal will require 2 acres for temporary construction for about 1 year. The staging area will be located on the east side of the Tehama-Colusa Canal and just north of the Dunnigan Pipeline. Access to this structure is anticipated to be from the existing Tehama-Colusa Canal access road.

Dunnigan Pipeline

The Dunnigan pipeline will be about 4 miles long, have a minimum depth of 6 feet below ground surface, and have an inside diameter of approximately 9 feet. The Dunnigan Pipeline will extend through existing agricultural lands and cross I-5, Road 99W, the railroad, and a commercial auction yard between I-5 and Road 99W. The tunneled crossings at I-5, Road 99W and the railroad will be 300 feet long and 250 feet long, respectively, and will require 12 5-foot-diameter casings.

A CBD outlet with an energy dissipation facility will be built at the downstream end of the pipeline. Two 60-inch-diameter, fixed-cone valves will be placed at the discharge stilling basin to dissipate energy and adjust the flow. Hoods on the fixed-cones valves will control spray. The conveyance through the Dunnigan Pipeline to the CBD will use gravity (i.e., no pump station) and have a flow of up to 1,000 cfs. Water releases will generally be made from May to November, but could occur at any time of the year depending on the Storage Partner's need and conveyance capacity to convey water to its intended point of delivery. Construction of the Dunnigan Pipeline from the Tehama-Colusa Canal to the CBD will require dewatering, trenching, and pile driving or a vibration hammer. Dewatering will be necessary for a segment of the pipeline to reduce groundwater levels to 20 or 30 feet below ground surface along its length. Trenching and pipeline installation will be completed after dewatering. Pile driving or a vibration hammer will be used to install piles for construction of the CBD outlet. Construction will include open cut of approximately 100 feet to cross Bird Creek in the dry season.

Construction will include clearing and grading the pipeline alignment; excavating the pipeline trench and provide shoring; installing and welding up the pipeline and backfilling with a combination of CLSM and native material; installing flow meters, valving, air valves, blowoffs, and access manways; installing a cathodic protection system consisting of rectifiers attached to pipe; revegetating and restoring the pipeline route and constructing a gravel maintenance road along the pipeline route; constructing the CBD Outlet Structure; clearing and grubbing area along the CBD for the outlet structure; transporting materials to the site; placing construction materials at staging areas; building the outlet structure, which will consist of excavating the ground to accommodate placement of structure structural concrete and rebar; connecting the outlet structure to the Dunnigan Pipeline; and testing the facility. The anticipated construction time to complete the work is approximately 10 months.

Recreation Areas

The Project involves the development and maintenance of two primary recreation areas and a day-use boat ramp. The recreation areas will also require a network of new roads and upgrades to existing roads for maintenance and local access.

- Peninsula Hills Recreation Area - The Peninsula Hills Recreation Area will be located on the northwest shore of the Sites Reservoir, to the north of the existing Sites Lodoga Road and across the reservoir from the Stone Corral Creek Recreation Area. Access will be provided by the existing Sites Lodoga Road west of the reservoir. This recreation area will encompass up to 373 acres and will include a kiosk, access to electricity and potable water, 10 picnic sites (with parking at each site), and hiking trails. There will also be 19 vault toilets, 200 campsites (car and recreational vehicle), and one group camp area.

- Stone Corral Creek Recreation Area - The Stone Corral Creek Recreation Area will be located on the eastern shore of the Sites Reservoir, north of the existing Maxwell Sites Road and Sites Dam. Access will be provided from Sites Dam and Sites Lodoga Road near the eastern end of the bridge across the reservoir. This recreation area will encompass up to 235 acres, and its facilities will include a kiosk, access to electricity and potable water, 10 picnic sites (with parking at each site), and hiking trails. There will also be 10 vault toilets and 50 campsites (car and recreational vehicle).

- Day-Use Boat Ramp and Parking Areas - The day-use boat ramp will be located on the western side of the reservoir where the existing Sites Lodoga Road intersects with the proposed inundation area for the reservoir. A parking area will be added to the existing Sites Lodoga Road where it exits the inundation area footprint of the reservoir. The boat ramp and parking area will encompass up to 10 acres and include a kiosk, access to potable water, and one vault toilet.

Construction of the recreation areas and facilities will consist of clearing and grubbing, excavating, backfilling, constructing roads and parking lots, installing utility connections, constructing amenities, constructing the boat ramps, and restoring temporarily disturbed areas. It is anticipated that all construction activities associated with the recreation areas will occur within the proposed footprints of the recreation areas and the temporary and permanent access road areas. A helipad will be placed within either the Peninsula Hills Recreation Area or the day-use boat ramp area for emergency access.

The total construction disturbance area of the recreation areas will be within the acreage of the recreation areas themselves, which is approximately 618 acres. Construction disturbance may be much less if recreational facilities are designed and constructed to minimize vegetative disturbance, including tree removal. Anticipated ground-disturbing and related activities during construction include surveying, clearing and grubbing, excavating, backfilling,

constructing the road and parking lot, installing potable water and power connections, installing amenities, constructing the boat ramp, and performing site revegetation.

New and Existing Roadways

Approximately 46 miles of new paved and unpaved roads will provide construction and maintenance access to the proposed facilities, as well as public access to the proposed recreation.

Construction access roads will be designed to provide the necessary roadway improvements specific to the movement of construction equipment and transport of materials. Roadways that will be used for construction access and local access will be designed to achieve the objectives for both uses and prioritize needs for local traffic use and safety. Roads used solely for construction access will be designed with a minimum 15-foot cross-section and a maximum of a 50-foot cross-section. Construction access roads may be repurposed as permanent operation and maintenance roads after completion of construction. Permanent facility access roads constructed from gravel and asphalt will facilitate operation and maintenance. These access roads will require new construction or the relocation of existing public county roads. Temporary gravel roads will also be built during construction.

Local access roads will generally have two 12-foot-wide lanes with paved shoulders. Maintenance access roads will be constructed or improved in accordance with the equipment and personnel required for operations and maintenance of specific facilities. Roads installed for construction access will be repurposed for maintenance following construction. Repurposed maintenance roads will have one 15-foot-wide minimum gravel lane with no shoulders. Several existing roads will be improved to support the construction of Sites Reservoir facilities (e.g., main dams and saddle dams) and enable construction vehicles to safely pass one another if needed.

The area planned to be inundated by the reservoir will be used as a materials and construction equipment staging area for the Sites Lodoga Road/Maxwell Sites Road and bridge(s). For the portion of proposed roadway and bridges across the reservoir, the total construction permanent disturbance area will be approximately 442 acres. This area will incorporate the roadway fill prism, bridges, equipment and materials staging area, borrow areas, stockpile areas, site access, and perimeter space to construct these facilities. This acreage will be completely within the construction disturbance area for the Sites Reservoir inundation area itself.

For the access, construction and maintenance roads beyond the Sites Reservoir inundation area, the total construction permanent disturbance area will be approximately 1,107 acres. This area will incorporate a realigned roadway (assumed balanced cut and fill — no borrow or stockpiling), widening of roadways, equipment and materials staging area, site access, and perimeter space to construct these facilities. Disturbance will be caused by construction activities involving roadway excavation, rock cutting, clearing and grubbing, grading,

construction equipment circulation, drainage system construction, ditch excavation, fence placement, roadside sign placement, installing roadway striping and reflectors; restoring temporary disturbance areas; and cleaning up the work sites. Acreage for these facilities is beyond the Sites Reservoir inundation disturbance area and is thus additive to the construction disturbance area for the inundation area.

An asphalt batch plant for road construction may be set up onsite and outside of the Sites Reservoir footprint. One possible location could be adjacent to the footprint of the proposed Operation and Maintenance Building. This location will be centrally located to where paving will be conducted, is relatively flat, and has shallow soils and impervious subsoil that should facilitate spill containment and site cleanup. Alternatively, the construction contractor may obtain asphalt from regional commercial sources.

Construction will include surveying; setting up staging areas within the Sites Reservoir footprint; constructing access roads involving grading; transporting materials and equipment to the site; setting up offices and batch plants; clearing and grubbing; excavating and stockpiling; constructing roadway fill prisms for the reservoir crossing; constructing bridge pier and abutment foundations, piers and abutments, and superstructures; relocating utilities, if necessary; constructing roadway embankments and cuts; widening roadways and intersections; constructing temporary and permanent fencing; constructing temporary and permanent roadway drainage conveyance systems; extending, improving, or replacing bridges and box culverts; extending or replacing pipe culverts; and cleaning up the site, removing equipment, and restoring the area.

Sites Lodoga Road

The Project will realign a segment of Sites Lodoga Road and construct a bridge over Sites Reservoir. The relocated segment of Sites Lodoga Road will include 5-foot-wide shoulders adjacent to the two 12-foot-wide lanes to accommodate bicycles and will connect to the new bridge.

The realigned Sites Lodoga Road will be placed across the reservoir and extend 7,800 feet; it will necessitate the construction of four fill prisms that will be up to 150 feet tall and will support two shorter bridge segments approximately 3,450 and 4,050 feet long. The roadway and bridge profile will be at 2 feet above the maximum flood plus wave height. The maximum flood plus wave height is set at 10 feet above the normal WSE (elevation 498 feet for the 1.5 MAF reservoir).

The bridge structure will consist of a cast-in-place, prestressed concrete box girder that will have two lanes with a total width of 35.5 feet and 4-foot-wide shoulders. The bridge will have California Department of Transportation-approved edge barriers with small-diameter electrical conduits, a suicide prevention barrier, emergency phone service facilities, deck drains, and an opening for potential utilities. The bridge design does not include sidewalks due to the remote rural nature of this site. The bridge will be exposed to high winds; therefore, high wind

advisory facilities, such as static roadside signs or extinguishable message signs that are illuminated when instruments measure high winds will be installed.

The disturbance area for bridge construction will include the footprint of the bridge structure, the staging areas for materials and equipment, and the area needed to construct the facilities and access roads. Initial construction activities will involve establishing staging areas, surveying and marking roadways, clearing, and grading. Bridge construction will include surveying and setting markers, clearing and grading the construction workspace, preparing the construction materials laydown and equipment staging areas, transporting materials and equipment to the site, building the concrete and/or portable concrete batch plant, creating road cuts and fills, hauling excess cut materials, constructing bridge foundation, including drilled pier installation for foundations, constructing bridge columns, constructing bridge spans, installing barriers, installing roadway striping and reflectors, performing erosion and stormwater management, and performing site restoration and cleanup.

Construction Access

Construction access for the reservoir and supporting facilities will occur on public roads from I-5 to the reservoir site on the north and at Sites Lodoga Road on the east. These roads currently cross small creeks and irrigation canals, and the crossings are generally reinforced through concrete box culverts. There are three primary construction access routes for consideration that will most likely be defined for use by the construction contractor.

The first construction access route will be on 5.5 miles of existing paved road approximately 24 feet wide that stretches from I-5 west along Road 68, south on Road D, and west on Road 69 to just west of the Tehama-Colusa Canal. From here the road changes to a 24-foot wide gravel road (North Road), which will be temporary and continue for approximately 5 miles along existing ranch roads and trails to the north end of the reservoir at the saddle dams. From this location, onsite access roads will be constructed within the limits of the reservoir.

The second construction access route will be on 7.2 miles of existing paved road from I-5 west along Delevan Road, north along McDermott Road, and west on Road 69 to just west of the Tehama-Colusa Canal. Approximately 1.5 miles of the existing gravel McDermott Road between Dirks Road and West Glenn Road will be paved to accommodate the volume of heavy construction traffic.

The third construction access route will be on 12 miles of existing paved road from I-5 along Delevan Road, south along McDermott Road to Maxwell Sites Road, and then west to the existing gravel access road to Funks Reservoir. The first mile of this gravel road will be the initial segment of the Sites Lodoga Road realignment. This gravel road will also provide access to the Funks PGP and Golden Gate Dam. Maxwell Sites Road will provide access to Sites Dam. Construction equipment/materials will not be permitted to pass through the community of Maxwell on the Maxwell Sites Road; thus, the construction access roads will circumvent Maxwell.

Road 68, Road D, Road 69, Delevan Road, and McDermott Road will be modified with the following improvements:

- Roadbeds and intersections will be widened;
- Roadbeds will be reconstructed;
- Horizontal and vertical curve corrections will be implemented; and
- Drainage features will be improved.

Reconstruction of the roads above will include the addition of new 2-foot-wide paved shoulders to each lane, as well as potential modifications to existing creek and irrigation canal crossings. These roads currently cross small creeks and irrigation canals, and the crossings are generally reinforced through concrete box culverts. It is anticipated that the existing crossing structures will be widened, strengthened, or replaced, as needed.

Local Access

In addition to the local roads described above that will be improved for construction purposes and then remain local access roads, several other public local roads will be relocated or developed to accommodate reservoir facilities. These roads include Sites Lodoga Road, Huffmaster Road, Comm Road South, County Road 8, County Road 90B, County Road 99W, and recreation area roads. There will also be one temporary detour during construction—the Sites Lodoga Temporary Detour Road.

Comm Road South

Access to existing communication facilities will consist of a gravel road that will start near the northern end of Huffmaster Road and proceed north to the communications tower.

Realigning Huffmaster Road

Huffmaster Road Realignment is the easterly segment of Sites Lodoga Road Realignment from the existing Huffmaster Road to Maxwell Sites Road. This road will be a gravel road to serve the residences at the end of Huffmaster Road. Similar to the Sites Lodoga Road realignment, it will be realigned through a combination of underdeveloped mountainous and rolling hills terrain. The roadbed will be constructed as a two-lane gravel road with 12-foot lanes and shoulders and will consist of 12 inches of compacted aggregate base on top of 6 inches of compacted aggregate subbase. Some areas of excavation may also involve rock cutting and blasting, with proposed slope cuts and fills to be approximately 1.5:1 (H:V) to 2:1 (H:V). Earthen roadside ditches will be constructed adjacent to the shoulders, connecting to

crossing pipe culverts, which will convey stormwater runoff. This roadway will also be aligned with fencing.

Dunnigan Pipeline Access Roads

Yolo County Roads 8, 90B, and 99W will be used during construction of the Dunnigan Pipeline. County Road 8 is an east–west, two-lane rural local road that extends 0.5 mile from County Road 90B to County Road 99W near the Dunnigan Pipeline alignment. The county road is paved with some sidewalks on the east side of the I-5 interchange. County Road 90B is a north–south, two-lane rural local road that extends 0.6 mile south of County Road 8 west of the I-5 interchange with County Road 8. County Road 90B converts to a dirt/gravel road south of Bird Creek. County Road 99W is a north–south, two-lane rural minor collector road that extends 2.5 miles from County Road 10 to County Road. The county road is paved with narrow unpaved shoulders in both directions and includes some turning pockets to access private property or major crossroads.

Recreation Area Roads

New recreation area roads will provide access from Sites Lodoga Road to the Peninsula Hills Recreation Area, day-use boat ramp, and Stone Corral Creek Recreation Area. The access roads to Peninsula Hills Recreation Area and day-use boat ramp on the west side of Sites Reservoir will be paved. The access road to the Stone Corral Creek Recreation Area on the east side of the reservoir will be paved and gravel.

Sites Lodoga Temporary Detour Road

A temporary detour road will be constructed to expedite construction and maintain traffic movement through the reservoir site during the construction of Sites Dam and the bridge across the reservoir (including fill prisms). This road will convey local traffic for a period of approximately 1 year and will be aligned around the Sites Dam site partially on the Sites Lodoga realignment from Maxwell Sites Road to near the easterly bridge at the top of the ridge. The temporary detour road will then split off to the south and traverse hilly terrain before Comm Road South, rejoining Sites Lodoga Road near its intersection with Peterson Road.

Maintenance Access

New and existing maintenance access roads will provide access to the main dams, saddle dams and dikes, I/O Works, and Funks PGP. Except for the existing road to Funks Reservoir, the maintenance access roads will be single-lane, 15-foot-wide gravel roads with no shoulder. Comm Road South will be a local access and maintenance access road.

North Road will begin at the end of the unpaved Road 69, continue 5 miles to the reservoir's edge, and connect with several new maintenance access roads that will provide access to

the saddle dams and dikes. Access Road A1 will be a new gravel road along the crest of the Golden Gate Dam with minor cuts/fills. Access Roads B1 and B2 will be new gravel roads connecting to the I/O Works and Golden Gate Dam with minor cuts/fills. Access Road C1 is expected to be a two-lane, 30-foot-wide, paved road to access Funks Reservoir, and the existing road to the reservoir will be maintained. Access Road C2 will be improved from an existing jeep trail at the east base of the Golden Gate Dam to a gravel road that will extend off Access Road C1.

Construction Schedule

Construction of the Project is expected to take approximately six years. Factors that could affect the schedule include funding, implementing agency environmental requirements, contracting methods and strategies, material and construction equipment availability, lead time for fabrication of major pumping and generating equipment, labor force constraints, weather, and access road capacity limitations. Adjustments to the schedule will be addressed as the Project is developed and implemented.

V. Covered Species Subject to Take Authorization Provided by this ITP:
This ITP covers the following species:

Name	CESA Status[3]
1. Giant garter snake (*Thamnophis gigas*)	Threatened[4]
2. Swainson's hawk (*Buteo swainsoni*)	Threatened[5]
3. Tricolored blackbird (*Agelaius tricolor*)	Threatened[6]
4. Crotch's bumble bee (*Bombus crotchii*)	Candidate[7]

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

VI. Impacts of the Taking on Covered Species:
Project activities and their resulting impacts are expected to result in the incidental take of individuals of the Covered Species. The enumerated activities described above in the Project Description are expected to result in incidental take of individuals of the Covered Species and some specific actions that are expected to result in incidental take include: geotechnical explorations site preparation, construction of water use and facilities, use of borrow areas and quarries, improvements to the Tehama-Colusa Canal and GCID Main Canal Diversion Improvements, construction of the TRR and associated infrastructure, construction of two main dams and saddle dams, impoundment of water at Sites Reservoir and related facilities,,

[3] Under CESA, a species may be on the list of endangered species, the list of threatened species, or the list of candidate species.
[4] See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(4)(E).
[5] See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(5)(A).
[6] See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(5)(H).
[7] The species status may change following the decision of the Fish and Game Commission to designate the species as threatened or endangered but if there is such a designation, the species will remain a Covered Species.

excavation of Funks Reservoir and associated infrastructure, construction of the transition manifold, installation of electrical transmission connections, construction of storage buildings, impoundment of water at Sites Reservoir and related facilities, construction of conveyance structures to the Colusa Basin Drain, construction of recreational facilities and accesses, new roadways, any areas of temporary impact such as staging, access and stockpile areas, locations of trenches for infrastructure, and any onsite preserves and required management (Covered Activities).

Incidental take of individuals of the Covered Species in the form of mortality ("kill") may occur as a result of Covered Activities such as geotechnical exploration, site preparation, construction of water use and facilities, use of borrow areas and quarries, improvements to the Tehama-Colusa Canal and GCID Main Canal Diversion Improvements, construction of TRR and associated infrastructure, construction of two main dams and saddle dams, excavation of Funks Reservoir and associated infrastructure, construction of the transition manifold, installation of electrical transmission connections, construction of storage buildings, impoundment of water at Sites Reservoir and related facilities, construction of conveyance structures to the Colusa Basin Drain, construction of recreational facilities and accesses, new roadways any areas of temporary impact such as staging, access and stockpile areas, locations of trenches for infrastructure, and any onsite preserves and required management. Incidental take of individuals of the Covered Species may also occur from the Covered Activities in the form of pursuit, catching, capturing, or attempting to do so of the Covered Species from conducting species specific surveys and management. The areas where authorized take of the Covered Species is expected to occur are: the inundation area of Antelope Valley (between 13,200 and 12,600 acres) located in Glenn and Colusa counties located approximately 10 miles west of the town of Maxwell, and construction Project components located in Tehama County, Glenn County, Colusa County, and Yolo County; and which will be further specified in the CDFW-signed Phase Authorization Package as detailed below in Condition of Approval 6 (collectively, the Project Area).

The Project is expected to cause the permanent loss of:

1. Up to three Swainson's hawk nest trees
2. Up to 13,291 acres of Swainson's hawk foraging habitat
3. Up to 0.5 acre of tricolored blackbird nesting habitat
4. Up to 4,155 acres of tricolored blackbird foraging habitat
5. Up to 20 acres of giant garter snake habitat, consisting of:
    a. 1 acre of aquatic habitat
    b. 19 acres of upland habitat
6. Up to 13,868 acres of Crotch's bumblebee habitat

The Project is expected to cause the temporary loss of:

1. Up to 1,235 acres of Swainson's hawk foraging habitat
2. Up to 360 acres of tricolored blackbird foraging habitat
3. Up to 17 acres of giant garter snake habitat, consisting of:
    a. 6 acres of aquatic habitat
    b. 11 acres of upland habitat
4. Up to 1,218 acres of Crotch's bumblebee habitat

Impacts of the authorized taking also include adverse impacts to the Covered Species related to temporal losses, increased habitat fragmentation and edge effects, and the Project's incremental contribution to cumulative impacts (indirect impacts). These impacts include: stress resulting from noise and vibrations from construction activities, capture and relocation, and long-term effects due to decrease in available food and shelter resources, displacement from preferred habitat, increased competition for food and space, and increased vulnerability to predation.

VII. 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 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 surveying, capturing, managing, and relocation of Covered Species as authorized by this ITP.

VIII. Conditions of Approval:
Unless specified otherwise, the following measures apply to all Covered Activities within the Project Area, including areas used for vehicular, aircraft (e.g., drone or helicopter) 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 Environmental Impact Report (SCH No.: 2001112009) certified by the Sites Project Authority on November 17, 2023, as lead

agency for the Project pursuant to the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.).

3. LSA Agreement Compliance: Permittee shall implement and adhere to the mitigation measures and conditions related to the Covered Species in the Lake and Streambed Alteration (LSA) Agreement (EPIMS Notification No. COL-46998-R2) 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 Biological and Conference Opinion on the Proposed Sites Reservoir Project in Colusa and Glenn Counties California for the Project pursuant to the Federal Endangered Species Act (ESA).

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. Phase Authorizations: Permittee may not begin any phase of the Project until Permittee has obtained authorization (Phase Authorization) from CDFW, as described below in Conditions of Approval 6.1 and 6.2. For the purposes of this ITP, a phase (Phase) is defined as any combination of the enumerated activities described in the Project Description above that are to be completed within two calendar years, or other timeframe if agreed upon by CDFW in writing.

6.1. Phase Authorization Package. For each Phase of the Project, Permittee shall submit a complete Phase Authorization Package for CDFW's review and approval. The Phase Authorization Package shall be submitted to R2CESA@wildlife.ca.gov The Phase Authorization Package shall include:

6.1.1. A completed Phase Authorization Form (included in this ITP as Attachment 5), including assessments of the expected permanent and temporary impacts on Covered Species habitat associated with the proposed Phase as well as calculations of the amounts of compensatory mitigation due for that Phase.

6.1.2. A complete description of all applicable Covered Activities defined under this ITP.

6.1.3. A biological report assessing the portion of the Project Area in which Covered Activities will occur during the Phase (Phase Project Area) and describing the methodology used to conduct species-specific surveys.

6.1.4. A habitat delineation showing both the natural land cover habitats and the specific Covered Species habitats within a Phase Project Area.

6.1.5. Protocol-level species survey results completed in accordance Conditions of Approval 9.4, 9.12, 9.20, and 9.27.

6.1.6. A complete description of all applicable avoidance, minimization, and mitigation measures that are applicable to a Phase.

6.1.7. An engineering plan or geotechnical workplan showing all activities to occur within the Phase Project Area. Engineering plans shall be at 60 percent design complete, unless otherwise agreed to with CDFW in writing.

The Phase Authorization Form shall remain in substantially the same form as the template in Attachment 5. CDFW may require an amendment to this ITP if any substantive changes to the Phase Authorization Form are required.

6.2. CDFW Review of the Phase Authorization Package. CDFW will review the Phase Authorization Package provided by Permittee to confirm: (1) the Phase falls within the scope of Covered Activities authorized by this ITP, (2) all applicable ITP Conditions of Approval have been included in the Phase Authorization Package, and (3) the Phase, if implemented in accordance with the Phase Authorization Package, would be consistent with this ITP.

6.2.1. CDFW Review Timelines. CDFW will have 60 calendar days from receipt of the Phase Authorization Package to determine if the Phase Authorization Package is consistent with this ITP. If CDFW determines the Phase Authorization Package is not consistent with this ITP and the package is resubmitted per Conditions of Approval 6.2.3 or 6.2.4, CDFW will have an additional 60 days to review. If Permittee, on its own initiative, revises or otherwise changes and resubmits the Phase Authorization Package, CDFW will have an additional 60 days to review. Permittee must receive a copy of the Phase Authorization Form signed by CDFW prior to commencing the applicable Phase under this ITP.

6.2.2. Consistency with ITP. CDFW will review and sign the Phase Authorization Form if it finds that all requirements and processes in ITP Section 6.1 and 6.2 have been met. CDFW will not add additional Conditions of Approval in the Phase Authorization that are not contained within this ITP. CDFW will provide Permittee with the CDFW-signed Phase Authorization Form which signifies CDFW's determination that the Phase, if implemented as detailed in that Phase Authorization Package, is consistent with this ITP.

6.2.3. Resubmittal of Phase Authorization Package. If CDFW finds that a proposed Phase as described in the Phase Authorization Package would be inconsistent with this ITP, CDFW will provide written notice to Permittee and

explain the actions necessary to address any deficiency. If a Phase Authorization Package is determined to be inconsistent or Permittee withdraws the Phase Authorization Package, then Permittee will have no incidental take authorization for the Phase under this ITP. Permittee may resubmit a Phase Authorization Package that has previously been found to be inconsistent with this ITP after attempting to address in writing any deficiencies identified by CDFW.

6.2.4. Additional Information Required. If CDFW finds that a proposed Phase as described in the Phase Authorization Package does not contain enough information to determine if the Phase is consistent with this ITP, CDFW will respond in writing to Permittee with the additional information that is necessary to determine the Phase Authorization Package is consistent with this ITP. Once the Phase Authorization Package is resubmitted to CDFW, the 60-calendar day timeline will begin as described in Condition of Approval 6.2.1.

6.2.5. Amendment of Phase Authorization Package. Following signature from both Permittee and CDFW, the Phase Authorization Package is automatically incorporated by reference into this ITP. Any amendments or other types of changes to the CDFW-signed Phase Authorization Package, including extensions, will be processed by CDFW in accordance with Section IX of this ITP.

7. General Provisions:

7.1. 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.

7.2. Designated Biologist(s). Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information of the Designated Biologist (Designated Biologist) using the Biologist Resume Form (Attachment 2) or another format containing the same information at least 30 days before starting Covered Activities for each Project Phase. Permittee shall ensure that the Designated Biologist is knowledgeable and experienced in the biology and natural history 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 for each Project Phase and shall also obtain approval in advance, in writing, if the Designated Biologist must be changed. CDFW will provide approval of completed Biologist Resume Form within 30 days of submittal.

7.3. Capture and Handling Designated Biologist(s). Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information of a Biologist (Capture Biologist) at least 30 days before starting Covered Activities for each Project Phase who will be responsible for the capture and handling of the Covered Species. Permittee shall ensure that the Capture Biologist is knowledgeable and experienced in the biology, natural history, capture, and handling of the Covered Species. Permittee shall obtain CDFW approval of the Capture Biologist in writing before starting Covered Activities for each Project Phase and shall also obtain approval in advance in writing if the Capture Biologist must be changed. CDFW will provide approval of the Capture Biologist within 30 days of submittal of all required information identified above.

7.4. Capture Biologist Role. For the purposes of this ITP, the approved Capture Biologist may fulfill any role of the Designated Biologist including monitoring, reporting, or other requirements of this ITP.

7.5. Designated Biologist and Capture Biologist Authority. To ensure compliance with the Conditions of Approval of this ITP, the Designated Biologist or Capture Biologist shall have the authority to immediately stop any activity that does not comply with this ITP and/or order any reasonable measure to avoid the unauthorized take of an individual of the Covered Species. Permittee shall provide unfettered access to the Project Area and otherwise facilitate the Designated Biologist and Capture Biologist in the performance of their duties. If the Designated Biologist and Capture Biologist are unable to comply with the ITP, then the Designated Biologist and Capture Biologist shall notify the CDFW Representative immediately. Permittee shall not enter into any agreement or contract of any kind, including but not limited to non-disclosure agreements and confidentiality agreements, with its contractors and/or the Designated Biologist and Capture Biologist that prohibit or impede open communication with CDFW, including but not limited to providing CDFW staff with the results of any surveys, reports, or studies or notifying CDFW of any non-compliance or take. Failure to notify CDFW of any non-compliance or take or injury of a Covered Species as a result of such agreement or contract may be considered a violation of this ITP and may result in CDFW taking actions to prevent or remedy such violation.

7.6. Education Program. Permittee shall conduct an education program such as a Worker Environmental Awareness Program (WEAP) for all persons employed or otherwise working in a particular Phase Project Area before performing any Covered

Activities in the particular Phase Project Area. 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. The program shall also cover avoidance measures and procedures to be implemented in the case of encounter with the Covered Species as described in this ITP. Permittee shall prepare and distribute wallet-sized cards or a fact sheet handout containing this information for workers to carry in the Project Area. 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 Covered Activities in the Phase Project Area. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees that will be conducting Covered Activities in the Phase Project Area.

7.7. Construction Monitoring Documentation. The Designated Biologist and Capture Biologist shall maintain construction-monitoring documentation on-site in either hard copy or digital format 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 documentation is available for review at the Project Area upon request by CDFW.

7.8. 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, ideally at daily intervals but at least once a week, to avoid attracting opportunistic predators such as ravens, coyotes, and feral dogs.

7.9. 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.

7.10. 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.

7.11. Delineation of Project Boundaries. Before starting Covered Activities in each portion of the Project in active construction that is safely accessible on foot, Permittee shall

clearly delineate the boundaries of the active working sections 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.

7.12. Delineation of Habitat. Before starting Covered Activities in each portion of the Project in active construction, Permittee shall clearly delineate avoidable 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. Permittee shall maintain all fencing, stakes, and flags until the completion of Covered Activities in that area.

7.13. Project Access. Project-related personnel shall access the Project Area using existing routes and routes identified in the Project Description and CDFW-approved Phase Authorization Package and shall not cross Covered Species' habitat outside of or en route to the Project Area. Permittee shall restrict Project-related vehicle traffic to established roads, staging, and parking areas. Permittee shall ensure that vehicle speeds do not exceed 20 miles per hour to avoid Covered Species on or traversing the access roads. If Permittee determines construction of routes for travel is necessary outside of the Project Area, the Designated Representative shall contact CDFW for written approval before carrying out such an activity. CDFW may require an amendment to this ITP, among other reasons, if additional take of Covered Species will occur as a result of the Project modification.

7.14. 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 7.13 of this ITP.

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

7.16. CDFW Access. Permittee shall provide CDFW staff with reasonable access to the Project Area 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.

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

7.18. Artificial Lighting at Night. Permittee shall minimize, to the extent feasible, permanent or temporary, fixed, exterior lighting, including motion-triggered security lighting that casts light on Covered Species habitat beyond the Project Area between sunset and sunrise. Nighttime construction lighting shall be shielded and oriented downward to minimize effects on any nearby Covered Species.

8. Monitoring, Notification and Reporting Provisions:

8.1. Notification Before Commencement. The Designated Representative shall notify CDFW 14 calendar days before starting Covered Activities within each Phase and shall document compliance with all pre-Project Conditions of Approval before starting Covered Activities in each Phase.

8.2. Notification of Non-compliance. The Designated Representative shall immediately notify CDFW if 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 of this ITP. The Designated Representative shall follow up within 24 hours with a written report to CDFW describing, in detail, any non-compliance with this ITP and suggested measures to remedy the situation.

8.3. Compliance Monitoring. The Designated Biologist shall be on-site daily when Covered Activities occur. The Designated Biologist shall conduct compliance inspections a minimum of monthly during periods of inactivity and after clearing, grubbing, and grading are completed. 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 Phase Project Area.

The Designated Representative or Designated Biologist shall prepare daily written observation and inspection records summarizing oversight activities and compliance inspections, observations of Covered Species and their sign, survey results, and monitoring activities required by this ITP.

8.4. Quarterly Compliance Report. The Designated Representative or Designated Biologist shall compile the observation and inspection records identified in Condition of Approval 8.3 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 the CDFW offices listed in the Notices section of this ITP and via e-mail to CDFW's Regional Representative and Headquarters CESA Program. At the time of this ITP's approval, the CDFW Regional Representative is the Region CESA Program (R2CESA@wildlife.ca.gov) and Headquarters CESA Program email is CESA@wildlife.ca.gov. CDFW may at any time increase the timing and number of compliance inspections and reports required under this provision depending upon the results of previous compliance inspections. If CDFW determines the reporting schedule must be changed, CDFW will notify Permittee in writing of the new reporting schedule. Prior to notification, CDFW will meet and confer with the Authority's Designated Representative to discuss this change.

8.5. Annual Status Report. Permittee shall provide CDFW with an Annual Status Report (ASR) no later than January 31 of every year beginning with issuance of this ITP and continuing until CDFW accepts the Final Mitigation Report identified below. Each ASR shall include, at a minimum: (1) a summary of all Quarterly Compliance Reports for that year identified in Condition of Approval 8.4; (2) a general description of the status of the Project Area and Covered Activities, including actual or projected completion dates, if known; (3) a copy of the table in the MMRP with notes showing the current implementation status of each mitigation measure; (4) an assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing and mitigating Project impacts; (5) all available information about Project-related incidental take of the Covered Species; (6) an accounting of the number of acres subject to both temporary and permanent disturbance, both for the prior calendar year, and a total since ITP issuance; and (7) information about other Project impacts on the Covered Species.

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

8.7. Final Phase Mitigation Reports. No later than 90 days after completion of all Covered Activities for each Project Phase and after Covered Activities in all Project

Phases have been completed, Permittee shall provide CDFW with a Final Phase Mitigation Report. The Designated Biologist shall prepare the Final Phase Mitigation Reports which shall include, at a minimum: (1) a summary of all Quarterly Compliance Reports and ASRs prepared during the applicable Project Phase; (2) a copy of the table in the MMRP with notes showing when each of the applicable mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species that occurred during the applicable Project Phase; (4) information about other Project impacts on the Covered Species that occurred during the applicable Project Phase; (5) beginning and ending dates of Covered Activities for that Project Phase; (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 so far; (7) recommendations on how mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future Covered Activities on the Covered Species; and (8) any other pertinent information.

8.8. Final Project Mitigation Report. No later than 90 days after completion of all mitigation measures for the overall Project, Permittee shall provide CDFW with a Final Project Mitigation Report. The Designated Biologist shall prepare the Final Project Mitigation Report which shall include, at a minimum: (1) a summary of all Final Phase Mitigation Reports; (2) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; (3) a summary of Project-related incidental take of the Covered Species; (4) a summary of other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an overall 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.

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

8.10. Seeding. Permittee shall restore all temporarily exposed/disturbed areas, including excavation areas and blast areas, and access points within the Project Area, by seeding with a native seed mix of known genetic origin whose original stock seed was collected from the Great Central Valley or adjacent foothills of the Coast Range, unless otherwise agreed upon with CDFW. Revegetation shall be completed in the fall before the start of the rainy season and as soon as possible after project activities.

9. 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:

Giant Garter Snake (GGS)

9.1. Giant Garter Snake Capture and Relocation Plan. Prior to the start of Covered Activities during each Project Phase, Permittee shall develop and obtain CDFW's written approval of a Phase-specific Giant Garter Snake Capture and Relocation Plan describing how and where GGS will be captured and relocated if it becomes necessary to move them to avoid injury or mortality. All GGS capturing and handling shall be conducted by a Capture Biologist with experience and expertise in handling GGS. The Giant Garter Snake Capture and Relocation Plan shall include the name and qualifications of the Capture Biologist responsible for capturing and handling GGS, the methods that will be used to capture and relocate GGS, and a map showing where GGS will be released. Permittee shall quantify the amount, relative location, and quality of suitable habitat (aquatic and terrestrial) for relocation areas, including invasive and non-native species present, available upland burrows, suitable prey items, and potential barriers for movement. Permittee shall also identify a wildlife rehabilitation or veterinary facility that will be used if any captured GGS are injured. Relocation areas should be within the same watershed as the Project Area.

9.2. Timing of Work. Permittee shall conduct all Covered Activities within suitable GGS aquatic and upland habitat (areas within 200 feet of aquatic habitat) during the GGS active period (May 1 through October 1). Permittee may conduct work between October 2 and October 31, or April 1 and April 30 provided the ambient air temperatures exceed 75 degrees F during work and maximum daily air temperatures have exceeded 75 degrees F for at least three consecutive days immediately preceding work. CDFW may consider requests to work outside of this work window on an activity-by-activity basis. Permittee shall submit these requests in writing for review and approval by CDFW. Requests shall include a justification for the request and any additional information CDFW deems necessary.

9.3. Work Period in Low Rainfall / Dry Weather Only. The work period for Covered Activities within suitable GGS aquatic and upland habitat shall be restricted to periods of low rainfall (less than 1/2-inch per 24-hour period) and periods of dry weather (with less than a 50 percent chance of rain). Permittee shall monitor the National Weather Service 72-hour forecast for the Project Area. No work shall occur during a dry-out period of 24 hours after the above referenced wet weather. Weather forecasts shall be provided to CDFW upon request.

9.3.1. If the Permittee needs more time to complete the project activity, the work may be permitted outside of the work period and extended on a day-to-day basis (or for some other set period of time) by a CDFW representative who reviewed the project, or if unavailable, through contact with the Regional office (see Contact Information). The Permittee shall submit a written request for a work period variance to CDFW. The work period variance request shall: 1) describe the extent of work already completed; 2) detail the activities that will be completed outside the work period; 3) detail the time required to complete each of the activities; and 4) provide photographs of the proposed site for work period variance activities. Work period variances are issued at the discretion of CDFW. CDFW will review the written request to work outside of the established work period. CDFW will have ten (10) calendar days to review the proposed work period variance. CDFW reserves the right to require additional measures to protect GGS as a condition for granting the variance.

9.4. Pre-Construction Survey and Refugia Flagging. No more than 24 hours prior to commencement of Covered Activities within 200 feet of GGS aquatic habitat, the Project Area shall be surveyed for GGS by the Designated Biologist. The Designated Biologist shall survey all upland habitat within 200 feet of GGS aquatic habitat for burrows, soil cracks, and crevices that may be suitable for use by GGS. Any identified burrows, soil cracks, crevices, or other habitat features that are outside of the area planned for direct disturbance (e.g., grading, excavation, etc.) shall be flagged or marked by the Designated Biologist. Permittee shall avoid flagged locations during Covered Activities to the maximum extent feasible. In areas planned for direct disturbance, a Designated Biologist shall be onsite to monitor during ground disturbing activities. If Covered Activities stop for more than 14 calendar days, the Designated Biologist shall repeat surveys for burrows, soil cracks and similar features as described above, prior to resuming the Covered Activity.

9.5. Giant Garter Snake Exclusion Fencing. Prior to the start of any construction ground disturbance, Permittee shall install exclusion fencing around the perimeter of all work areas that include or fall within 200 feet of identified potential GGS aquatic habitat. Vegetation removal or excavation needed to install the exclusion fencing may occur first. The Designated Biologist shall survey the areas to be fenced to ensure that no GGS are present and become trapped within the fenced area. The

bottom edge of the fencing shall be installed at least six inches below the ground surface to prevent snakes from entering the Project Area under the fence. The Designated Biologist shall ensure that the exclusion fencing is maintained and that any necessary repairs are implemented immediately. If exclusion fencing is found to be compromised, construction within the fenced area shall immediately stop and the Designated Biologist shall survey the fenced area for GGS. Any GGS found within the fenced area shall be allowed to leave on their own or captured and relocated following the methods described in the Giant Garter Snake Capture and Relocation Plan described in Condition of Approval 9.1. Pre-construction vegetation removal necessary for the installation of the fencing is not confined to this measure.

9.6. Dewatering Aquatic Habitat. Permittee shall dewater areas of GGS aquatic habitat prior to starting construction or sediment removal in those areas. Once dewatered, Permittee shall allow the area to dry out for 15 consecutive days before starting Covered Activities in the area, unless otherwise agreed upon in writing by CDFW. If groundwater begins to percolate into the dewatered area during the 15-day dry out period, Permittee may place a layer of clean fill material on top of the dewatered area to prevent ponding. The 15-day dry out period will not start over if groundwater percolates into the previously dewatered area. Prior to the placement of any fill, the Designated Biologist shall visually survey the area for GGS. The Designated Biologist shall monitor during fill placement to ensure that no wildlife is buried, injured or trapped by the fill. If a GGS is observed in the area, it shall be captured and relocated following the methods described in a Giant Garter Snake Capture and Relocation Plan described in Condition of Approval 9.1.

9.7. Grading Sediment Spoils. Immediately preceding grading deposited spoil piles, a Designated Biologist shall survey planned work areas for GGS and burrows. Additionally, a Designated Biologist shall monitor all grading of deposited spoil piles as it occurs.

9.8. Open Pits and Trenches. At the end of each workday, Permittee shall place an escape ramp at each end of any open trench/pit to allow any animals that may have become trapped to climb out overnight. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle no greater than 30 degrees. Alternatively, Permittee may cover open pits/trenches and secure the material(s) used to cover the opening to prevent GGS from accessing the hole or trench. The Designated Biologist shall check all excavated open holes and trenches for GGS at the beginning and end of each day, and immediately before the holes and trenches are filled. If a GGS is found, it shall be captured and relocated following the methods described in the Giant Garter Snake Capture and Relocation Plan described in Condition of Approval 9.1.

9.9. Erosion Control Materials. Permittee shall ensure that all fiber rolls and erosion control blankets or netting are made of loose-weave mesh that is not fused at the

intersections of the weave, such as coconut (coir) fiber, or other products without welded weaves. Permittee shall not use products with plastic monofilament or jute netting or any material with cross joints in the netting that are bound/stitched (such as that found in straw wattles/fiber rolls and some erosion control blankets), which may cause entrapment of GGS. Permittee shall cover the edges of erosion control blankets or netting with soil, sandbags, or similar materials to prevent GGS from crawling underneath the material and becoming trapped.

9.10. Revegetation of Temporarily Disturbed Habitat. Permittee shall restore all temporarily impacted GGS upland habitat. Temporarily disturbed habitat identified as suitable by the Designated Biologist will be revegetated using plant plugs, or a similar method, in addition to forb seed mix, as applicable for the existing habitat conditions. Permittee shall develop a revegetation plan for CDFW's review prior to implementation. The plan shall describe the revegetation process and source of plant material and consider the availability of plant material. Permittee shall exclusively use seed and/or plant materials of known genetic origin whose original stock seed was collected from the Great Central Valley, unless otherwise agreed upon in writing with CDFW. Revegetation shall be completed as soon as possible and within one year following construction activities in the area.

9.10.1. In addition to the information described above, the revegetation plan shall include, at a minimum, the following information:

9.10.1.1. A description of the existing physical conditions of the area to be revegetated, including water resources and habitat types;

9.10.1.2. A map showing the location of the site;

9.10.1.3. A plan for the preparation of the site including the removal of invasive plant species (if applicable) and any necessary physical modifications;

9.10.1.4. A locally native plant palette and a planting plan that includes the wetland and/or upland species that will be planted on the site, the quantity of plant materials and/or seed, and the location(s) that will be planted;

9.10.1.5. Monitoring and maintenance measures;

9.10.1.6. A timeline for planting, monitoring, and maintenance;

9.10.1.7. An irrigation plan;

9.10.1.8. Procedures to ensure that invasive plants are not introduced or allowed to sustain at the revegetation site; and

9.10.1.9. Success standards with contingency measures, including a period of monitoring time that is appropriate for the type of plantings/habitat and sufficient to determine the successful establishment of the vegetation.

Swainson's Hawk (SWHA) Measures

9.11. Raptor Nest Inspection. All Project-related tree removal work will be conducted between September 15 and February 1 to avoid impacting nesting individuals of the Covered Species unless consultation occurs, and a request is submitted to and approved in writing by CDFW for tree removal between February 2 and September 14. The Designated Biologist shall inspect any trees marked for removal for evidence of raptor nests. The results of the nest inspection shall be provided to CDFW prior to commencing tree removal activities. If a raptor nest is found, Permittee shall consult with CDFW regarding appropriate action to comply with this ITP. If the nest is one of the three SWHA nests allowed for take by this ITP, Permittee shall notify CDFW in writing at least 24 hours prior to removing the nest.

9.11.1. If all three SWHA nests have been removed and another SWHA nest must be removed, or if take of SWHA nests exceeds three, Permittee shall immediately halt all Covered Activities within a Phase that could result in take and consult with CDFW to demonstrate compliance with CESA. If additional take of SWHA is considered, Covered Activities within a Phase shall not resume until the ITP has been amended and take of additional nests has been fully mitigated.

9.12. SWHA Protocol Survey. In each year in which Project activities occur, the Designated Biologist shall conduct a SWHA survey within a minimum 0.5-mile radius around the Phase Project Area. The Designated Biologist shall conduct the appropriate technique in each of the five periods below in accordance with the methodology described in the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Tech. Advis. Comm., 5/2000):

January to March 20- One Survey, All Day

March 20 to April 5- Three Surveys, Sunrise to 10:00 / 16:00 to Sunset

April 5 to April 20- Three Surveys, Sunrise to 12:00 / 16:30 to Sunset

April 21 to June 10- Monitoring

June 10 to July 30- Three Surveys, Sunrise to 12:00 / 16:00 to Sunset

Results of each period survey shall be submitted to CDFW with the appropriate quarterly compliance report. Permittee shall map all existing or potential nesting or foraging sites and provide these maps to CDFW. Nesting sites, including both currently occupied nesting sites and sites known to have been occupied within the last five years, shall be noted on plans that are submitted as a part of a Phase Authorization Form.

9.13. Nesting SWHA. If a nesting SWHA is found at or within 0.5 miles of Project Activities within the Phase Project Area, the Designated Biologist shall be present to monitor the behavior of the potentially affected SWHA. The Designated Biologist, shall have the authority to order the cessation of any or all Covered Activities if the bird(s) exhibits distress and/or abnormal nesting behavior (swooping/stooping, excessive vocalization (e.g., distress calls), agitation, failure to remain on nest, failure to deliver prey items for an extended time period, failure to maintain nest, etc.) which may cause reproductive failure (nest abandonment and loss of eggs and/or young). Permittee shall not resume any ceased Covered Activities within 0.5 miles of the nest until the appropriate response procedure described in Condition of Approval 9.14 has been implemented. If no occupied SWHA nests initially occur at or within 0.5 mile of the Phase Project Area, any discovery of nests shall trigger the monitoring and records required under this Condition of Approval.

9.14. SWHA Mortality Reduction and Relocation Plan. The Designated Biologist shall prepare a SWHA Mortality Reduction and Relocation Plan (SWHA Plan) and submit it to CDFW for review and written approval prior to commencing Covered Activities in the nesting season. The Plan shall describe mortality reduction strategies and buffer sizes that Permittee will implement and shall describe the response procedure for each of the following scenarios, and shall be specific to the Phase Project:

Scenario 1: Mortality or injury of adult SWHA prior to egg-laying

Scenario 2: Mortality or injury of adult SWHA during egg-laying

Scenario 3: Mortality or injury of adult SWHA after egg-laying

Scenario 4: Abandonment of SWHA nest prior to egg-laying

Scenario 5: Abandonment of SWHA nest during egg-laying

Scenario 6: Abandonment of SWHA nest after egg-laying

Scenario 7: Abandonment of SWHA nest after egg-hatching

Scenario 8: Damage or destruction of nest tree with eggs or juvenile SWHA

Scenario 9: Mortality or injury of juvenile SWHA

The Plan shall include, but not be limited to, identification of capture methods, handling methods, methods to returning SWHA individuals back into the wild, and the identification of a wildlife rehabilitation center or veterinary facility with appropriate expertise handling SWHA. Only the Capture Biologist shall handle and relocate eggs, hatchlings, or injured SWHA. If the Capture Biologist conducts actions under this SWHA Plan, notification to CDFW shall be made immediately via email, followed by a written incident report within two days. Each notification shall include the date, time, location and circumstances of the incident, and the name of the facility where the animal was taken. Permittee shall be responsible for any costs associated with the capture and transportation of SWHA to the wildlife rehabilitation center or veterinary facility.

9.15. Employee Break and Rest Areas. In consultation with the Designated Biologist, Permittee shall not designate any employee break, rest, or meeting areas within 600 feet of active SWHA nests Permittee shall stage stationary, not in-use equipment outside of sight lines for the SWHA nest.

9.16. High Impact Covered Activities. To the maximum extent feasible, Permittee shall coordinate with the Designated Biologist and/or CDFW prior to the submission of a Phase Authorization Form in order to schedule the loudest or otherwise most disruptive Covered Activities outside periods where the SWHA, its nest, its eggs, or its young are most vulnerable to disturbance.

9.17. Rodenticide Use. Permittee shall prohibit the use of rodenticides in the Phase Project Area during Covered Activities.

9.18. Revegetation of Temporarily Disturbed Habitat. Permittee shall restore all temporarily impacted SWHA foraging habitat. Temporarily disturbed habitat identified as suitable by the Designated Biologist will be revegetated using plant plugs, seed mix, or similar methods, as applicable for the existing habitat conditions. Permittee shall develop and submit a revegetation plan for CDFW's review and approval at least 90 days prior to implementation. The plan shall describe the revegetation process and source of plant material and consider the availability of plant material. Permittee shall exclusively use seed and/or plant materials of known genetic origin whose original stock seed was collected from the Great Central Valley, unless otherwise agreed upon in writing with CDFW. Revegetation shall be completed as soon as possible and within one year following construction activities in the area.

9.18.1. In addition to the information described above, the revegetation plan shall include, at a minimum, the following information:

9.18.1.1. A description of the existing physical conditions of the area to be revegetated, including water resources and habitat types;

9.18.1.2. A map showing the location of the site;

9.18.1.3. A plan for the preparation of the site including the removal of invasive plant species (if applicable) and any necessary physical modifications;

9.18.1.4. A locally native plant palette;

9.18.1.5. A planting plan that includes the plant species that will be planted on the site, the quantity of plant materials and/or seed, and the location(s) that will be planted;

9.18.1.6. Monitoring and maintenance measures;

9.18.1.7. A timeline for planting, monitoring, and maintenance;

9.18.1.8. An irrigation plan, as appropriate;

9.18.1.9. Procedures to ensure that invasive plants are not introduced or allowed to sustain at the revegetation site; and

9.18.1.10. Success standards with contingency measures, including a period of monitoring time that is appropriate for the type of plantings/habitat and sufficient to determine the successful establishment of the vegetation.

Tricolored Blackbird (TRBL)

9.19. Preconstruction Assessment. Prior to the commencement of Covered Activities for a Project Phase, a Designated Biologist will conduct a field investigation to determine if existing or potential nesting or foraging sites are present within the Phase Project Area and adjacent areas within three miles of the Phase Project Area. The preconstruction assessment shall be completed during the breeding season (March 1 through September 15) prior to implementation of a Phase. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Permittee shall map all existing or potential nesting or foraging sites and provide these maps to CDFW as a part of a Phase Authorization Form. Nesting sites, including both currently occupied nesting sites and sites known to have been occupied within the last five years, shall be noted on plans that are submitted as a part of a Phase Authorization Form.

9.20. Preconstruction Surveys. Permittee shall conduct a pre-construction survey to determine if active nests are present within a Phase Project Area or within 500 feet

of a Phase Project Area if existing or potential nest sites were found during surveys and Covered Activities will occur during the breeding season (March 1 through September 15). The Designated Biologist shall conduct pre-construction surveys within approximately 30 days of the commencement of Covered Activities and again within 3 days of ground-disturbing Covered Activities within the proposed Phase Project Area and 500 feet of the Phase Project Are to determine the presence of nesting TRBL. The surveys should be separated by at least three weeks. Pre-construction surveys shall be conducted during the breeding season (March 1 through September 15). Surveys conducted in February (to meet pre-construction survey requirements for work starting in March) shall be conducted within 14 days of the commencement of Covered Activities again within 3 days of ground-disturbing Covered Activities. If a nest is present, Permittee shall implement Condition of Approval 9.21 and 9.22.

9.21. Nest Buffer. If active nests are found within the Phase Project Area or within 500 feet of any Covered Activities, Permittee shall establish a 500-foot temporary buffer around the active nest until the young have fledged. The Designated Biologist could modify the nest buffer with written approval from CDFW.

9.22. Nest Buffer Monitoring. If nesting TRBL are present within the Phase Project Area or within 500 feet of any Project-related Covered Activity, the Designated Biologist shall monitor the colony throughout the nesting season to determine when the young have fledged. The Designated Biologist will be on site daily while construction-related activities are taking place near the disturbance buffer. Work within the nest disturbance buffer will not be permitted. If the Designated Biologist determines that TRBL are exhibiting agitated behavior, construction will cease until the buffer size is increased to a distance necessary to result in no harm or harassment to the TRBL. If the Designated Biologist determines that the colonies are at risk, the actions identified in the TRBL Mortality Reduction and Relocation Plan shall be implemented and CDFW shall be notified. The Designated Biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a tricolored blackbird flies into an active construction zone (i.e., outside the buffer zone), as part of the education program described in Condition of Approval 7.6.

9.23. TRBL Mortality Reduction and Relocation Plan. The Designated Biologist shall prepare a TRBL Mortality Reduction and Relocation Plan (TRBL Plan) and submit it to CDFW for review and written approval prior to commencing Covered Activities in the nesting season. The TRBL Plan shall describe mortality reduction strategies and buffer sizes that Permittee will implement and shall describe the response procedure for each of the following scenarios, and shall be specific to the Phase Project:

Scenario 1: Mortality or injury of adult TRBL

Scenario 2: Mortality or injury of juvenile TRBL

Scenario 3: Abandonment of TRBL colony

Scenario 4: Damage or destruction of TRBL colony

9.23.1. The TRBL Plan shall include, but not be limited to, identification of capture methods, handling methods, methods to returning TRBL individuals back into the wild, and the identification of a wildlife rehabilitation center or veterinary facility with appropriate expertise handling TRBL. Only the Capture Biologist shall handle and relocate TRBL. If the Capture Biologist handles or relocates TRBL under, notification to CDFW shall be made immediately via telephone or email, followed by a written incident report within two days. Each notification shall include the date, time, location and circumstances of the incident, and the name of the facility where the animal was taken. Permittee shall be responsible for any costs associated with the capture and transportation of TRBL to the wildlife rehabilitation center or veterinary facility.

9.23.2. The Capture Biologist shall not approach a TRBL colony to retrieve an injured individual TRBL if doing so would risk disturbing the colony to the extent that healthy nests may be abandoned.

9.24. High Impact Covered Activities. To the maximum extent feasible, Permittee shall coordinate with the Designated Biologist and/or CDFW to time the loudest or otherwise most disruptive Covered Activities outside periods where the TRBL, their nests/colony, their eggs, or their young are most vulnerable to disturbance.

9.25. Timing of Pesticide Use. Unless otherwise approved by CDFW in writing, pesticides (including herbicides) shall not be applied from January 1 through July 15 in the Project Area within three miles of a TRBL colony.

9.26. Revegetation of Temporarily Disturbed Habitat. Permittee shall restore all temporarily impacted TRBL foraging habitat. Temporarily disturbed habitat identified as suitable by the Designated Biologist will be revegetated using plant plugs, seed mix, or similar methods, as applicable for the existing habitat conditions. Permittee shall develop and submit a revegetation plan for CDFW's review and approval at least 90 days prior to implementation. The plan shall describe the revegetation process and source of plant material and consider the availability of plant material. Permittee shall exclusively use seed and/or plant materials of known genetic origin whose original stock seed was collected from the Great Central Valley, unless otherwise agreed upon in writing with CDFW. Revegetation shall be completed as soon as possible and within one year following construction activities in the area.

9.26.1. In addition to the information described above, the revegetation plan shall include, at a minimum, the following information:

9.26.1.1. A description of the existing physical conditions of the area to be revegetated, including water resources and habitat types;

9.26.1.2. A map showing the location of the site;

9.26.1.3. A plan for the preparation of the site including the removal of invasive plant species (if applicable) and any necessary physical modifications;

9.26.1.4. A locally native plant palette;

9.26.1.5. A planting plan that includes the plant species that will be planted on the site, the quantity of plant materials and/or seed, and the location(s) that will be planted;

9.26.1.6. Monitoring and maintenance measures;

9.26.1.7. A timeline for planting, monitoring, and maintenance;

9.26.1.8. An irrigation plan;

9.26.1.9. Procedures to ensure that invasive plants are not introduced or allowed to sustain at the revegetation site; and

9.26.1.10. Success standards with contingency measures, including a period of monitoring time that is appropriate for the type of plantings/habitat and sufficient to determine the successful establishment of the vegetation.

Crotch's Bumble Bee (CBB)

9.27. Seasonal Restriction. If feasible, native or non-native flowering vegetation removal shall occur prior to bloom and before the active season for CBB (approximately March 1 through October 31). If Covered Activities cannot be avoided during this time and vegetation needs to be removed during the bloom period for those species, Permittee shall remove flowering vegetation in a patched manner leaving areas of floral resources as refugia for foraging CBB or wait until bloom has ceased. During the bloom period and active season for CBB, removal of non-native plants should be prioritized over native plants.

Permittee shall avoid conducting Covered Activities within a Phase involving vegetation and ground disturbance in CBB habitat during the Queen/Gyne Flight Season, when queens emerge in the spring searching for nest sites and during the

fall flight period when gynes mate and search for overwintering habitat. These time periods shift each year due to climatic conditions (drought, temperature, and precipitation). To determine these time periods each year, the Designated Biologist shall be onsite and conduct CBB Protocol Surveys as described in Condition of Approval 9.29.

9.28. Vegetation Management. Disturbance or removal of vegetation shall be kept to the minimum necessary to complete Covered Activities within a Phase. Vegetation marked for protection may only be trimmed with hand tools to the extent necessary to gain access to work sites. Permittee shall set mower blade heights no lower than 4 inches, unless otherwise approved by CDFW in writing. Permittee shall ensure that pesticide use only occurs when CBB are dormant or when flowers are no longer in bloom.

9.29. CBB Protocol Survey. If Covered Activities are proposed to occur during the active season for CBB, Permittee shall develop a Pre-Construction Survey Plan for CBB and submit it to CDFW for acceptance with the Phase Authorization Package, developed in coordination with CDFW (see https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213150&inline). A total of three surveys shall be conducted prior to any ground-disturbing Project activities or vegetation removal that will take place during the active season for CBB (March 1 through October 31), or until all flowering vegetation is largely desiccated, to determine if any active nests are within the Phase Project Area. Each survey shall be spaced two to four weeks apart, unless otherwise authorized in writing by CDFW, with the last survey taking place within 72 hours prior to construction activity. The Designated Biologist shall perform meandering transects through the planned construction footprint, plus a 50-foot buffer where accessible, between 9:00 am and 1:00 pm where feasible and at least one hour after sunrise and at least two hours before sunset, to visually survey the area for CBB activity. The duration of the survey will be the minimum amount of time necessary to adequately survey the area, typically at least one hour of surveying per three acres of potential habitat, excluding capture, chilling, photo, identification, and release time. For each sampling event, the Designated Biologist shall survey suitable habitat using non-lethal photo voucher and netting methods, developed in coordination with CDFW (see https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213150&inline). If a suspected or confirmed CBB is identified during any of these surveys, the Designated Biologist shall notify CDFW within 48 hours.

9.29.1. If only foraging CBB is observed (i.e., no nest is found), construction activities may proceed without the additional monitoring requirements described below in Condition of Approval 9.29.2; however, if there is a lapse

in initial construction disturbance greater than two weeks, an additional clearance survey will be repeated prior to ground disturbance. If a CBB nest is found, one or more Designated Biologist will provide biological construction monitoring as long as needed to implement applicable measures below.

9.29.2. If CBB nests are discovered in Project work areas, then Permittee will implement the following measures to minimize impacts on the nest.

9.29.2.1. If a nest is discovered within the construction or restoration area and avoidance is feasible, a non-disturbance buffer of 50 feet will be established around the nest until the nest senesces or becomes inactive and is no longer in use, as determined by the Designated Biologist or until Covered Activities in the Phase Project Area are complete, whichever is first. The buffer shall be delineated using high-visibility fencing, flagging, or similar materials along with appropriate signage. The nest location will be recorded with global positioning system (GPS) and will be reported to CDFW within 48 hours of finding the nest. CDFW may, in extraordinary circumstances, approve in writing a smaller buffer with additional avoidance measures.

9.30. Lighting Minimization. If feasible, Covered Activities will be restricted to daytime hours. If nighttime construction is needed within 500 feet of CBB habitat, Permittee shall implement ensure that all construction-related lighting shall not have significant illumination pass beyond the immediate work area. Shielding techniques may include, but should not be limited to, the use of fence slats, netting, mesh, or tarps; and all construction lighting used shall be yellow or orange lighting.

9.31. Revegetation of Temporarily Disturbed Habitat. Permittee shall restore all temporarily impacted CBB foraging habitat. Temporarily disturbed habitat identified as suitable by the Designated Biologist will be revegetated using plant plugs, or a similar method, in addition to forb seed mix, as applicable for the existing habitat conditions. Permittee shall develop and submit a revegetation plan for CDFW's review and approval at least 90 days prior to implementation. The plan shall describe the revegetation process and source of plant material, consider the availability of plant material, and thoroughly consider the habitat management needs of CBB colonies such as access to high-quality flowering resources (e.g., insecticide-free plants that provide both pollen and nectar) throughout the entire time the colony is active. Permittee shall exclusively use seed and/or plant materials of known genetic origin whose original stock seed was collected from the Great Central Valley, unless otherwise agreed upon in writing with CDFW. Revegetation shall be completed as soon as possible and within one year following construction activities in the area.

9.31.1.1. In addition to the information described above, the revegetation plan shall include, at a minimum, the following information:

9.31.1.2. A description of the existing physical conditions of the area to be revegetated, including water resources and habitat types;

9.31.1.3. A map showing the location of the site;

9.31.1.4. A plan for the preparation of the site including the removal of invasive plant species (if applicable) and any necessary physical modifications;

9.31.1.5. A locally native plant palette;

9.31.1.6. A planting plan that includes the wetland and/or upland species that will be planted on the site, the quantity of plant materials and/or seed, and the location(s) that will be planted;

9.31.1.7. Monitoring and maintenance measures;

9.31.1.8. A timeline for planting, monitoring, and maintenance;

9.31.1.9. An irrigation plan,

9.31.1.10. Procedures to ensure that invasive plants are not introduced or allowed to sustain at the revegetation site; and

9.31.1.11. Success standards with contingency measures, including a period of monitoring time that is appropriate for the type of plantings/habitat and sufficient to determine the successful establishment of the vegetation.

10. Habitat Management Land Acquisition and Restoration: As described in Section VI above, the Project will result in the permanent loss of up to three SWHA nest trees, 13,291 acres of SWHA foraging habitat, 0.5 acre of occupied TRBL habitat, 4,155 acres of TRBL foraging habitat, 20 acres of GGS habitat, and 13,868 acres of CBB habitat[8]. Additionally, take of the Covered Species as defined by Fish and Game Code (Fish & G. Code, § 86) is expected. 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 from 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

[8] The total acreage of Covered Species habitat is expected to be lower than the estimates provided in this ITP due to the use of habitat models designed to include all potentially suitable habitat and because habitat types for different Covered Species overlap in many areas. The exact impact amounts for each Phase of the Project will be determined prior to the start of the Phase in accordance with submission of a Phase Authorization Form (Condition of Approval 6).

which the Covered Activities will impact the habitat, and CDFW's estimate of the protected acreage required to provide for adequate compensation.

Permittee shall compensate for Project impacts on a phase-by-phase basis using the following formulas:

For each SWHA nest tree removed, Permittee shall provide one nest tree credit from a CDFW-approved mitigation or conservation bank or shall provide the equivalent in Habitat Management (HM) lands,

For each acre of SWHA foraging habitat that is within ten miles of a SWHA nest tree[9], Permittee shall purchase one credit for SWHA foraging habitat from a CDFW-approved mitigation or conservation bank or shall provide the equivalent in HM lands.

For each acre of TRBL foraging habitat that is within three miles of a TRBL colony[10], Permittee shall purchase one credit for TRBL foraging habitat from a CDFW-approved mitigation or conservation bank or shall provide the equivalent in HM lands.

For each 0.5 acre of TRBL nesting habitat, Permittee shall purchase 1.5 credits for TRBL colony habitat from a CDFW-approved mitigation or conservation bank or shall provide the equivalent in HM lands.

For each acre of aquatic GGS habitat, Permittee shall purchase three aquatic credits for GGS habitat from a CDFW-approved mitigation or conservation bank or shall provide the equivalent in HM lands.

For each acre of upland GGS habitat, Permittee shall purchase three upland credits for GGS habitat from a CDFW-approved mitigation or conservation bank or shall provide the equivalent in HM lands.

For each acre of CBB habitat, Permittee shall purchase one credit for CBB habitat from a CDFW-approved mitigation or conservation bank or shall provide the equivalent in HM lands.

To meet this requirement, Permittee shall purchase Covered Species credits from a CDFW-approved mitigation or conservation bank pursuant to Condition of Approval 10.2 below and/or provide for both the permanent protection and management of HM lands pursuant to Condition of Approval 10.3 below and the calculation and deposit of the management funds pursuant to Condition of Approval 10.4 below.

As described in Condition of Approval 6.6.1 above, Permittee shall calculate the total impacts on Covered Species habitat and the corresponding amount of compensatory

[9] SWHA nest trees include all nest trees that currently support an active SWHA nest or are known to have supported an active SWHA nest within five years prior to impact.
[10] TRBL colonies include all currently active TRBL colonies and all areas of TRBL nesting habitat that are known to have supported an active TRBL nest within five years prior to impact.

mitigation required prior to beginning each Phase of the Project. Purchase of Covered Species credits and/or permanent protection and funding for perpetual management of HM lands for each specific Phase must be complete before starting that Phase's Covered Activities, or within 18 months of CDFW's signature of the Phase Authorization Form if security is provided pursuant to Condition of Approval 11 below for all uncompleted obligations. Permittee shall also restore on-site all temporarily impacted Covered Species habitat pursuant to Conditions of Approval 9.10, 9.18, 9.26, and 9.31 above.

10.1. Cost Estimates. For the purposes of determining the security amount for each Project Phase, Permittee shall provide the cost sufficient for CDFW or its contractors to complete acquisition, protection, and perpetual management of the HM lands as follows:

10.1.1. Land acquisition costs for HM lands identified in Condition of Approval 10.3 below. Land acquisitions costs shall be estimated using local fair market current value per acre for lands with habitat values meeting mitigation requirements;

10.1.2. All other costs necessary to review and acquire the land in fee title and record a conservation easement as described in Condition of Approval 10.3.1 and 10.3.2 below;

10.1.3. Start-up costs for HM lands, including initial site protection and enhancement costs as described in Condition of Approval 10.3.6 below.

10.1.4. Interim management period funding as described in Condition of Approval 10.3.7 below;

10.1.5. Long-term management and monitoring funding as described in Condition of Approval 10.4 below. Permittee shall estimate long-term management funding for the purpose of providing security to ensure implementation of HM lands management.

10.1.6. 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 a CDFW-authorized government entity, special district, non-profit organization, for-profit entity, person, or other entity as described in Conditions of Approval 10.3 and 10.5.

10.1.7. Restoration of on-site temporary effects to Covered Species habitat as described in Conditions of Approval 9.10, 9.18, 9.26, and 9.31.

10.2. Covered Species Credits. If Permittee elects to purchase Covered Species credits to complete compensatory mitigation obligations for any Project Phase, then

Permittee shall purchase the appropriate number of Covered Species credits from a CDFW-approved mitigation or conservation bank prior to initiating Covered Activities for that Project Phase, or no later than 18 months from CDFW's signature of the Phase Authorization Form if security is provided pursuant to Condition of Approval 11 below. Prior to purchase of Covered Species credits, Permittee shall obtain CDFW approval to ensure the mitigation or conservation bank is appropriate to compensate for the impacts of the Project Phase. Permittee shall submit to CDFW a copy of the Bill of Sale(s) and Payment Receipt prior to initiating Covered Activities for that Project Phase or within 18 months from CDFW's signature of the Phase Authorization Form if security is provided.

10.3. Habitat Management Lands Acquisition and Protection. If Permittee elects to provide for the acquisition, permanent protection, and perpetual management of HM lands to complete compensatory mitigation obligations, then Permittee shall:

10.3.1. Fee Title. Transfer fee title of the HM lands to a CDFW-approved entity pursuant to terms approved in writing by CDFW. CDFW, in its sole discretion, will authorize a governmental entity, special district, non-profit organization, for-profit entity, person, or another entity to hold title to and manage the property, and will ensure that the district, organization, entity, or person meets the requirements of Government Code sections 65965-65968, as amended.

10.3.2. Conservation Easement. A conservation easement shall be placed on the HM lands and either CDFW shall act as grantee for a conservation easement over the HM lands or CDFW, in its sole discretion, shall 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 elects not to be named as the grantee for the conservation easement, CDFW shall be expressly named in the conservation easement as a third-party beneficiary. 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 Civil Code sections 815-816, as amended, and Government Code sections 65965-65968, as amended and includes provisions expressly addressing Government Code sections 65966(j) and 65967(e). Because the "doctrine of merger" could invalidate the conservation interest, under no circumstances can the fee title owner of the HM lands serve as grantee for the conservation easement.

10.3.3. HM Lands Approval. Obtain CDFW written approval of the HM lands before acquisition and/or transfer of the land and/or recordation of the conservation easement. To obtain approval, Permittee shall submit, at least

six months before acquisition and/or transfer of the HM lands and/or recordation of the conservation easement, documentation described in Condition of Approval 10.3.4 identifying the land to be purchased or property interest conveyed to an approved entity as mitigation for the Project's impacts on Covered Species.

10.3.4. HM Lands Documentation. Provide a recent preliminary title report, Phase I Environmental Site Assessment, land surveyor maps and products, and other necessary documents in CDFW's Permittee Checklist of Documents for Habitat Management Land Property Review and Protection. 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.

10.3.5. 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. The grantee for the conservation easement cannot serve as the interim or long-term manager without the express written authorization of CDFW in its sole discretion.

10.3.6. 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 (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.

10.3.7. Interim Management (Initial and Capital). Provide for the interim management of the HM lands. 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, vegetation and invasive species management, and any other expected management activities.

Permittee shall either (1) provide 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 or (2) establish an escrow account with written instructions approved in advance in writing by CDFW to pay the land manager annually in advance.

10.4. Endowment Fund. If Permittee elects to provide for the acquisition, permanent protection, and perpetual management of HM lands to complete compensatory mitigation obligations, then 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 is permanently restricted to paying the costs of long-term management and stewardship of the mitigation property for which the funds were set aside, which costs include the perpetual management, maintenance, monitoring, and other activities on the HM lands consistent with this ITP, the conservation easement, and the management plan required by Condition of Approval 10.3. 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.

10.4.1. 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)(3) and, if so, shall provide Permittee with a written explanation of the reasons for its determination.

10.4.2. Calculate the Endowment Funds Deposits. After obtaining CDFW written approval of the HM lands, long-term management plan, and Endowment Manager, Permittee shall prepare two endowment assessments (equivalent to a Property Analysis Record (PAR)). One endowment assessment is to calculate the amount of funding necessary to ensure the long-term management of the HM lands (Endowment Deposit Amount). A second endowment assessment is calculated for the amount of funding necessary for the conservation easement holder to perform its monitoring and reporting duties. Permittee shall submit to CDFW for review and approval the results of the endowment assessments before transferring funds to the Endowment Manager.

10.4.2.1. Capitalization Rate and Fees. Permittee shall obtain the capitalization rate from the selected Endowment Manager for use in calculating the endowment assessment and adjust for any additional administrative, periodic, or annual fees.

10.4.2.2. Endowment Buffers/Assumptions. Permittee shall include in the endowment assessment assumptions the following buffers for endowment establishment and use that will substantially ensure long-term viability and security of the Endowment:

10.4.2.2.1. 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.

10.4.2.2.2. Three Years Delayed Spending. The endowment shall be established assuming spending will not occur for the first three years after full funding.

10.4.2.2.3. 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.

10.4.3. 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.

10.4.4. Management of the Endowment. 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.

Notwithstanding Probate Code sections 18501-18510, the Endowment Manager shall not make any disbursement from the Endowment that will result in expenditure of any portion of the principal of the endowment without the prior written approval of CDFW in its sole discretion. Permittee shall ensure that this requirement is included in any agreement of any kind governing the holding, investment, management, and/or disbursement of the Endowment funds.

Notwithstanding Probate Code sections 18501-18510, if CDFW determines in its sole discretion that an expenditure needs to be made from the Endowment to preserve the conservation values of the HM lands, the Endowment Manager shall process that expenditure in accordance with directions from CDFW. The Endowment Manager shall not be liable for any shortfall in the Endowment resulting from CDFW's decision to make such an expenditure.

10.5. Reimburse CDFW. Permittee shall reimburse CDFW for all reasonable costs incurred by CDFW related to issuance and monitoring of this ITP, including, but not limited to transaction fees, account set-up fees, administrative fees, title and documentation review and related title transactions, costs incurred from other state agency reviews, and overhead related to transfer of HM lands to a CDFW authorized entity as described above.

11. Security: Permittee may proceed with Covered Activities for a specific Phase only after Permittee has ensured funding (Security) to complete any activity required for that Phase by Condition of Approval 10 that has not been completed before Covered Activities begin. Permittee shall provide Security as follows:

11.1. Security Amount. The Security for each Phase shall be calculated prior to approval of that Phase based on the instructions provided in the Phase Authorization Form (Attachment 5). The amount shall be determined by CDFW based on the cost estimates provided with the Phase Authorization Form, sufficient for CDFW or its contractors to complete land acquisition, property enhancement, startup costs, initial management, long-term management, and monitoring.

11.2. Security Form. The Security shall be in the form of an irrevocable letter of credit (see Attachment 3) or another form of Security approved in advance in writing by CDFW's Office of the General Counsel.

11.3. Security Timeline. The Security for a specific Phase shall be provided to CDFW before Covered Activities for that Phase begin or within 30 days of receiving a signed Phase Authorization Form, whichever occurs first.

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

11.5. Security Transmittal. Permittee shall transmit the Security to CDFW with a completed Mitigation Payment Transmittal Form (see Attachment 4) or by way of an approved instrument such as an escrow agreement, irrevocable letter of credit, or other.

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

11.7. Security Release. The Security (or any portion of the Security then remaining) shall be released to Permittee after CDFW has conducted an on-site inspection and received confirmation that all secured requirements have been satisfied, as evidenced by:

- Copy of Bill of Sale(s) and Payment Receipt(s) or Credit Transfer Agreement for the purchase of Covered Species credits (if applicable);
- 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 for a specific Phase is provided, Permittee must complete the required acquisition, protection and transfer of all HM lands and record any required conservation easements required for that Phase no later than 18 months from CDFW's signature of the Phase Authorization Form. CDFW may require 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 Permittee does not complete these requirements within the specified timeframe.

IX. 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 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.

X. Stop-Work Order:
If CDFW determines Permittee has violated any term or condition of this ITP or has engaged in unlawful take, CDFW may issue Permittee a written stop-work order instructing Permittee to suspend any Covered Activity for an initial period of up to 30 days or risk suspension or revocation of this ITP. CDFW can issue a stop-work order 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, regardless of whether that species is a Covered Species under this ITP. 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 30 additional days.

If Permittee fails to remedy the violation or to comply with a stop-work order, CDFW may proceed with suspension and revocation of this ITP. 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.

XI. Liability:
All terms and conditions of this ITP shall be binding upon each Permittee. Notwithstanding California Civil Code section 1431 or any other provision of law, each Permittee shall be jointly and severally liable for performance of all terms, conditions, and obligations of this ITP and shall be jointly and severally liable for any unauthorized take or other violations of this ITP, whether committed by Permittees or any person acting on behalf of one or more Permittees, including their officers, employees, representatives, agents or contractors and subcontractors. Any failure by one or more Permittees to comply with any term, condition, or obligation herein shall be deemed a failure to comply by all Permittees.

XII. Compliance with Other Laws:
This ITP sets forth CDFW's requirements for 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.

XIII. Notices:
Written notices, reports and other communications relating to this ITP shall be delivered to

CDFW by email or registered first class mail at the following address, or at addresses CDFW may subsequently provide Permittee. Notices, reports, and other communications shall reference the Project name, Permittee, and ITP Number (2081-2022-006-02) in a cover letter and on any other associated documents. Email submittal is preferred.

Original cover with attachment(s) to:

Morgan Kilgour, Regional Manager
California Department of Fish and Wildlife
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670
Telephone: (916) 358-2930
R2CESA@wildlife.ca.gov

and a copy to:

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:

Region 2 CESA Program
California Department of Fish and Wildlife
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670
Telephone: (916) 358-2900
R2CESA@wildlife.ca.gov

XIV. Compliance with the California Environmental Quality Act:
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, Sites Project Authority. (See generally Pub. Resources Code, §§ 21067, 21069.) The lead agency's prior environmental review of the Project is set forth in the Sites Reservoir EIR, (SCH No.: 2001112009) dated November 2023 that the Sites Project Authority certified for Sites Reservoir on November 17, 2023.

This ITP, along with CDFW's related CEQA findings, which are available as a separate document, provide evidence of CDFW's consideration of the lead agency's 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 mitigation measures identified in the lead agency's findings, 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.

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

CDFW finds based on substantial evidence in the ITP application, Sites Reservoir Project EIR, 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 compensatory habitat, in the ratios described in Condition of Approval 10 and with the exact quantity of which will be calculated on a phase-by-phase basis, up to the maximum impacts contemplated in this ITP, with such 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 Permittee as necessary to avoid jeopardy and as required by law.

XVI. Attachments:

FIGURE 1	Map of Project
FIGURE 2	SWHA Impact Area
FIGURE 3	TRBL Impact Area
FIGURE 4	GGS Impact Area
FIGURE 5	CBB Impact Area
ATTACHMENT 1	Mitigation Monitoring and Reporting Program
ATTACHMENT 2	Biologist Resume Form
ATTACHMENT 3	Letter of Credit Form
ATTACHMENT 4	Mitigation Payment Transmittal Form
ATTACHMENT 5	Phase Authorization Form

ISSUED BY THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE ON 10/22/2024

DocuSigned by:
Morgan Kilgour
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Morgan Kilgour, Regional Manager
North Central Region