



State of California – Natural Resources Agency  
DEPARTMENT OF FISH AND WILDLIFE  
Bay Delta Region  
2825 Cordelia Road, Suite 100  
Fairfield, CA 94534  
(707) 428-2002  
[www.wildlife.ca.gov](http://www.wildlife.ca.gov)

**GAVIN NEWSOM, Governor**  
**CHARLTON H. BONHAM, Director**



July 6, 2022

Jon Wilcox  
Pacific Gas and Electric Company  
77 Beale Street (B28P)  
San Francisco, CA 94015  
[J7WK@pge.com](mailto:J7WK@pge.com)

Subject: Incidental Take Permit 2081-2015-031-03 for the PG&E Bay Area Operations and Maintenance Project

Dear Mr. Wilcox:

Enclosed you will find an electronic copy of the Incidental Take Permit for the above referenced Project, which has been digitally signed by the California Department of Fish and Wildlife (CDFW). Please read the permit carefully and sign the acknowledgement on the permit **no later than 30 days from CDFW signature** and prior to initiation of ground-disturbing activities. You may return an electronic copy of the permit with digital signature to [CESA@wildlife.ca.gov](mailto:CESA@wildlife.ca.gov). Digital signatures shall comply with Government Code section 16.5. Alternatively, you may return a hard copy of the permit via mail to:

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

You are advised to keep the permit in a secure location and distribute copies to appropriate project staff responsible for ensuring compliance with the conditions of approval of the permit. Note that you are required to comply with certain conditions of approval prior to initiation of ground-disturbing activities. Additionally, a copy of the permit must be maintained at the project work site and made available for inspection by CDFW staff when requested.

The permit will not take effect until the signed acknowledgement is received by CDFW. If you wish to discuss these instructions or have questions regarding the permit, please contact Mr. Craig Weightman, Environmental Program Manager, at [Craig.Weightman@wildlife.ca.gov](mailto:Craig.Weightman@wildlife.ca.gov).

Sincerely,

DocuSigned by:

*Erin Chappell*

B77E9A6211EF486  
Erin Chappell

Regional Manager  
Bay Delta Region

*Conserving California's Wildlife Since 1870*



**California Department of Fish and Wildlife**  
**Bay Delta Region**  
**2825 Cordelia Road, Suite 100**  
**Fairfield, CA 94534**

California Endangered Species Act  
 Incidental Take Permit No. 2081-2015-031-03

**PG&E BAY AREA OPERATIONS AND MAINTENANCE 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. CESA prohibits the take<sup>1</sup> of any species of wildlife designated by the California Fish and Game Commission as an endangered, threatened, or candidate species<sup>2</sup>. 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).

<b>Permittee:</b>	<b>Pacific Gas and Electric (PG&amp;E)</b>
<b>Principal Officer:</b>	<b>Jon Wilcox</b>
<b>Contact Person:</b>	<b>Matthew Brown, (559) 246-1592</b>
<b>Mailing Address:</b>	<b>77 Beale Street (B28P), San Francisco, CA 94015</b>

**II. Effective Date and Expiration Date of this ITP:**

This ITP shall become effective when signed by all parties and received by CDFW as described in the Notices section of this ITP. Unless renewed by CDFW, this ITP's authorization to take the Covered Species shall expire on **December 31, 2052** so long as the Permittee satisfies the 5-year review process described in the Permit Term section below.

**III. Permit Term:**

Permittee is required to prepare and submit to CDFW a 5-year compliance report in lieu of an annual report by June 30 of each 5-year anniversary of the effective date of this ITP (Condition of Approval 6.7). Permittee shall meet and confer with CDFW within 60 days after the 5-year compliance report submittal to discuss the report and any potential ITP compliance issues. Within 30 days following that meeting, if CDFW determines that there are any outstanding ITP compliance issues, CDFW shall provide a letter describing the outstanding ITP compliance issues and what actions are necessary for the Permittee to remain in or come

<sup>1</sup>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").

<sup>2</sup>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.

into compliance. Within 30 days of receiving CDFW's letter, the Permittee shall provide CDFW a response in writing listing actions taken or proposed to show how the compliance issues will be resolved. Permittee shall work with CDFW to confirm the resolution proposed meets the needs to bring the ITP into compliance. If the Permittee fails to provide the required written response or fails to complete the necessary actions to remain in or come into compliance, CDFW may revoke or suspend the permit as provided under California Code of Regulations, Title 14, section 783.7.

Permittee shall be prepared to discuss and include in their 5-year compliance report, at a minimum, the following:

1. A list of Covered Activities (including both construction and maintenance activities) completed over the prior 5-year period, including activities that are currently in progress;
2. Acreages of impacts to Covered Species habitat(s) over the prior 5-year period, along with Geographic Information System (GIS) mapping depicting impacts to Covered Species habitat(s) over the last five years. GIS point data will be provided for impacts less than 0.1 acres and GIS polygon data will be provided for impacts equal to or greater than 0.1 acres;
3. Total acres and GIS mapping depicting on-site restoration of temporarily impacted Covered Species habitat and field verifications of return to baseline conditions within 12 months from the date of initial impacts was achieved;
4. Accounting and discussion of the Covered Activities and associated restoration efforts and field conditions when temporary impacts were recategorized as permanent impacts;
5. Updated spatial models for Covered Species and habitats with written summary;
6. Number of individuals of the Covered Species taken during the last 5-year period;
7. A copy of the table in the Mitigation Monitoring and Reporting Program (MMRP) with notes including the current implementation status of each mitigation measure;
8. An assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing, and mitigating impacts associated with Covered Activities;
9. An assessment of whether the Covered Activities and Project Description, as described in this ITP are still valid;
10. A summary of the results of monitoring and mortality reduction and relocation associated with Covered Activities over the prior 5-year period, including the number and location(s) of Covered Species encountered; and

11. Any new information relevant to the conservation of the Covered Species and/or to the Project Area, as defined in the impact analysis section of this ITP.

If during the 5-year compliance review process, CDFW determines that 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, the Permittee shall submit a request for an amendment pursuant to Title 14, Section 783.6 of the California Code of Regulations and associated fee based on the fee schedule at time of submittal.

Notwithstanding the expiration date on the take authorization provided by this ITP, Permittee's obligations pursuant to this ITP do not end until CDFW accepts as complete the Permittee's Final Mitigation Report required by Condition of Approval 6.9 of this ITP.

#### **IV. Project Location:**

The PG&E Bay Area Operations and Maintenance Project (Project) locations consist of Permittee's gas and electrical transmission and distribution facilities and their rights-of-way (ROWs) and the lands owned by the Permittee or subject to Permittee's easements to maintain these facilities, access routes associated with Permittee's routine maintenance, lands adjacent to existing ROWs, and conservation lands acquired to mitigate impacts on the three CESA-listed species covered under this permit within the following Bay Area counties: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma ("Permit Area") (FIGURE 1).

#### **V. Project Description:**

The Permittee provides natural gas and electricity to customers throughout the Permit Area. To maintain services to its customers Permittee must perform ongoing operations and maintenance (hereafter referred to as O&M). A summary overview of Permittee's two systems, the work methods and techniques to operate and maintain each, and detailed descriptions of the specific O&M activities covered by this ITP are described below. Following this overview are descriptions of minor new construction activities and habitat conservation and enhancement activities that are also covered by this ITP.

### **NATURAL GAS TRANSMISSION AND DISTRIBUTION SYSTEM**

#### ***System Overview***

Permittee's natural gas system consists of a transmission system and a distribution system. The transmission system in the Permit Area includes 16 primary gas transmission lines totaling approximately 1,820 miles of pipeline. The largest three transmission facilities in the Permit Area are Line 2 and Lines 300A and B, as described below.

**Line 2.** This 115-mile-long (of which 13.3 miles are within the Permit Area), 12- to 20-inch-diameter pipeline runs from the Brentwood Terminal in Contra Costa County to the Panoche Metering Station in Fresno County.

**Lines 300A and 300B.** These 502-mile-long (of which 42 miles are within the Permit Area Permit Area), 34-inch-diameter pipelines run from the California/Arizona border near Needles, California, to Permittee's Milpitas Terminal in the Permit Area.

The gas transmission system transports natural gas in steel pipelines buried 3 to 4 feet deep (measured to the top of the pipe). Depending on the location and type of pipe, pipe diameter can vary from 8 to 42 inches. Gas pressure in transmission pipelines generally exceeds 60 pounds per square inch (psi). The Bethany Compressor Station in Alameda County maintains the gas pressure in the pipelines within the Permit Area.

The Permit Area gas distribution system consists of approximately 19,350 miles of both steel and plastic lines. Typically, the 0.25- to 24-inch-diameter lines are buried 2 to 4 feet deep. Gas pressure in distribution pipelines is generally less than 60 psi. Approximately 90 percent of the gas distribution lines are in urban areas. The transmission and distribution pipelines are buried in native soil; however, in areas of rocky soil, imported backfill is used to prevent potential damage to the pipes.

The ROW width for the natural gas system varies from 5 to 150 feet. Permittee owns less than one percent of linear ROWs in fee title; the remainder is in easements and franchise. Generally, Permittee has nonexclusive easements that do not allow Permittee the rights to fence the pipeline corridors. Permittee obtains exclusive easements with the right to construct fences when security fencing is required for valve lots, compressor stations, and other aboveground facilities, or subsurface vaults.

## **Operation and Maintenance Activities for the Natural Gas System**

### **G1. Patrols**

#### *Aerial Patrol*

Permittee conducts aerial patrols of gas pipelines and associated facilities quarterly using fixed-wing aircraft that fly at an elevation of 500 feet. Helicopters and drones are used periodically as needed.

#### *Ground Patrol*

Compliance with California Public Utilities Commission (CPUC) regulations requires periodic ground patrols of the gas transmission lines. On a quarterly to annual basis, Permittee conducts ground patrols of the pipelines and associated facilities on foot, with all-terrain vehicles (ATVs), or by using small trucks or SUVs on existing access and pipeline patrol roads. The purpose of the patrols is to observe surface conditions on and adjacent to the transmission line ROW and look for indications of leaks, ensure that pipeline markers are

clearly visible, and record conditions that might affect safety and operation. Ground patrols also read gas meters.

#### *Leak Detection Patrol*

Permittee conducts leak detection patrol of the gas facility system at either 6-month or 12-month intervals. Leaking gas from pressurized pipelines can present hazardous conditions that must be corrected. The patrol is conducted on foot or by small trucks, depending on the terrain and accessibility. Permittee uses either a portable hydrogen-flame ionization gas detector or a laser-methane detector to sample air above the gas line to test for leaks.

## **G2. Inspections**

#### *Valves*

Valves are located along all pipelines at different intervals depending on the size of the line and number of taps (i.e., point of interconnection of a similar diameter or smaller diameter pipeline) off the line. Permittee inspects valve sites along the pipelines and tests the valves three to four times per year. Light trucks are used on existing access and pipeline patrol roads. Valves are not marked but are located inside vaults or fenced areas and can be accessed by a two- or three-member maintenance crew. Crews lubricate valves as necessary, using a gun pump to apply either motor oil or grease (e.g., 1033 grease).

#### *Telecommunication Sites*

Permittee conducts routine inspections of telecommunication sites, which are used to monitor gas pipeline functions remotely, on a monthly basis unless problems are identified at specific sites. Lighttrucks use existing access and pipeline patrol roads, or Permittee uses fixed-wing aircraft, helicopters, or drones.

#### *Anode Beds*

Anode beds are part of the cathodic protection system (CPS) and usually placed approximately every 10–20 miles along the pipeline. Permittee inspects cathodic protection every 2 months, or as indicated by the integrity management team, by checking the electric current at various Electric Test System (ETS) stations along the line and at anode bed sites. Simple testing instruments are used. Surveys of pipelines located within the Permit Area typically require 10 days to complete. Light trucks use existing access and pipeline patrol roads.

#### *Pressure Limiting Stations*

Permittee conducts routine inspections of existing pressure limiting stations (PLS) every 2 months along transmission lines and annually along distribution lines. A single light truck uses existing access and pipeline patrol roads.

## *Land Surveys*

Permittee periodically conducts land surveys of facilities and facility ROWs along the alignment. It is estimated that the entire gas transmission and distribution system is inspected once per year.

### ***G3a. Pipeline Remedial Maintenance***

Remedial maintenance corrects erosion and vandalism problems and involves the evaluation of internal pipeline issues. Permittee performs remedial maintenance at approximately 100 locations per year. The majority of these locations are in upland land cover types, but some are in streams. Maintenance materials used for site-specific solutions to erosion problems may include biodegradable jute netting and, to a lesser extent, the periodic use of concrete, Ercon mats, or concrete pillow systems. The extent of concrete, Ercon mat, or concrete pillow system installation will not typically exceed 100 feet long or 50 feet wide on any stream. During such installation, Permittee complies with permits for work in waterways. Permittee installs concrete, Ercon mats, or concrete pillow systems at approximately one location per year.

Vandalism can affect any structures located above ground; it usually entails visual (e.g., graffiti) rather than structural impacts. Of the 100 sites maintained each year, Permittee estimates that only 10 will require fencing for protection from vandalism. Fencing these areas requires excavation for fence post installation; this action results in a 50- by 50-foot disturbance area for each fenced location and a 50- by 50-foot work area.

### ***G3b. Internal Pipeline Inspections***

Permittee inspects the internal coatings of its pipelines annually. Every 7 years, on average, each segment is inspected above ground by electronically measuring the integrity of the pipeline coating. Using technology such as magnetic flux leakage, Permittee inspects the pipeline with sensors to measure pipe corrosion, cracks, and indentations. During these procedures, the pipeline remains in operation. If problems are indicated, the pipeline is inspected internally using a pipeline inspection gauge (pig) that is inserted into the pipe at an external launch and receiver point. No excavation is required. The pig travels throughout the length of the pipeline, employing robotically operated cameras to look directly inside pipes. Once the "pigging" data are analyzed, the inspection crew conducts a calibration test (i.e., excavates a bell hole) at two or three locations along the pipeline to confirm that the pigging results are accurate. The area exposed depends on the length of pipeline where the pig has indicated possible problems. If corrosion cannot be repaired, pipeline replacement is necessary.

Permittee internally inspects approximately 100 miles of pipeline each year, resulting in 50 inspection locations per year. On average, two or three calibration tests are conducted at each site along a 10-foot length of pipe, requiring a bell hole work area of approximately 10 by 10 feet along the exposed pipeline. Soil excavation, soil stockpiling, and construction vehicle travel are within bell hole the work area during the inspection.

For the purposes of estimating impacts, Permittee assumed that all internal inspections result in a section of pipeline that needs to be replaced, and that excavation, soil stockpiling, staging, and the use of construction vehicles would disturb a 50- by 50-foot work area. Permittee hydrostatically tests the new section of pipe and disposes of the water by discharging overland, using a baker tank, discharging to a sewer, or using other approaches. Before test water is discharged from the banker tank to the land or sewer, Permittee tests the water under the appropriate water quality permits.

#### ***G4. Compressor Station Upgrades and Maintenance***

The Bethany Compressor Station is a 100-acre facility in eastern Alameda County and within the Permit Area. The compressor station occupies a developed and fenced site. Some routinely maintained natural land is present within the grounds, and approximately 17 acres of landscaped and natural lands surround the station. Permittee conducts inspections daily and performs maintenance and upgrades approximately two times every two years. Typical maintenance tasks include overhauling compressors and engines, repairing and replacing piping, painting the station, and drilling or cleaning water wells. In addition, operations and air quality standards may require modifications or upgrades to station equipment. Inspections, maintenance, and upgrades to the Bethany Compressor Station are within the fenced facility footprint. Access to the site is from existing roads. Crews mow a strip approximately 600 feet long by 20 feet wide outside the perimeter of the facility's fence line once each year to comply with local fire standards.

#### ***G5. Pipeline Electric Test System Installation***

The electric test system (ETS) is a component of the cathodic protection system. Units are installed 1-5 miles apart on pipelines to (1) determine protection system effectiveness by measuring conductivity, and (2) help crews locate the pipe prior to excavation. This technology precludes the need to systematically expose the pipe and physically examine it for signs of corrosion. The ETS consists of two wires (leads) that are welded to the pipe; the leads are exposed at the surface inside a 4-foot-tall, 4-inch-diameter plastic tube or valve box. Installation entails exposing a 3- to 5-foot long section of pipe, attaching the leads with a small weld, and recovering the pipe. During ETS installation, the pipeline remains in operation. Most sites are accessible from existing access roads. Where an ETS is not accessible from an existing road, workers access it on foot or by use of small trucks.

Permittee performs approximately seven ETS installations per year. At each installation site, soil excavation, soil stockpiling, and the use of construction vehicles disturb an approximate 50- by 50-foot work area.

#### ***G6. Pipeline Valve Maintenance—Recoating***

As part of activities G10, Pipeline Coating Replacement, and G11, Pipeline Replacement, Permittee may need to recoat a gas pipeline valve. Mainline valves, which are generally 7 to 20 miles apart, regulate the flow of gas through the pipeline and enable crews to isolate portions of pipeline. Occasionally, these valves malfunction or wear out, causing leaks.

Incidental Take Permit  
No. 2081-2015-031-03

PACIFIC GAS & ELECTRIC COMPANY  
PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT



Depending on the condition of the valve, Permittee will either recoat or replace approximately five valves annually. Recoating is done by sandblasting the valve over tarps, collecting the debris, and recoating the valve with a specialized epoxy that protects against corrosion.

### ***G7. Pipeline Valve Maintenance—Replacement or Automation***

As part of activities G10, Pipeline Coating Replacement, and G11, Pipeline Replacement, Permittee may replace a gas pipeline valve. Mainline valves, which regulate the flow of gas through the pipeline and enable crews to isolate portions of pipeline, occasionally malfunction or wear out, causing leaks. Permittee also replaces valves to allow for the passage of inspecting devices (i.e., pigging for in-line inspections). To ensure overall pipeline system safety Permittee will be automating valves and, when automation is not possible, replacing valves. Enhancing or replacing approximately eight of the valves per year may include an aboveground valve, several small cabinets for a Supervisory Controlled and Data Acquisition (SCADA) system, and electric service extension. Mainline valves are generally 7 to 20 miles apart.

Prior to replacing or installing valves, a portion of the gas line must be blown down. Valves are replaced within the existing station facility corridor. If Permittee replaces a small section of the pipeline during valve placement or automation, the pipeline must be hydrostatically tested. Permittee may replace or automate valves at any time, depending on weather and on operational restrictions related to the need to temporarily shut down the pipeline.

Estimated disturbance areas include the anticipated need for facility upgrades and fencing at 10 percent of the valve locations, which expands the footprint to a 50- by 50-foot facility. Soil excavation, soil stockpiling, and the use of construction vehicles require an approximate 150- by 150-foot work area. A 50- by 50-foot laydown area to store equipment may also be required. Once the pipeline valves are automated, Permittee checks them annually to ensure that they work properly.

### ***G8. Pipeline Cathodic Protection***

Corrosion of underground steel pipes is a continual maintenance issue for gas system pipelines. Pipes generate or carry corrosion-cell current that, as it moves to the soil, can form pits in the pipe. These pits can weaken sections of the pressurized pipe and cause it to fail. Permittee uses cathodic protection to prevent corrosion.

Permittee undertakes approximately 100 cathodic protection activities per year using the methods described below. Of those activities, approximately 25 require excavation, and an estimated 20 percent (five total activities) are in natural vegetation. A work area approximately 100 by 10 feet wide is needed to install the cable, excavate the soil, stockpile soil, and house construction equipment. Most installations require 5 to 7 days to complete.

## *Anode Beds*

As a pipeline's coating degrades over time, it requires increased cathodic protection to prevent corrosion. Cathodic protection is a technique to control pipeline corrosion by making the pipeline the cathode of an electrochemical cell. A cable rated for the expected current output connects the negative terminal of a rectifier, which is a small piece of equipment that is mounted on an existing utility pole, to the pipeline. A cathode protection expert adjusts the operating output of the rectifier to the optimum level after conducting various tests, including measurements of electrochemical potential. Pipe coatings commonly degrade faster in areas of high moisture content (e.g., locales with regular precipitation or irrigation) than in drier areas. Increased cathodic protection current accelerates the consumption of anode beds and decreases their effectiveness. Consequently, anode beds must be replaced periodically, and additional anodes may be needed. The pipeline continues to operate during installation or replacement of the anodes.

Galvanic anode cathodic protection is Permittee's preferred method for distribution facilities and for use in urban areas. Galvanic anodes do not require an external power source, and installation requires minimal excavation for installation. There is some flexibility as to where the anode beds can be located, with beds usually placed approximately every 10 to 20 miles along the pipeline. The installation of anodes typically can be accomplished in a single day.

## *Deep-Well Anode Beds*

Deep-well anode beds typically have a 20-year life span and are abandoned in place when no longer in use. Installation of deep-well anode beds involves drilling deep ground wells (200–300 feet) and installing zinc or magnesium bars, platinum anode rods, or ground mats. Permittee uses this installation method where pipelines are exposed to large amounts of induced alternating current (AC) (typically from adjacent high-voltage electric transmission lines) or where soil conditions dictate. For many applications, the anodes are installed in a 200 to 300-foot-deep (or more), 10-inch-diameter vertical hole and backfilled with conductive coke (a nontoxic carbon material that improves the performance and life of the anodes). Once an anode bed is installed, it is connected to the pipeline and the electric line by an underground cable. The deep-well anode bed typically is located approximately 10 to 15 feet from the gas pipeline and every 10 to 20 miles along the pipeline corridor. In the Permit Area, a rectifier is the standard method Permittee uses to provide electricity. Installation of deep-well anodes typically requires 4 days to complete. Work crews evenly distribute leftover fill over the buried work site and grade it to blend in with the existing site, reserving topsoil to spread on top.

## *Other Types of Anode Beds*

Other protection measures include the installation of cathodic protection units (CPUs), anode flex and magnesium anodes, and horizontal anode beds. Although deep anodes are preferable, these other measures can be used for certain soils or in isolated corrosion areas where installing a deep well is not practical.

Installation of CPUs involves trenching a few feet parallel to the pipeline and installing the flex or magnesium anode at the same depth as the pipeline. Trenching for CPU installation varies in width, from approximately 4 inches to 2 feet. Horizontal anode beds are installed parallel to the pipeline, 400 to 1,000 feet from the ROW centerline, at approximately the same depth as the pipeline. The need to install or replace a horizontal anode bed is relatively infrequent, and Permittee anticipates it will occur less than once per year in the Permit Area. A small underground cable delivers an electric current from the horizontal anode bed to the pipeline.

### ***G9. Pipeline Lowering***

Permittee may need to lower gas pipelines to increase the depth below surface and thereby improve public safety. The need for pipeline lowering arises mostly in agricultural areas and areas of intense land use, but pipeline lowering also may be needed in other land cover types or in waterways where pipe structures are exposed. Pipeline lowering typically involves trenching and installing a new pipeline parallel to, and to a greater depth than, the existing pipeline. Typically, the old pipe is abandoned in place and either capped or filled with slurry and then capped. Pipeline lowering may be needed at any time of year, depending on operational restrictions related to the need to temporarily shut down the pipeline. Permittee lowers approximately 1 mile of pipeline every 3 years. A 20-foot-wide work corridor is needed for trenching and soil excavation, soil stockpiling, and the use of construction vehicles. The pipeline requires hydrostatic testing prior to pressurizing the gas pipeline.

### ***G10. Pipeline Coating Replacement***

Permittee coats natural gas pipelines to protect them from degradation and external corrosion. When a pipeline's coating has deteriorated to the point of requiring replacement, Permittee recoats the pipe with epoxy. To determine whether the coating has maintained its integrity, Permittee induces an electric current on the pipeline at the ETS station and then measures for a loss of voltage, which would indicate degradation in coating integrity.

To avoid bending or affecting the integrity of the pipe, the pipeline must be excavated in sections and supported at intervals typically of 40 feet. Workers remove the old coating by jetting, scraping, or sandblasting and typically place plastic sheeting or tarps below the pipe to collect the residue. Permittee performs testing to determine if the material is hazardous and then disposes of it in accordance with regulations. The surface is then prepared for the new wrap by running a self-contained grit- or shot-blasting machine over the pipe. The pipeline continues to operate while a coating machine applies the coating.

Permittee recoats approximately 1 mile of pipeline every 5 years. This requires construction vehicles and includes vegetation removal, trenching, soil excavation, and soil stockpiling. On average, a 20-foot-wide work area is needed for this activity. The majority of recoating is in upland land cover types but may periodically be within streams. In intermittent and ephemeral streams, Permittee schedules instream maintenance when the stream is dry. One mile of pipeline coating replacement typically involves three different access locations.

## **G11. Pipeline Replacement**

Public safety sometimes necessitates replacing sections of pipe for various reasons, including those listed below:

- Development alongside the pipeline has resulted in a change of class location.
- Aging or corrosion has affected the integrity of the pipeline.
- Pipelines have been damaged by private contractor(s) during construction (i.e., dig-ins).
- Acts of nature have damaged the pipeline.

In the case of class location changes, Permittee must move or replace the line with upgraded pipe to comply with regulations mandated by the California Department of Transportation and CPUC. Permittee uses standard pipeline construction techniques. As the old pipeline is removed from service for the tie-in to the new line, it is “blown down” (i.e., gas is evacuated to the atmosphere from the affected section of pipe through a blowdown stack). Any gas condensation is captured and removed from the old pipeline and disposed of in compliance with current regulatory standards. The existing pipeline is abandoned in place by filling it with slurry before the pipeline is capped. Typically, the crew will cut and cap the pipeline every 1,000 feet, depending on the location. Slurry is used if the pipeline crosses a water body or needs to be stabilized. In the event a pipeline is abandoned in place, Permittee will typically place the new section of pipe as close to the abandoned pipeline as possible and modify existing easements by expanding existing ROW or acquiring additional land rights.

Permittee performs pipeline replacement approximately five times per year. The length of pipe affected varies, depending on the reason for replacement. The minimum length of pipe replaced is typically 40 feet (one joint of pipe), although 8 miles could be replaced during each targeted replacement effort. Replacing an existing pipeline with a new pipeline includes clearing and grading the ROW, trenching and excavating the existing pipeline alignment, placing the pipe (including welding, inspecting the welds, field-coating or fiber-wrapping, and backfilling), performing hydrostatic testing, protecting pipes against corrosion, marking the pipeline, implementing erosion control measures, stockpiling spoil in the ROW, removing or abandoning existing line, and cleaning up and restoring the ROW. In general, the existing pipeline will be abandoned in place and filled with slurry and capped, although some of the pipelines will be removed and restored. Permittee may need to acquire additional ROW to accommodate an increase in the pipeline corridor for about 75 percent of the new pipeline. A 50- by 50-foot area for new valve equipment is required along each pipeline replacement. Trenching and soil excavation, soil stockpiling, staging, and construction vehicles disturb a 20-foot-wide work area, which includes the 10-foot excavation area. As the new pipeline is installed, Permittee hydrostatically tests the pipe, collects test water in a baker tank for discharge to land or a municipal sewer system (based on water quality, quantity, local conditions and relevant discharge or release requirements), and backfills the trench. Before

test water is discharged from the tanker tank to the land or sewer, Permittee tests the water under the appropriate water quality permits.

Permittee estimates that it will replace approximately 248 miles of pipeline during the course of the 30-year permit term. Of the 248 miles, approximately 75 percent (186 miles) are in urban areas. The remaining 62 miles are in nonurban areas. A new 10-foot-wide ROW above the pipeline alignment is required and could be in natural vegetation. Trenching and soil excavation, soil stockpiling, staging, and the use of construction vehicles require a work area, which includes the 10-foot-wide excavation area along the length of the pipeline.

Permittee may perform pipeline replacement at any time of year, depending on operational restrictions related to the need to temporarily shut down the pipeline. In the event that no access road exists or an emergency arises, construction of a temporary road that is estimated to be 0.5-mile in length by 12 feet wide may be necessary to implement this O&M activity.

### ***G12. Pipeline Telecommunication Site Maintenance***

A SCADA system monitors pipeline functions remotely and transmits pipeline operational information to Permittee's operations offices at the Brentwood Gas Terminal via Permittee's utility telecommunications system. Periodic vehicle or helicopter access is required to check the telecommunication facilities, replace batteries, conduct minor maintenance, or make adjustments to the facilities or components. In the event of major storm damage, reconstruction of the facility or replacement of a component is required as soon as weather permits. A staging area may be required for major maintenance or storm damage repairs. The staging area may be located either next to the site within the temporary work area or at a distant location (for helicopter transport of workers and materials). The pipelines continue to operate during site maintenance. Permittee performs this activity approximately once per year. A 20- by 20-foot work area is needed for soil excavation, soil stockpiling, and the use of construction vehicles. Also, approximately once per year, Permittee must install new fiber optic cable, which requires an estimated 10- by 1,500-foot work area.

### ***G13a. Pipeline Right-of-Way Vegetation Management***

Permittee manages vegetation along the pipeline ROWs to prevent damage to the natural gas system, facilitate inspections related to routine O&M tasks, and comply with state and federal regulations that require Permittee to patrol periodically for gas leaks. The gas system vegetation management program is designed to remove weeds, brush, and trees around equipment and facilities for ROW visibility, fire hazard reduction, security, safety, and maintenance access. Trees and brush that interfere with patrols or tree and brush roots that may pose a threat to buried pipelines may require periodic removal. Permittee also clears any tree canopy and brush that obscures the ROW to facilitate aerial inspections and maintain the line of sight between gas line markers. To keep incompatible vegetation from growing over the facilities, Permittee does not replant trees within the ROW after vegetation management, although reseedling—with the landowner's notification—will be routinely performed.

Permittee identifies areas within the ROW that require vegetation removal during routine patrols. ROW width averages 20 feet over the gas pipeline and is dependent upon legal documentation. Maintenance width is dependent on the width of the easement. For example, some easements are 10 feet wide, and others can be up to 65 feet wide. Vegetation management usually is accomplished by manually removing (with a chainsaw) large-diameter woody vegetation, then mechanically removing other vegetation with a brush hog, hydro-axe, or brush rake, usually to establish a maximum clearance height of 1 foot from the ground (depending on vegetation and the return growth rate), and to allow surveys by foot. If access is poor, vegetation is manually lopped into 6- to 24-inch lengths and scattered within the ROW. Permittee also relies on chemical control (herbicides) for vegetation management.

Permittee uses herbicides in accordance with label requirements and U.S. Environmental Protection Agency (EPA) regulations, and herbicides are applied by a qualified applicator licensed by the California Department of Pesticide Regulation. In general, herbicides are used in the gas transmission ROWs and for cut-stump applications (where Permittee has notified the landowner). Only federal and California EPA-registered herbicides are used.

These include selective and nonselective, inorganic and organic, contact and translocated, and preemergent and post-emergent types. The use of herbicides is subject to landowner notification. Permittee contracts with licensed and registered pest control advisors to prepare herbicide prescriptions for vegetation control and eradication within ROWs.

The O&M activity described in this section is for those instances in which vegetation management is necessary as a distinct and separate action that Permittee crews perform, and not a part of ROW clearing necessary for other O&M activities, such as pipeline replacement. On average, there are 10 sections of ROW reclaimed per year by removing 10 feet of vegetation on each side of the pipeline over a 0.5-mile length. Ongoing vegetation management of the ROW disturbs a 20-foot-wide corridor averaging one mile in length. Frequency is based on an assumed return interval of 5 years within tree- and shrub-dominated land cover types.

### ***G13b. Pipeline Access Road Maintenance***

Access road maintenance work takes place in the ROW. Permittee maintains the road without altering the road profile. Every 2 to 3 years, Permittee performs surface maintenance on an as-needed basis to keep access roads in operational condition. At approximately five locations a year a temporary turnout that is approximately 45 feet in length and 10 feet wide is needed. Occasionally a culvert may be replaced during maintenance activities.

### **Electrical Transmission and Distribution System**

Permittee's electrical system consists of a transmission system and a distribution system. The electrical transmission system in the Permit Area consists of approximately 4,430 miles of transmission lines. Bulk transmission lines (230 kV and 500 kV) are supported on steel-lattice towers or steel poles. Power lines with a 60 kV, 70 kV, or 115 kV capacity are most

Incidental Take Permit  
No. 2081-2015-031-03

**PACIFIC GAS & ELECTRIC COMPANY**  
**PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT**

often supported by wood poles, but steel poles, tubular steel poles (TSPs), and lattice towers are also used in certain areas.

Permittee currently operates 207 transmission substations in the Permit Area. Power from high-voltage transmission lines is transformed to lower voltage at these substations. The in-line spacing of these structures varies. The height of conductors above the ground varies according to topography and the design of the transmission system. Generally, conductors on 230 kV and 500 kV systems are designed to maintain a minimum clearance of 30 feet above the ground. CPUC G.O. 95 dictates the design of electrical facilities. Conductor sag (the extent to which an electrical conductor can hang between poles and towers) varies and is dependent on the height of the towers or poles, the electrical load through the conductors, ambient air temperature, conductor type, and span length. Transmission ROWs are of varying widths and generally are within easements that are negotiated with private landowners of private lands or public agency landowners of public lands. Permittee owns less than one percent of these ROWs in fee title; the rest are in easements. The ROW widths depend on circuit or line voltage, the number of lines per ROW, terrain, and other factors. The electrical transmission system includes a network of fiber optic communications cable associated with the SCADA system. In addition, there may be cables owned by other entities located inside Permittee ROWs. For example, third-party fiber optic communications cables (for telephone, television, or internet) are typically installed on Permittee facilities, either above or below the electrical circuits.

Permittee's electrical distribution system provides links between most customers and the transmission system. Approximately 14,885 miles of overhead distribution lines extend through the Permit Area, and another 8,130 miles are underground. Wood or steel poles support the overhead distribution conductors. The electrical distribution ROW widths vary according to the system voltage, terrain, and other factors. The distribution system includes primary and secondary distribution lines that deliver electricity and distribution transformers that reduce voltage from distribution to utilization (i.e., residential or commercial) levels. Primary distribution lines carry three-phase AC power in the 2–50 kV range to street rail and bus systems as well as to industrial and commercial customers. Secondary distribution lines serve most residential customers with 120-/240-volt, single-phase, three-wire service, which provides electrical power for lighting and most appliances. Secondary distribution transformers can further reduce voltage to the required secondary voltage at or near a customer's service connection.

Insulators are positioned between support structures and conductors to support the wires and isolate energized conductors from potential grounding. Most insulators for transmission voltages are ceramic; non-ceramic insulators made of fiberglass rods and rubber shrouds also are used.

## **Operation and Maintenance Activities for the Electric System**

### ***E1. Patrols***

Permittee conducts patrols of its lines and associated facilities annually or on more frequent basis as needed or required. Patrols alternate annually between patrols by air and patrols from the ground.

#### ***Aerial Patrol***

Permittee conducts aerial patrols of electric transmission lines, distribution lines, and associated facilities biannually (in terms of calendar years) using helicopters or drones.

#### ***Ground Patrol***

If electric transmission lines and associated facilities are located in no-fly zones, Permittee personnel conduct ground patrols on foot or with ATVs or use small trucks or SUVs on existing access roads. These patrols occur on a 2- to 5-year cycle, depending on whether the facility is wood or steel. Vegetation management personnel conduct biannual ground patrols of transmission and distribution lines by vehicle and on foot. It is estimated that 33.3 percent (7,664 miles) of the electric distribution system and 87.5 percent (3,876 miles) of the transmission system is patrolled each year. Approximately 95 percent of the patrolled system length is accessible from existing roads. The rest is patrolled on foot or by use of a helicopter. Approximately 5 percent (577 miles) of the electric system requires access by off-road travel using light trucks or ATVs.

### ***E2. Inspections***

#### ***Tower, Pole, and Equipment Inspection***

Permittee routinely inspects tower footings and poles to verify stability, structural integrity, and equipment condition (e.g., fuses, breakers, relays, cutouts, switches, transformers, paint). Footings and poles are accessed from existing roads or may require off-road travel, either in vehicles or on foot.

#### ***Outage Inspection***

When outages and CPUC Reportable Incidents take place because of weather, accidents, equipment failure, or other reasons, Permittee inspects lines to determine the location and probable cause of the outage. Lines are accessed from existing roads or may require off-road travel, either in vehicles or on foot.



### ***Substation Inspection***

Permittee inspects all transmission and distribution substations every 1 to 2 months to verify equipment operation and conduct safety inspections. Substations are accessed from existing roads in vehicles.

### ***Telecommunication Sites***

Permittee conducts routine inspections of telecommunication sites annually unless problems are identified at specific sites. Access is by light truck on existing access and power line ROW roads or by helicopter. Helicopter patrols are infrequent, and hovering typically lasts a few minutes, allowing personnel to collect a Global Positioning System (GPS) point for the site or note the facility location.

### ***Sections of Line***

The regular inspection of underground facilities, instrumentation and control, and support systems is critical for safe and reliable operation. Permittee inspects aboveground components at least annually for corrosion, equipment misalignment, loose fittings, and other common mechanical problems. The underground portion of the line is inspected at vault locations annually. Inspections are performed from existing roads or may require off-road travel, either in vehicles or on foot.

### ***Land Surveys***

When new construction is proposed by a property or land developer, Permittee conducts land surveys of facilities and facility ROWs for construction layouts and other purposes. Data collected include precision measurements regarding length and slope and other geology-related information. Access is by vehicles on existing roads but may include off-road travel or surveys on foot.

### ***E3. Insulator Washing or Replacement***

Conductive airborne particles or bird droppings that settle on ceramic insulators can provide a conductive path across the insulators, causing contamination-induced electric faults. Permittee personnel periodically wash ceramic insulators to reduce the risk of such faults. Non-ceramic insulators tend to perform better in contamination-prone areas. Insulators are washed periodically to prevent faults using a truck- or trailer-mounted spray system or a helicopter. Washing typically is done during energized conditions (i.e., while the power lines are operating). Distilled water is used to wash the insulators; dry washing using ground corn hulls also is used. Permittee replaces insulators when they have been damaged by gunshot, lightning, heavy corrosion or when they no longer can be washed. They can be replaced while energized or de-energized, depending on access, loading, and safety. Replacement typically takes a four- to six-person crew with a small truck for hauling crew members, tools, and materials. If access is limited, a helicopter may be used to land crew members and tools on a tower. Insulators are washed or replaced approximately once per year.

Incidental Take Permit  
No. 2081-2015-031-03

PACIFIC GAS & ELECTRIC COMPANY  
PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT

#### ***E4. Substation Maintenance***

Most of Permittee's substations are located near load centers, such as residential, commercial, and industrial areas. Typical minor maintenance tasks at these substations include repair and replacement of transformers, switches, fuses, cutouts, meters, and insulators. Maintenance of substation systems requires this type of work approximately once per year. Load demands may require modifications of station equipment or installation of new facilities. These O&M activities could require use of station property or adjacent property for construction staging, materials storage, permanent facilities, and land management. Permittee conducts vegetation management inside and outside of substation facilities as required to meet CPUC and local regulations and ordinances, reduce and eliminate fire hazards, enhance security for fenced facilities, enhance aesthetics, and reduce potential for illegal dumping and homeless encampments. O&M activities on Permittee lands to control vegetation external to substations may include the mowing of grass and weeds. Treatments include pruning or removal of vegetation where needed inside or on the immediate perimeter of a fenced facility (usually within 3–5 feet of the fence).

Occasionally, public agencies, municipalities, or neighboring landowners ask Permittee to conduct additional fuels reduction activities on Permittee parcels outside of the fenced facility, usually for the purpose of improving or maintaining compliance with local and state fire codes. These activities, aimed at managing fire risk or public nuisances, may include brush and weed mowing and discing, herbicide treatments, tree thinning or pruning, and trash removal. Workers may use tractors, flail mowers, or string trimmers for mowing and discing operations. Tree service crews use chainsaws to manually prune or remove hazard trees and to cut brush. Herbicides may be applied, when appropriate, by use of vehicle-mounted spray equipment on tractors, ATVs, and pickups, or manually applied by backpack sprayer. Herbicide applications on special projects are prescribed by a California Licensed Pest Control Adviser and may include pre-emergent, directed post-emergent, and cut stump treatments. Substations are located primarily in residential, commercial, and industrial areas. No impacts on natural vegetation result within the fenced perimeters during maintenance because the grounds are paved with blacktop or gravel. An estimated 150 acres of Permittee property external to fenced substation perimeters is disced, mowed, or cleared of vegetation annually and is part of the baseline condition for sites that have been maintained annually. It is estimated that on an annual basis one of these substations has adjacent natural habitat, resulting in a 20- by 1,000-foot disturbance area.

#### ***E5. System Outage Repair***

O&M activities involving outage repair are necessary to maintain reliable service and ensure public safety. Weather, equipment failure, accidents, fire, or bird electrocution are typical causes of outages. When an outage is reported, Permittee patrols the line until personnel determine the cause of the outage. Access is primarily on existing roads, although some overland access with small trucks or SUVs is expected. Depending on the cause of the outage, repair may entail anything from reclosing a switch to replacing a transformer or pole. Crews repair and restore circuits as quickly as possible.

Permittee performs outage repair approximately 500 times per year in rural locations throughout the Permit Area. Soil excavation, soil stockpiling, and the use of construction equipment disturb an approximate 22- by 22-foot work area during each repair.

### ***E6a. Tower Replacement or Repair***

Permittee tower replacement or repair typically involves tower extensions or strengthening the foundations or superstructures of towers. Superstructures typically are strengthened by replacement, modification, or the addition of pieces of steel lattice, as determined by engineering analysis specific to each tower. Permittee extends towers approximately 360 times annually.

#### ***Tower Extensions***

The most common method to raise a tower involves installing a prefabricated extension at the bottom, waist, or top of the tower. The extension is typically installed using a helicopter or crane, depending on the tower location. If a crane is used, an approximately 25- by 40-foot area is graded adjacent to the tower to serve as a level crane pad. Temporary wood pole supports (shoo-flies) are constructed adjacent to the tower to support the conductors while the crane lifts the tower. The tower extension is installed, the conductors replaced, and the shoo-flies removed.

The second method requires lifting the tower. A tower lifter is driven beneath the tower, and its four arms are clamped to the tower legs. The tower legs are unbolted from the base, the tower is lifted, and leg extensions are installed.

#### ***Strengthening Tower Foundations***

To strengthen tower foundations, concrete from the existing footings is broken away to expose the steel reinforcements. A new replacement concrete footing, called a grade beam, is poured between reinforcements. When the towers are accessible from existing roads, the old concrete footings are removed and hauled off site on large trucks. For some project locations the old concrete footings are bagged in a giant tarp with ropes and bundled and taken by helicopter from the tower site and disposed of according to regulations, typically at a local landfill. To repair foundations submerged in water, such as in the San Francisco Bay, a cofferdam is installed at low tide to allow access to the foundation footing. The wood cofferdam is built around the footing to be repaired and is used to isolate the footing from the water. The mud is removed by hand, and the dam is pushed down to the required depth to expose the solid piling, usually 3 feet below the mud line. Typically, the mud is placed in bags and taken to a landfill. If there is little mud collected, then it is returned to the base of the footing after the cement is poured. The material is staged by helicopter or barge, or a combination of both. The old concrete pier is chipped away to expose the pile. New pins are inserted, a new rebar cage is installed around the pile, and the concrete is replaced. The cofferdam then is removed by excavating around the outside and hoisting it from the tower.

Incidental Take Permit  
No. 2081-2015-031-03

**PACIFIC GAS & ELECTRIC COMPANY**  
**PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT**

Where Permittee cannot complete the work from an existing boardwalk, construction crews place a rubber mat at the base of each footing as a work area. If a lot of material is needed at the job site, Permittee builds a temporary section of boardwalk laterally from the existing boardwalk. A helicopter is then used to place the material on the temporary boardwalk, and workers move the material to the work site by hand or wheelbarrow.

If piles are not required for the tower foundation, footing repairs can be done within a work area extending approximately two feet from the footing. If piles are required, the work area may need to be extended to 20 feet outside the tower footprint. Permittee crews may use rubber mats to temporarily access the area requiring maintenance work for a period of up to two hours. Workers place the mats in such a way to help protect the vegetation around the temporary boardwalk during its construction.

### *Strengthening Tower Superstructures*

Superstructures typically are strengthened by replacement, modification, or addition of pieces of steel lattice, as determined by engineering analysis specific to each tower. Other minor repairs that require accessing facilities are replacing fuses, breakers, relays, cutouts, switches, transformers, and paint.

### ***E6b. Access Boardwalk Repair and Replacement***

Permittee has many miles of boardwalks that service transmission facilities in the vegetated margins of the San Francisco Bay. The boardwalks typically extend from levees and provide access across marsh and salt ponds to transmission tower footings. These boardwalks have a 15- to 20-year life and require repair and replacement. Approximately 15 times per year, 1,500 feet of boardwalk are repaired or replaced, which consists of installing replacement piles (spaced approximately 100 feet apart) and replacement planks. Permittee crews perform boardwalk maintenance and construction activities using hand tools and gas-powered tools such as drills and saws. Replacement piles are pushed into the ground using a steel bar for leverage and the weight of four people. The planking is transported along the boardwalk on special hand-dollies. Planking is slid into place, drilled, and bolted. If the boardwalk is not too degraded (i.e., still walkable), crews do much of the work from the boardwalk and some from adjacent to the boardwalk where piles are being replaced. If Permittee is raising the height of an existing boardwalk, crews do the work from the boardwalk. If the boardwalk is substantially degraded, crews do the work within a 10-foot corridor around the boardwalk being replaced. When a 10- by 10-foot work area is required, soil excavation and soil stockpiling disturb vegetation.

### ***E7. Facility Installations (Shoo-Flies)***

Permittee needs to replace or repair poles/towers and equipment (e.g., anchors, cross arms, insulators, wires, cables, guys, switches) when they fail or become unsafe. New additions to existing transmission line facilities or tap lines from the old facilities may require installation of a shoo-fly. Shoo-fly installations involve adding temporary poles or structures around existing permanent facilities to limit service interruptions until work crews can make permanent

Incidental Take Permit  
No. 2081-2015-031-03

PACIFIC GAS & ELECTRIC COMPANY  
PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT

repairs. Shoo-flies consist of a number of poles and anchors supporting conductors to bypass facilities needing repairs or upgrades. In some cases, existing conductors are removed from the old poles or structures and reattached to the shoo-fly structures. In most cases, this is accomplished with one or two poles for every circuit attached to the structure being shoo-flied. For example, one double-circuit 115 kV tower (six wires attached) requires a minimum installation of four poles. Shoo-fly supports are removed when the repair or construction work is complete. Shoo-fly installations occur approximately 100 times per year. A work area of approximately 25 by 100 feet is frequently required.

### ***E8a. Pole Equipment Repair and Replacement***

Permittee repairs or replaces pole equipment (e.g., cross arms, insulators, pins, transformers, wires, cables, guys, anchors, switches, fuses, and paint) when it fails, becomes unsafe, outlasts its usefulness, or is identified for replacement. Replacement and repair of pole equipment typically are performed with the pole in place, using a line truck. Such repairs and replacements take place approximately 500 times per year.

### ***E8b. Utility/Wood Pole Replacement***

When replacing a Permittee distribution or transmission pole, the new pole is framed (i.e., cross arms, pins, insulators, grounds, bonding, markers, and any equipment are installed) on the ground adjacent to the existing pole prior to setting the pole in the ground. To replace a pole, the line is typically de-energized. A line truck augers a hole, the new pole is moved into the new hole, the conductors are moved from the old pole to the new pole, the old pole is typically removed, and the old pole site is backfilled with the augured soil. Existing wood poles may be replaced with new wood poles or light-duty steel poles. Permittee pole replacements take place approximately 500 times per year, requiring a 10-foot-long by 7-foot-wide work area.

### ***E9. Line Reconductoring***

Permittee replaces conductors (wires) once the wires have outlasted their usefulness. Work crews install replacement conductors by temporarily splicing them to the ends of the existing conductors and pulling them through travelers (pulleys) attached to the arms of the towers or pole cross arms. Travelers are installed at each tower or pole using a boom truck. Where a boom truck cannot be used, a winch is used to install the travelers. In some cases, a helicopter is necessary to install the travelers and conductors. Reconductoring typically is done in 2- to 3-mile sections with the use of pull and tension sites (pull sites).

*Pull sites* are temporary construction areas that are used during the removal of existing conductors and the placement of new conductors along the transmission line. Pull sites may also be used to stage materials and provide work areas for tower or pole work. Pull sites are typically located within relatively flat areas that are in line with the conductor. Several pieces of equipment are used at the pull sites, including tensioners (rope trucks) to feed out the new conductor and adjust tension, conductor reels to receive the existing conductor as it is removed, and reels of new conductors. Trailers pulled by semi-trucks, which also are parked

Incidental Take Permit  
No. 2081-2015-031-03

PACIFIC GAS & ELECTRIC COMPANY  
PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT

on-site, typically deliver and remove the reels. On-site cranes move the conductor reels on and off of the semi-trucks. Pull sites are generally rectangular and vary in size, from approximately 50 to 350 feet wide for small pull sites and approximately 100 to 1,250 feet long for large pull sites. Distances between pull sites vary, but on average, approximately 2.7 miles of conductor separates single pull sites or groups of pull sites. Vegetation mowing and minor grading may be required to prepare pull sites for use.

Before pulling the conductor, Permittee crews install clearance structures at road crossings and other locations (where necessary) to prevent conductors from contacting existing electric or communication facilities or passing vehicles. These temporary structures consist of wood poles. After the conductors are pulled into place, they are tensioned by pulling them to a predetermined sag and tension. The conductors are then permanently attached to the insulators and existing conductors. Electric distribution reconductoring takes place approximately 250 times per year, and electric transmission reconductoring takes place approximately 10 times per year. One-third of all reconductoring work requires a pull site; the remaining reconductoring work requires installation and removal of travelers on a two-circuit line, resulting in disturbance. Electric transmission reconductoring also requires a 25- by 25-foot work area.

### ***E10. Vegetation Management (General)***

Permittee performs routine vegetation management on all of its overhead electric distribution and transmission facilities to maintain compliance with Public Resource Code Section 4293, CPUC G.O. 95, Rule 35, the California Independent Systems Operator (CAISO) Transmission Maintenance Agreement, and Northern American Electric Reliability Corporation's (NERC) FAC-003-01 and 02. The clearance regulations identify, by voltage, specific clearance distances that Permittee must maintain between vegetation and energized conductors. Minimum clearance distances range from 18 inches to 20 feet.<sup>2</sup> Vegetation removals for routine maintenance and reliability work generally involve individual trees or small groups of trees encompassing less than 0.1 acre (66 by 66 square feet) per event on an annual basis.

Clearance distances take into account the growth rate of the vegetation in a year's time. So that Permittee has to perform maintenance only annually, pruning clearances include the average growth rate in the clearance calculations. For example, for vegetation with a clearance distance of 4 feet and tree and a growth rate of 8 feet in 1 year, Permittee will clear 12 feet so that the clearance distance will be maintained after 1 year of growth.

### ***E10a. Routine Vegetation Maintenance and Management***

#### ***Routine Maintenance***

Routine vegetation management includes an annual patrol of vegetation growing near overhead distribution and transmission facilities. It also includes pruning or removal of trees that will not remain outside of required clearance distances or that may pose a hazard to electric facilities before the next year's patrol. Approximately 80 percent of the routine

Incidental Take Permit  
No. 2081-2015-031-03

PACIFIC GAS & ELECTRIC COMPANY  
PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT

maintenance is pruning the trees to a clearance level dependent on voltage and regulations, and approximately 20 percent is removal of small in-growth or hazard trees. This activity focuses on tree work outside of the minimum clearance distances on distribution line sections that have a history of high numbers of tree-related outages. This activity affects larger portions of the tree than other routine vegetation maintenance work. Permittee prioritizes the distribution line sections that have the worst performance, as measured by either a high number of customers who have been without power or a high number of repeat outages. Once a line section is prioritized, personnel analyze the outage data to determine the pattern of tree decay that has historically caused vegetation-related outages and a vegetation specific management prescription is written for trees along those line sections.

### *Enhanced Vegetation Management*

This activity is currently focused on lines within high fire-threat areas, which are those noted as tier 2 or tier 3 on the CPUC fire threat maps. Work includes maintaining expanded clearances, eliminating overhanging branches, and removing hazard trees to reduce fire risk and ensure system reliability, as well as creation of fire defense zones in partnership with customers. Hazard trees are defined as “dead trees, old decadent or rotten trees, trees weakened by decay or disease, and live trees or portions thereof that are leaning toward the line which may contact the line from the side or may fall on the line” as determined by a forester or arborist and further requires that the hazard trees “shall be felled, cut, or trimmed so as to remove such hazard”.

### ***E10b. Pole Clearing***

Permittee performs pole clearing around subject poles on its overhead distribution and transmission facilities to maintain compliance with Public Resource Code Section 4292.

There are two subcategories of pole clearing: maintenance of previously cleared poles and maintenance of new poles that have never been cleared of vegetation. Permittee implements both subcategories of clearing annually. Vegetation clearing for existing poles applies to vegetation that has grown over the course of the year (e.g., grasses, forbs, saplings, and branches). Vegetation clearing for new poles requires the removal of all vegetation within 10 feet of a pole that could propagate a fire.

Approximately 100 new subject poles are cleared of vegetation in a 10-foot radius around the pole annually in natural vegetation.

### ***E10c. Tree Removal—Small Groups***

When determined by Permittee—considering tree species, growth rates, site conditions, landowner notification, and appropriate permits—Permittee removes small groups of trees growing below overhead transmission and distribution facilities while conducting routine maintenance activities (E10a).

Trees are removed in groups affecting approximately 0.1 acre (4,350 square feet) at approximately 25 locations each year. Trees are cut off at ground level, with the roots and stump left in place.

#### ***E10d. Tree Removal—Transmission ROW Clearing***

Permittee uses an integrated vegetation management program to manage incompatible vegetation (tall growing plant communities) and maintain low-growing diverse plant communities that are compatible with transmission ROWs. Permittee vegetation management staff prioritizes lines and line sections to be worked annually. Prioritization is based on a NERC-regulated line, line criticality, level of risk of an outage, vegetation density, and property ownership. Goals of transmission ROW vegetation management also include protecting the transmission system in the event of a fire, as well as preventing vegetation-caused fires.

NERC requires transmission owners to have a documented Transmission Vegetation Management Plan (TVMP). The TVMP needs to describe how transmission owners conduct work on their applicable active transmission line ROWs to prevent sustained outages due to vegetation coming into contact with conductors and causing vegetation-related outages leading to blackouts or cascading outages (Standard FAC-003-2). Compliance with the standard is mandatory, and if a transmission owner allows vegetation to encroach into the Minimum Vegetation Clearance Distance (imminent threat), steep fines can be levied. Permittee's TVMP is associated with ROWs for its critical transmission lines, which operate at 200 kV or more, and for some transmission line ROWs, which operate at less than 200 kV.

The first step of the integrated vegetation management program is to clear the ROW of incompatible vegetation (e.g., any vegetation growing within the ROW that has the potential to grow or fall into Permittee minimum clearance distances). ROW clearing typically is accomplished either mechanically or manually. However, because cutting or mowing can stimulate resprouting of incompatible vegetation, Permittee vegetation management staff monitors the ROW for resprouting and reinvasion by incompatible vegetation. When resprouting and reinvasion does occur, staff manages the ROW to achieve the desired outcome. A number of factors are considered in selecting and implementing the appropriate management method or methods.

This covered activity is defined by those instances in which vegetation management is necessary as a distinct and separate action. The long-term goal of an integrated vegetation management program in the transmission ROW is to convert tall-growing plant communities to low-growing communities. Low-growing shrubs, grasslands, or plants are preferred at the belly of the span, which is the middle 50 percent of the line between towers or poles. Vegetation may be taller near towers. Management toward low-growing communities can be accomplished over a period of many years by selectively controlling incompatible plants while preserving low-growing shrubs, grasses, and plants. With proper management, the low-growing vegetation eventually can dominate the ROW and suppress the growth of the tall-growing vegetation, thereby reducing the need for future treatments.



ROW management is based on the concept of creating wire zones and border zones. The *wire zone*, which comprises the ROW area beneath the transmission wire plus 10 feet on either side, is managed for low-growing shrub-forb-grass plant communities (early successional). The *border zone*, which extends from the wire zone to the edge of the ROW, is managed for taller shrubs and brush communities (transition zone). This management concept is depicted in Figure 2.

At approximately 10 locations per year, Permittee removes 1 mile of vegetation in a 25-foot-wide area under the belly of the span and prunes the remaining vegetation in a 75-foot-wide area along all transmission lines from 115 kV to 500 kV. This estimated area is based on an assumption that Permittee removes most trees from under the belly of the span, and, depending on clearance requirements, leaves the trees near towers. In riparian areas, vegetation management is anticipated to be more targeted. Riparian vegetation clearing will not extend beyond 1,000 feet in one continuous area, and 1,000 feet of clearing is anticipated only once every 3 to 5 years. Riparian removals for this activity are illustrated in Figure 3 and Figure 4. Low-growing trees that stay below the clearance distance height are compatible and are retained. If the trees are incompatible then they will be removed; however, the compatible understory vegetation will be retained.

#### ***E10e. Tower Cage Clearing***

Permittee performs vegetation management around poles and towers on its overhead transmission facilities to maintain the visibility necessary to inspect the footings for structural integrity as required by the CAISO Transmission Maintenance Agreement. Managing vegetation around poles and towers also keeps the interior of the tower clear of woody vegetation. Vegetation management includes patrol of poles and towers and removal of all trees, tree seedlings, and any material that obstructs the ability to visually inspect the tower and pole footings. The work is scheduled throughout the year and the work type depends on the plant material to be removed. Vegetation management involves cutting vegetation with string trimmers or chainsaws, and treatment with herbicides to prevent regrowth, where appropriate. Permittee performs this activity approximately 80 times per year. Approximately 10 percent of the time (eight times annually), vegetation is pruned or removed within a 1,600-square-foot area.

#### ***E10f. Fee Strip Maintenance***

To comply with city and county ordinances for fuels reduction and beautification, Permittee performs weed abatement work on Permittee-owned land under electric transmission facilities approximately once a year along a one-mile ROW corridor. Work type and timing varies depending on requirements defined in each local ordinance. Ongoing vegetation management includes removing material by chemical, mechanical, or physical methods, depending on the site conditions, environmental considerations, types of vegetation, and size of the area. Methods may include mowing, discing, and using string trimmers.

### ***E11a. Wood Pole Test and Treat - Inspection and Maintenance***

Permittee identifies the line segments for inspection and testing based on age and condition of the utility assets. Staff evaluates all transmission and distribution wood poles that are at least 10 years old to determine whether they are suitable candidates for replacement, trussing, stubbing, or fiber wrapping. Within a 3-foot radius around the pole, construction crews excavate 20 inches of soil and bore a minimum of three 9/16 -inch holes at 45° angles to the axis of the pole. Each successive boring is 120° to the right and 12 inches above the previous bore. The shell thickness and circumference of the pole are used to determine whether the pole is a candidate for replacement or reinforcement. Inspection and maintenance takes place frequently, approximately 60,000 times per year. Approximately 10 percent (6,000) of these poles are in nonurban areas.

### ***E11b. Wood Pole Test and Treat - Reinforcement***

Approximately 180 poles (or 3 percent of the 6,000 wood poles in non-urban areas) that Permittee inspects will need reinforcement. Staff determines the type of reinforcement method—stubbing or trussing—after reviewing the testing results of an inspected line segment. Stubbing and trussing entail driving or setting a short steel truss or wood pole into the ground and attaching it to the existing pole to provide the support originally afforded by the pole butt. Fiber-wrapping is performed on poles that are not candidates for trussing or replacement. This entails fiber-wrapping the pole at or below ground level with a material that has been impregnated with preservatives to retard external deterioration of the pole. Excavation of soil within the 6-foot radius of the existing pole results in minor disturbance.

### **Minor New Construction**

#### ***G14. Gas Pressure Limiting Station Construction***

Human population densities determine the class location designations of pipelines. A change of class location designation may require Permittee to move or replace a pipeline with upgraded pipe to increase safety, as mandated by CPUC.

An alternative to replacing the pipeline is installing a PLS that lowers the pressure of the gas in the line. A typical PLS is located within or adjacent to the existing ROW and typically encompasses a footprint area of approximately 250 by 100 feet, including aboveground pipe and valve structures and a small control/monitoring building (usually 100 square feet) surrounded by security fencing. The control building houses pressure flow monitoring and SCADA equipment. The local distribution system or solar panel-charged batteries provide the electricity for the SCADA equipment. Installation of a PLS occurs approximately once every 5 years and involves excavating a pipeline joint. A construction corridor approximately 100 feet long by 100 feet wide and a laydown area approximately 100 by 100 feet may be required. In addition, the footprint of the PLS is approximately 250 by 100 feet, including fencing. In all cases, the work would disturb less than one acre of land. As part of the PLS installation, natural gas is cleared from a portion of the pipeline using forced air. Once the PLS is in place, the pipeline must be hydrostatically tested.

### ***E14. Minor Substation Expansion***

Substations typically are constructed close to residential, commercial, or industrial development but may be located in areas surrounded by agricultural or natural vegetation. Substation expansions would occur adjacent to existing substations. Although this activity is infrequent, Permittee estimates up to 3 acres of permanent potential habitat loss per substation expansion attributable to the substation footprint. This construction footprint may be required for additional transformers, fencing, and new distribution line outlets. The expansion area also may be used for setbacks, landscaping, and access. Permittee grades, paves, or surfaces the substation sites and fences the area for safety and security reasons. This ITP covers five electric substation expansions over the 30-year permit term. Permitting and environmental review by the CPUC is not required when Permittee already owns the property or where the high-side voltage does not exceed 50 kV.

### ***E15. Underground Line Construction***

Underground line construction is conducted predominately in roadways in urban and high fire threat areas settings. For both transmission and distribution lines, underground cable installation is accomplished using a cut-and-cover construction method (open trenching) for the underground power line, duct banks, and splice vaults. For this activity, the construction specifications for a 115 kV transmission line were considered as the average size; however, construction area dimensions vary with the voltage capacity of the line and are frequently smaller than those necessary for constructing a 115 kV line. Although this width varies, typically, a minimum access width of 65 feet is required to allow for the trench excavation and construction of the duct bank. The activity construction area length and length of time trenches remain open varies based on the length of the line, the location of the work, and other variables. Open trenches are covered at the end of each workday or when crews are not onsite during active operations, and filled generally within 1-week and as soon as possible once facilities are installed. During construction, trench excavation spoil is removed and stored. If hazardous material is present, construction crews haul the material off site and dispose of it appropriately. Permittee constructs underground lines within undisturbed natural habitat about once every 10 years. Under CPUC G.O. 131-D, environmental review by the CPUC is not required for conversion of existing overhead lines to underground facilities, for similar work in existing franchise, or for other work that is exempt under CPUC G.O. 131-D.

#### ***Duct Bank Installation***

As the trench for the underground cable is completed, the crew installs the cable conduit, reinforcement bar, ground wire, and concrete conduit encasement duct bank. The duct bank typically consists of polyvinyl chloride (PVC) conduits that contain the underground cables. The typical trench dimensions for installation of a single circuit are approximately 3 feet wide by 5 feet deep; however, trench depths vary, depending on soil stability and the presence of existing substructures. Dewatering, if necessary because of a high groundwater table, is conducted using a pump or well-pointing to remove water from the trench. Construction crews then pump the water into baker tanks and haul it away for proper disposal. Dewatering

discharge would not be directed to the land or to water bodies near the work site. Once the PVC conduits are installed, thermal-select or controlled backfill is imported, placed, and compacted. A road base backfill or slurry concrete cap then is installed.

### *Vault Installation*

Vaults are installed in urban areas within public utility easements at intervals that vary with the voltage capacity of the conductor. The vaults are used initially to pull the cables through the conduits and splice cables together. During operation, vaults provide access to the underground cables for maintenance inspections and repairs. Vaults are constructed of prefabricated steel reinforced concrete and are typically about 20 feet long, 10 feet wide, and 8 feet deep. The total excavation footprint for a vault is typically about 22 feet long, 12 feet wide, and 10 feet deep.

### *Cable Pulling, Splicing, and Termination*

After installation of the conduit, cables are installed in the duct banks. Each cable segment is pulled into the duct bank, spliced at each of the vaults along the route, and terminated at the bus structures (switchboard) inside the switchyards. To pull the cable through the duct bank, a cable reel is placed at one end and a pulling rig is placed at the other. With a fish line, a larger wire rope is pulled into the duct. The wire rope is then attached to cable-pulling eyes for pulling. To ease pulling tensions, a lubricant is applied to the cable as it enters the duct. Cables are spliced at vaults after they are completely pulled through the ducts. A splice trailer is positioned directly above the vault manhole openings for each access. At each end, cables will rise out of the ground on a transition pole and terminate at a bus structure in the switchyards.

## **Habitat Conservation, Management and Enhancement**

Permittee will conserve, manage, and enhance habitat for the ITP-covered species: California tiger salamander, Alameda whipsnake, and California freshwater shrimp. Permittee will provide an endowment for mitigation lands to fund the management needs of conserved properties. Activities required for land management typically include vehicle use in or near upland habitat, regular pedestrian surveys or sampling, installation and maintenance of fencing, and use of handheld equipment to manage vegetation and invasive species and otherwise enhance or restore habitat. Where possible, Permittee will identify opportunities to enhance conservation lands for the benefit of the covered species. Enhancement actions will include activities such as wetland or breeding pond creation and maintenance, stream restoration, and invasive species management. In the course of acquiring, managing, monitoring, or enhancing mitigation lands consistent with a CDFW-approved habitat conservation, management, and/or enhancement plan, take of covered species could result.

## **Species and Activities Not Covered Under this ITP**

Permittee has elected not to receive take coverage for the following CESA-listed species whose habitats overlap with those of the Covered Species: Swainson's hawk, San Joaquin kit

Incidental Take Permit  
No. 2081-2015-031-03

PACIFIC GAS & ELECTRIC COMPANY  
PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT

fox, northern spotted owl, marbled murrelet, and coho salmon – southern Oregon/northern California Ecologically Significant Unit. Any activity that may result in take of these species will require additional consultation with CDFW and take of these species is not authorized under this ITP. In addition, vegetation management through use of aerial equipment was neither contemplated in the CEQA document for the Project nor in this ITP and is not an authorized activity.

## VI. Covered Species Subject to Take Authorization Provided by this ITP:

This ITP covers the following species:

<u>Name</u>	<u>CESA Status</u> <sup>3</sup>
1. California tiger salamander ( <i>Ambystoma californiense</i> )	Threatened <sup>4</sup>
2. Alameda whipsnake ( <i>Masticophis lateralis euryxanthus</i> )	Threatened <sup>5</sup>
3. California freshwater shrimp ( <i>Syncaris pacifica</i> )	Endangered <sup>6</sup>

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

## VII. Impacts of the Taking on Covered Species:

Project activities and their resulting impacts are expected to result in the incidental take of individuals of the Covered Species. The activities described above are expected to result in incidental take of individuals of the Covered Species and include grading; boring; vegetation management such as tree removal or limbing, mowing, discing; materials and spoils storage; equipment storage; equipment and personnel mobilization; excavation; fill placement; clearing and grubbing; dewatering; establishment of temporary access routes; and other activities, such as mitigation lands management and enhancement (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 crushing during excavation, trenching, movement of vehicles and materials, entombing in underground burrows during construction activities, displacement into inhospitable environs, desiccation via entrapment and blocking of movement corridors or dewatering. Incidental take of individuals of the Covered Species may also occur from the Covered Activities in the form of pursue, catch, capture, or attempt to do so of the Covered Species from salvage efforts including capture and relocation. The areas where authorized take of the Covered Species is expected to occur include: breeding habitat, upland habitat, Alameda whipsnake core habitat (i.e., areas of concentrated use; habitat in core areas primarily consists of scrub communities such as coastal scrub, coyote brush

<sup>3</sup> Under CESA, a species may be on the list of endangered species, the list of threatened species, or the list of candidate species.

<sup>4</sup>See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(3)(G).

<sup>5</sup>See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(4)(D).

<sup>6</sup>See Cal. Code Regs. tit. 14 § 670.5, subd. (a)(1)(A).

scrub, mixed chaparral, and chamise chaparral but may also include immediately adjacent grassland), and other areas where the Covered Species can be found that are within or immediately adjacent to existing Permittee's ROWs that have existing utility infrastructure in place where ongoing operations and maintenance activities have historically taken place in Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties within Covered Species habitat (collectively, the Project Area).

The estimated extent of the impacts from Covered Activities within the Permit Area is dependent on where Covered Species and the habitats on which they depend occur. Given the large geographic scope of the Permit Area and Covered Activities, Permittee has developed predictive spatial models to map Covered Species habitats to quantify impacts for individual Covered activities. (For spatial model development methodology see ATTACHMENT 1). In addition, the models have been used to map Hot Zones, essentially areas containing a known localized population of Covered Species with a small and well-defined range and where species would be most likely to be affected by Covered Activities. Hot Zones were created for California freshwater shrimp and California tiger salamander (in the Santa Rosa Plain, a portion of Solano County, and Palo Alto). These Hot Zones are mapped and incorporated into PG&E's GIS system for identification of such habitats and prescription of conservation measures.

There are 1,636 acres of modeled California freshwater shrimp habitat within the Permit Area of which 72 acres fall within the Project Area. There are 31,355 acres of modeled habitat for the Sonoma County Distinct Population Segment (DPS) population of California tiger salamander, a distinct and geographically isolated population, and 2,404 of those acres fall within the Project Area. There are 1,149,805 acres of modeled habitat for the Central California DPS of California tiger salamander within the rest of the Permit Area counties covered by this ITP, and 41,151 of those acres fall within the Project Area. There are 335,452 acres of modeled habitat for Alameda whipsnake and 10,804 of those acres falls within the Project Area.

The Project is expected to cause the permanent loss of up to 399.3 acres of habitat for the Covered Species, and temporary loss of 4,319 acres of habitat for the Covered Species. Table 1, below, summarizes the total allowed acreage disturbance to Covered Species habitats by impact type. 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 tunneling, capture, and relocation, and long-term effects due to increased pollution, displacement from preferred habitat, increased competition for food and space, and increased vulnerability to predation.

**Table 1. Maximum Acres of Habitat Loss by Impacts Type and Covered Species Authorized by the ITP**

Covered Species Habitat	Habitat Disturbance (Acres)	
	Permanent (30-year Permit Term)	Temporary (30-year Permit Term)
California freshwater shrimp	0.3	2
California tiger salamander (outside of Sonoma County)		
Potential breeding habitat	2	25
Potential upland habitat	298	3,800
California tiger salamander (Sonoma County)	13	80
Alameda whipsnake		
Core	34	13
Perimeter Core	25	70
Movement	27	329

Covered Activities are classified as either small (i.e. affecting less than 0.1 acres), or large (i.e. affecting 0.1 acres or greater). Evaluation of impacts from small Covered Activities will use a modeled habitat approach as an alternative to on-the-ground biological surveys and habitat determinations under most circumstances. Areas containing extant populations of Covered Species where there is a high likelihood of take are defined as Hot Zones. The Permittee maintains a Geographic Information Systems map of Hot Zones that are updated periodically based on current data, observations and with input from both CDFW and U.S. Fish and Wildlife Service.

#### **VIII. Incidental Take Authorization of Covered Species:**

This ITP authorizes incidental take of the Covered Species and only the Covered Species. With respect to incidental take of the Covered Species, CDFW authorizes the Permittee, its employees, contractors, and agents to take Covered Species incidentally in carrying out the Covered Activities, subject to the limitations described in this section and the Conditions of Approval identified below. This ITP does not authorize take of Covered Species from activities outside the scope of the Covered Activities, take of Covered Species outside of the

Incidental Take Permit  
No. 2081-2015-031-03  
**PACIFIC GAS & ELECTRIC COMPANY**  
**PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT**

Project Area, take of Covered Species resulting from violation of this ITP, or intentional take of Covered Species except for capture and relocation of Covered Species as authorized by this ITP.

## **IX. 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. 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 Biological Resources section of the Environmental Impact Report (SCH No.: 2017122028) certified by California Department of Fish and Wildlife on July 6, 2022 as lead agency for the Project pursuant to the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.).
- 3. ESA Compliance:** Permittee shall implement and adhere to the terms and conditions related to the Covered Species in the Pacific Gas and Electric Company Bay Area Operations and Maintenance Habitat Conservation Plan (08ESMF00-2013-F-0102-04) for the Project pursuant to the Federal Endangered Species Act (ESA). For purposes of this ITP, where the terms and conditions for the Covered Species in the federal authorization are less protective of the Covered Species or otherwise conflict with this ITP, the conditions of approval set forth in this ITP shall control.
- 4. ITP Time Frame Compliance:** Permittee shall fully implement and adhere to the conditions of this ITP within the time frames set forth below and as set forth in the Mitigation Monitoring and Reporting Program (MMRP), which is included as Attachment 2 to this ITP.

## **5. General Provisions:**

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



5.2. Designated Biologist(s), General Biological Monitor(s), and/or Veterinarian(s) Requirements and Approvals. Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information of proposed Designated Biologist(s) using the Biologist Resume Form (Attachment 3) or another format containing the same information at least 15 days before starting Covered Activities in the year 2022. Permittee shall provide a list prior to January 31 every year thereafter seeking annual re-approval of Designated Biologists and Biologist Resume Forms for proposed, and/or submit Biologist Resume Forms for new Designated Biologist approval requests. Permittee shall ensure that the Designated Biologist(s) and General Biological Monitor(s) are knowledgeable and experienced in the biology, natural history, and for Designated Biologists, collecting and handling of the Covered Species. The Designated Biologist(s) and General Biological Monitor(s) 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 as required by this ITP. Permittee shall obtain CDFW approval of the Designated Biologist(s) in writing before starting Covered Activities as prescribed in this Condition of Approval and shall also obtain approval in advance, in writing, if the Designated Biologist(s) must be changed. Permittee shall also provide the resume of General Biological Monitors upon request by CDFW.

5.2.1. Designated Biologist(s). Permittee shall ensure that each Designated Biologist is knowledgeable and experienced in the biology, natural history, collecting, and handling of the applicable Covered Species. The Designated Biologist may be approved by CDFW on a species-specific basis, and in those cases will only be authorized to complete surveys and monitoring of the Covered Species for which they are specifically approved. The Designated Biologists shall be responsible for conducting all activities specific to a Covered Species as prescribed in this ITP and any handling or other actions necessary if individuals of Covered Species are found in the Project Area where Covered Activities are being conducted including temporary staging areas and equipment mobilization routes in Covered Species habitat (Work Area). The Designated Biologists shall be responsible for supervising the General Biological Monitors. Please note that the term Designated Biologist is interchangeable with the term Qualified Biologist as defined in the *Pacific Gas and Electric Company Bay Area Operations and Maintenance Incidental Take Permit Environmental Impact Report* (SCH No. 2017122028).

5.2.2. General Biological Monitor(s). General Biological Monitors are biologists with general roles and technical responsibilities. General Biological Monitors may be used instead of Designated Biologist(s) only for general monitoring activities within each discreet Work Area under the direction of the Designated Biologist(s). General Biological Monitors must have a 4-year degree in wildlife biology or related field, have a minimum, of 6 months of construction monitoring experience, and be experienced in the general biology, natural history, and identification of the applicable Covered Species. The General Biological

Incidental Take Permit  
No. 2081-2015-031-03

PACIFIC GAS & ELECTRIC COMPANY  
PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT

Monitors shall receive training and direction from the Designated Biologist(s) for each task performed. The General Biological Monitor(s) shall communicate daily with the Designated Biologist(s) and shall immediately report any occurrence of Covered Species within the Project Area or buffer areas, as well as any apparent non-compliance with any provision of this ITP.

- 5.3. Biological Monitor Authority. To ensure compliance with the Conditions of Approval of this ITP, all Designated Biologists and General Biological Monitors shall immediately stop any activity, when safe to do so, 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 each Work Area and otherwise facilitate the Designated Biologists and General Biological Monitors in the performance of his/her duties. If a Designated Biologist or General Biological Monitor are either unable to comply with the ITP or prevented from performing required ITP compliance, then they 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 Designated Biologists or Biological Monitors 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 result in CDFW taking actions to prevent or remedy a violation of this ITP.
- 5.4. Education Program. Permittee shall conduct an education program for all persons employed or otherwise working in the Project Area before performing any work. The program shall consist of a presentation from the Designated Biologist or General Biological Monitor that includes a discussion of the biology and general behavior of the Covered Species, information about the distribution and habitat needs of the Covered Species, sensitivity of the Covered Species to human activities, its status pursuant to CESA including legal protection, recovery efforts, penalties for violations and Project-specific protective measures described in this ITP. Permittee shall provide interpretation for non-English speaking workers, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project Area. Upon completion of the education program, employees or contractors shall sign a form or equivalent acknowledging that 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 or contractors that will be conducting work in the Project Area. See also Conditions of Approval for activity specific Designated Biologist tailboards.
- 5.5. Covered Activity Monitoring Documentation. When biological monitoring is required per Condition of Approval 6.4 (Compliance Monitoring) or when required for conducting Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement) and minor new construction in modeled habitat, the

Incidental Take Permit  
No. 2081-2015-031-03

PACIFIC GAS & ELECTRIC COMPANY  
PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT

Monitoring Biologist(s) shall maintain monitoring documentation on-site in either hard copy or digital format throughout the duration of work, which shall include a copy of this ITP with attachments. Permittee shall ensure a copy of the monitoring documentation is available for review at the Work Area upon request by CDFW.

- 5.6. Trash Abatement. Permittee shall initiate a trash abatement program before starting Covered Activities and shall continue the program for the duration of the Project. Permittee shall ensure that trash and food items are contained in animal-proof containers and removed, ideally at daily intervals but at least once a week, to avoid attracting opportunistic predators such as ravens, coyotes, and feral dogs.
- 5.7. Dust Control. Permittee shall implement dust control measures during Covered Activities to facilitate visibility for monitoring of the Covered Species by Biological Monitors and crews. Permittee shall keep the amount of water used to the minimum amount needed and shall not allow water to form puddles.
- 5.8. Prohibition of Firearms. Firearms and domestic dogs shall be prohibited in each Work Area as well as from site access routes during construction and development of the Project, except those firearms and domestic dogs that are in the possession of authorized security personnel or local, state, or federal law enforcement officials.
- 5.9. Erosion Control. Permittee shall implement and install all erosion and sediment control measures and devices prior to conducting Covered Activities that include grading, excavation, or placement of fill. Permittee shall utilize erosion control measures where sediment runoff from exposed slopes or surfaces could enter a drainage, stream, wetland or pond. Permittee shall repair and/or replace ineffective measures or contrivances whose integrity has been compromised immediately.
- 5.10. 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.
- 5.11. Clean Vehicles. Permittee shall implement the following for Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement) and minor new construction that involve ground disturbance:
  - 5.11.1. Mud and/or accumulated soils shall be removed from equipment and vehicles to the maximum extent practicable.
  - 5.11.2. Vehicles and equipment shall be cleaned or washed before entering a new work site.
  - 5.11.3. A log shall be kept for each work site and shall be completed to document each cleaning or washing of vehicles or equipment before entering each new work site.

- 5.11.4. Vehicles shall be staged and stored on paved or cleared areas to the extent practicable.
- 5.11.5. Certified weed-free mulch, straw, hay bales, or equivalent materials shall be used where necessary.
- 5.12. Delineation and Avoidance of Sensitive Habitat Features. For Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement) and minor new construction, a Designated Biologist shall clearly identify sensitive resources that crews must avoid for the duration of the activities with posted signs, posting stakes, flags, and/or rope or cord, and place fencing as necessary to minimize or avoid disturbance.
- 5.13. Work Area Access. To the extent practicable, project related personnel shall access a Work Area using existing routes, and shall not cross Covered Species' habitat outside of or en route to a Work Area. Permittee shall restrict Project-related vehicle traffic to established roads, staging, and parking areas to the maximum extent practicable. Permittee shall ensure that vehicle speeds do not exceed 15 miles per hour to avoid Covered Species on or traversing the roads.
- 5.14. Staging Areas. Permittee shall confine all Project-related parking, storage areas, laydown sites, equipment storage, and any other surface-disturbing activities to a Work Area using, to the extent possible, previously disturbed areas. No staging areas shall be located in chaparral or scrub habitats, over rock outcroppings or within 300 feet of a stock pond or vernal pool.
- 5.15. 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 properly contain and dispose of any unused or leftover hazardous products off-site.
- 5.16. Pesticides. At no time shall Permittee utilize broadcast baiting of rodenticides within the Project Area. When pesticides are used, PG&E shall follow all applicable state and federal laws, County Agricultural Commissioner regulations, label requirements, and when applicable, according to requirements in habitat management plans associated with Condition of Approval 8.5 (Habitat Acquisition and Protection).
- 5.17. CDFW Access. Permittee shall provide CDFW staff with reasonable access to Work Areas 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.
- 5.18. Refuse Removal. Upon completion of Covered Activities within a Work Area, Permittee shall remove from, 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.

- 5.19. Extent of Hardscape in Streams. Permittee shall limit the extent of concrete, Ercon mat, or concrete pillow systems within a watercourse to a maximum length of 100 feet and a maximum width of 50 feet at any one location unless otherwise approved in writing by CDFW.

## 6. Monitoring, Notification and Reporting Provisions:

- 6.1. Notifications Before Commencement of Certain Activities. The Designated Representative shall provide notification (Attachment 4) to CDFW for the following Covered Activities when the activity occurs outside of urban areas in modeled habitat and shall document compliance with all pre-activity Conditions of Approval before starting Covered Activities:

- Minor New Construction
- **E9a** (Reconductoring);
- **G9** (Pipeline Lowering);
- **G11** (Pipeline Replacement);
- **E15** (Underground Line Construction) when the activity occurs outside of existing roadways or urban areas;
- **G10** (Pipeline Coating Replacement) – when excavation or trenching needed in wetlands or streams;
- **G13b** (Pipeline Access Road Maintenance) – when the activity includes culvert or headwall replacement;
- Construction of temporary or permanent access roads in modeled or potential Covered Species habitats;
- Covered Activities that occur within or over California freshwater shrimp habitat and those that may affect undercut banks and the trees that support undercut banks within shrimp habitat;
- All Covered Activities in wetted potential CTS breeding habitat;
- Covered Activities that include bridge replacement or culvert replacements in modeled California freshwater shrimp or California tiger salamander habitats.

- Other Covered Activities that may result in ground disturbance of 1 acre or greater in Covered Species habitats.

Notifications shall be submitted at least 45 days in advance and prior to “release to construction” by the Designated Representative for review by CDFW. Within 14 days of request by CDFW and if not possible then at least 5 days prior to the beginning of the Covered Activity, Permittee shall provide any requested additional information and provide access for a CDFW field review of the proposed Work Area. The proposed Covered Activity may not commence until Permittee has provided the additional information to the specifications of the request by CDFW, or until field review access has been provided to CDFW. If there continues to be unresolved issues or questions, then Permittee or CDFW may request to meet and confer within 10 business of the request to resolve any outstanding issues. CDFW retains the right to determine whether a proposed Covered Activity will not be provided coverage under this ITP.

Notification for Covered Activities listed in Condition of Approval 6.1 that are identified as “Emergency Work” (i.e., work that requires immediate action due to a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services) shall be provided within 48 hours of identification. Regulatory compliance deadlines or actions that are to be taken in response to violation notices do not qualify as “Emergency Work”.

- 6.2. Environmental Review, Planning and Screening Process. Permittee shall use an Automated Environmental Assessment (AEA) screening tool to screen many of the small electric (e.g., pole replacements) and small gas Covered Activities. The AEA tool shall automatically use a variety of current data layers (e.g., waterways, CNDDDB, serpentine soils, conservation easements, critical habitat, kit fox dens, levees, protected lands, anadromous fish streams, and vernal pools) and then release to construction if no data layers are flagged for manual review. If any AEA data layers are flagged for manual review, the activity will be evaluated further by a land planner or biologist before being released to construction. Modeled habitat and Hot Zones shall be integrated into the AEA screening process, and a Covered Activity that falls within modeled habitat or a Hot Zone shall be flagged for review. A team of land planners, biologists, foresters, arborists, and tree inspectors shall conduct environmental review of vegetation management covered activities before work in the field commences. Impacted acreages of Covered Species’ habitats shall also be calculated either using estimates from modeled habitat or ground-truthed. The Permittee shall also adhere to and implement the Environmental Review, Planning and Screening Process (see Attachment 5) for each Covered Activity. At a minimum, Permittee’s HCP Implementation Staff shall first review, plan, and screen Covered Activities. After the completion of any required surveys, studies, or analyses, the Permittee shall develop a release-to-construction memorandum that identifies the

natural resource protection measures that will be implemented in addition to relevant Conditions of Approval required by this ITP.

6.3. Notification of Non-compliance. The Designated Representative shall immediately notify CDFW if the Permittee is not in compliance with any Condition of Approval of this ITP, including but not limited to any actual or anticipated failure to implement measures within the time periods indicated in this ITP and/or the MMRP. The Designated Representative shall follow up within 72 hours with a written report to CDFW describing, in detail, any non-compliance with this ITP and suggested measures to remedy the situation.

6.4. General Compliance Monitoring. The Designated Biologist shall be on-site:

- Daily when Covered Species are encountered within a Work Area;
- At the determination of the Designated Biologist, when Covered Species are relocated outside a Work Area to monitor and assess relocation success;
- When conducting Covered Activities within 500 meters of a known or suspected California tiger salamander (CTS) breeding pond that will result in displacement of soil to a depth of 3-inches or greater and over an area of 0.1 acres or greater, during the clearing and grubbing phase and when conducting any ground disturbing activities;
- All Covered Activities that may directly affect (e.g., tree work) California freshwater shrimp habitat;
- When required by species-specific Conditions of Approval below.

A Biological Monitor shall be on-site:

- Daily when E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and minor new construction activities are conducted in modeled habitat;
- G10 (Pipeline Coating Replacement) when excavation or trenching occurs in wetlands or streams;
- When Covered Activities with a Work Area equal to or greater than 0.1 acres are conducted during rain events in modeled California tiger salamander habitat unless otherwise approved by CDFW in writing;
- When required by species-specific Conditions of Approval below.

For Covered Activities in Covered Species modeled habitat that require work over a period of two weeks or greater, a General Biological Monitor shall conduct

compliance inspections, at a minimum, once every week after clearing, grubbing, and grading are completed and during periods of inactivity. The General Biological Monitor 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 pre-designated Project Area(s).

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

- 6.5. Quality Assurance Check and Updates to Covered Species Modeled Habitat Maps. During the first year of ITP implementation, Permittee and CDFW shall coordinate to perform a quality assurance check and update as necessary the habitat models for Covered Species to ensure the spatial data accurately represent the modeled habitats available for the Covered Species. Thereafter, Permittee or CDFW may propose updates to habitat models for Covered Species to ensure the output accurately represents the habitat available for the Covered Species in coordination with, and as approved by, CDFW and the USFWS. For example, if Permittee receives better wetland data for Santa Rosa Plain or Solano County, this data can be integrated to better assist Permittee in avoiding wetland habitats.
- 6.6. Annual Status Report. Permittee shall provide CDFW with an Annual Status Report (ASR) no later than June 30 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) Biologist compliance monitoring notes/data sheets recorded for the year; (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 including observation reports to the California Natural Diversity Database (Condition of Approval 6.8); (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 including restoration of temporary impacts and return to baseline as prescribed in the

Incidental Take Permit  
No. 2081-2015-031-03

PACIFIC GAS & ELECTRIC COMPANY  
PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT



Vegetation Restoration Plan (Condition of Approval 8.8); (7) documentation that impacts categorized as temporary have achieved the established baseline; (8) information about other Project impacts on the Covered Species; (9) updates to the Pre-activity Notification Form as deemed necessary by CDFW or those that are mutually agreed upon by both CDFW and Permittee.

- 6.7. 5-Year Compliance Report. Permittee shall prepare and submit to CDFW a 5-year compliance report by June 30 each 5-year anniversary of the effective date of this ITP, as described in the Permit Term section of this ITP in addition to the information required in the Annual Status Report (Condition of Approval 6.6). CDFW and Permittee shall meet and confer to discuss the report and any ongoing challenges to successful ITP implementation.
- 6.8. CNDDDB Observations. The Designated Biologist or Permittee shall submit all observations of Covered Species to CDFW's California Natural Diversity Database within 60 calendar days of the observation and the Permittee shall include copies of the submitted forms with the next ASR or 5-year compliance report. If observations occur on lands not owned in fee title by Permittee, then Permittee may elect to inform the landowner of an observation. If the landowner objects to submission of the observation, then Permittee may elect to not submit.
- 6.9. Final Mitigation Report. Within 30 days of the ITP expiration date, Permittee shall provide CDFW with a Final Mitigation Report. The Permittee shall prepare the Final Mitigation Report which shall include, at a minimum: (1) a summary of all ASRs and 5-year compliance reports; (2) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species; (4) information about other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an assessment of the effectiveness of this ITP's Conditions of Approval in minimizing and fully mitigating Project impacts of the taking on Covered Species; (7) recommendations on how mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future projects on the Covered Species; and (8) any other pertinent information.
- 6.10. Notification of Take or Injury. Permittee shall immediately notify the Designated Biologist if a Covered Species is taken or injured by a Project-related activity, or if a Covered Species is otherwise found dead or injured within the vicinity of the Project. The Designated Biologist or Designated Representative shall provide initial notification to CDFW by calling the Regional Office at (707) 428-2002. The initial notification to CDFW shall include information regarding the location, species, and number of animals taken or injured and the ITP Number. Following initial notification, Permittee shall send CDFW a written report within two working days. The report shall include the date and time of the finding or incident, location of the animal or carcass, and if possible, provide a photograph, explanation as to cause of take or injury, and any other pertinent information.

**6.11. Temporary Impact Criteria.** The following criteria shall be used to define temporary impacts for the purposes of calculating mitigation requirements:

- 6.11.1. For areas less than one-acre, to be considered a temporary impact, the impacts must meet the following criteria: (1) returned to pre-activity conditions when compared to vegetation characteristics (i.e., percentage of cover by species, vegetation heights and species composition), on undisturbed lands adjacent to the Work Area; and (2) temporarily impacted areas must be restored within 12 months of impacts being initiated. Refer to Condition of Approval 8.8 for restoration and monitoring requirements.
- 6.11.2. For areas equal to or greater than 1-acre, to be considered a temporary impact, the impacts must meet the following criteria: (1) establishment and documentation of baseline conditions, including percentage of cover by species, vegetation heights and species composition, must be completed prior to impacts; (2) temporarily impacted areas must be restored to baseline conditions within 12 months of impacts being initiated. Refer to Condition of Approval 8.8 for restoration and monitoring requirements.

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

- 7.1. Equipment Fueling. No vehicles or heavy equipment will be refueled within 100 feet of a wetland, stream, or other waterway, or within 250 feet of vernal pools, unless secondary containment is used. The fueling operator must always stay with the fueling operation. Tanks may not be topped off. If refueling must be conducted closer to wetlands, construct a secondary containment area subject to review by an environmental field specialist and/or biologist. Permittee shall maintain spill prevention and cleanup equipment in refueling areas. Sufficient spill containment and cleanup equipment shall be present at all mobile, temporary, and permanent equipment fueling locations.
- 7.2. Lighting. Permittee shall ensure that all artificial outdoor lighting shall be limited to lighting for safety and security, and designed using Illuminating Engineering Society's design guidelines, International Dark-Sky Association-approved fixtures, or other industry standards that address lighting impacts. Lighting above ground level shall be directed downward or inward, where consistent with safety concerns, and shielding shall be utilized, where needed, to minimize light scatter off-site. Light fixtures shall have non-glare finishes that will not cause reflective daytime glare.
- 7.3. Covered Activities Hours. Construction activities shall cease 30 minutes before sunset and shall not begin prior to 30 minutes after sunrise, to the extent practicable. Emergency night work shall be limited in extent, duration, and brightness, to the extent feasible. For Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering),

Incidental Take Permit  
No. 2081-2015-031-03

PACIFIC GAS & ELECTRIC COMPANY  
PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT

G11 (Pipeline Replacement), and minor new construction, work may not occur at night during rain events in CTS habitat within 0.5 miles of known or potential breeding habitat between November 1 and April 30 unless otherwise authorized by CDFW. Covered Activities shall not occur at night for non-emergency work in California freshwater shrimp habitat any time of year unless otherwise authorized by CDFW.

- 7.4. Stored Materials Inspections. Workers shall thoroughly inspect for AWS and CTS in all construction pipe, culverts, or similar structures with a diameter of 7.6 centimeters (three inches) or greater that are stored for one or more overnight periods before the structure is subsequently moved, buried, or capped. If during inspection one of these animals is discovered inside the structure, workers shall notify the Biological Monitors) and allow the Covered Species to safely escape that section of the structure before moving and utilizing the structure or moved out of harm's way by a Designated Biologist.
- 7.5. Cover or Ramp Open Excavations. Trenches or pits shall be covered or equipped with an escape ramp if left overnight in Covered Species modeled habitat. Crews shall inspect any trench, pit, or hole every morning prior to conducting Covered Activities to ensure no individuals are trapped; if any animals are found staff shall contact the Designated Biologist(s) to identify whether it is a Covered Species and if so, it shall be moved out of harm's way by the Designated Biologist(s). If the animal is not a Covered Species, then a General Monitoring Biologist or other individual with wildlife handling experience in possession of any applicable handling permits may move it out of harm's way.
- 7.6. Spoils Stockpiles. Permittee shall ensure that soil stockpiles are placed where soil will not pass into wetlands or any other "waters of the state," in accordance with Fish and Game Code section 5650. Permittee shall cover and protect stockpiles to prevent soil erosion, including wind and rain. Spoils and shall be placed away from chaparral habitat, rock outcroppings, and concentrated ground squirrel, pocket gopher, or other small mammal burrows or habitat features suitable for use by the Covered Species as refugia habitat.
- 7.7. Screen or Cap Hollow Pipes or Posts. All hollow pipes or posts that are installed as part of Covered Activities, or encountered in a Work Area that the Permittee owns or is responsible for, that are above ground shall be capped, screened, or filled with material by Permittee prior to the end of the day in which installation occurs.
- 7.8. Equipment Inspection. Workers shall inspect for Covered Species under vehicles and equipment before the vehicles and equipment are moved. If a Covered Species is present, the worker shall notify the Biological Monitors and wait for the Covered Species to move unimpeded to a safe location. Alternatively, the Permittee shall contact a Designated Biologist to determine if they can safely move the Covered Species out of harm's way in compliance with this ITP.

- 7.9. No Barriers to Covered Species Movement. Permittee shall construct access routes such that there are no steep curbs, v-ditches, berms, straw wattles, or dikes that could prevent Covered Species from traversing through ROWs or from exiting roadways. If curbs/ berms/straw wattles are necessary for safety and/or surface runoff, Permittee shall design and construct them to allow Covered Species to move over them. Permittee shall modify or remove exclusion fencing at the request of Biological Monitors or CDFW staff that may impede Covered Species movements.

*California Tiger Salamander Specific Conditions*

- 7.10. California Tiger Salamander Mortality Reduction and Relocation Plan. Permittee shall prepare a CTS standardized mortality reduction and relocation plan (CTS Plan) that includes, but is not limited to, techniques to exclude salamanders from Work Areas; techniques to excavate burrows; and techniques to capture, handle, and relocate CTS safely if they are encountered in aquatic or upland habitats; and protocols for encounters with injured CTS. The CTS Plan shall also include information on materials to use, disease prevention, injuries, and nearby wildlife rehabilitation centers or veterinary facilities capable of evaluating or treating salamanders. The CTS Plan shall incorporate measures from the Fieldwork Code of Practice developed by the Declining Amphibian Populations Task Force to prevent disease transmission when working directly in aquatic habitat. Annual reports (see Condition of Approval 6.6) shall include a summary of the results of implementation of the CTS Plan. Covered Activities where CTS may be present shall not proceed until the CTS Plan is approved in writing by CDFW. Only the Designated Biologist(s) are authorized to handle or capture CTS. Any variance requests for an individual Covered Activity within a specified Work Area shall be approved in writing by CDFW. Upon request by either party, Permittee and CDFW shall meet and confer to update the CTS Plan, otherwise Permittee shall perform a scientific literature review and provide a list of in-line changes with the 5-year Compliance Report (Condition of Approval 6.7).
- 7.11. California Tiger Salamander Pre-Activity Clearance Surveys. When Covered Activities will result in ground disturbance in potential CTS aquatic habitat (seasonal or perennial), the Designated Biologist(s) shall perform a pre-activity clearance survey no more than 14 days prior to the start of Covered Activities. If Covered Activities will be conducted within 500 meters of a known or suspected CTS breeding pond that will result in displacement of soil to a depth of 3-inches or greater and over an area of 0.1 acres or greater, the Designated Biologist(s) shall perform a pre-activity clearance survey no more than 14 days prior to the start of Covered Activities. For Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and E14 (Minor Substation Expansion) in modeled habitat, the Designated Biologist(s) shall also conduct a pre-activity clearance survey. If a California tiger salamander in any life stage (adult, metamorph, larval, eggs, etc.) is encountered in a Work Area or at the recommendation of the Designated Biologist, Permittee shall implement the standardized mortality reduction and relocation plan (Condition of Approval 7.10). Pre-activity clearance surveys shall provide 100

Incidental Take Permit  
No. 2081-2015-031-03

PACIFIC GAS & ELECTRIC COMPANY  
PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT

percent visual coverage of a Work Area and a 50-foot buffer zone. All small mammal burrows within the Work Area and a 50-foot buffer zone shall be flagged to alert General Biological Monitors and work crews to their presence. Where feasible, an avoidance buffer of 50 feet or greater around active small mammal burrows shall be maintained. The Designated Biologist(s) shall submit a report documenting the results of the pre-construction surveys to CDFW within five days after performing the surveys. If any California tiger salamander are found within the Work Area or 50-foot buffer zone, the Designated Biologist will relocate them from the Work Area or buffer zone(s) in accordance with the CTS standardized mortality reduction and relocation plan (Condition of Approval 7.10).

**7.12. Work in or Adjacent to Aquatic Breeding Habitat.** A Designated Biologist shall be on-site to oversee any Covered Activities that occur within potential CTS breeding habitat (whether surface water is present or not). To the extent practicable, Permittee shall avoid impacts to potential or known CTS breeding habitat unless completely dry. If Covered Activities in wetted breeding habitat cannot be avoided, then the activities shall be performed under the direction of a Designated Biologist and in a manner consistent with the CTS Mortality Reduction and Relocation Plan. Permittee shall restrict placement of fill or other ground-disturbing activities within a 300-foot buffer from the edge of the ordinary high-water mark of known or potential aquatic breeding habitat to the extent practicable. However, if ground-disturbing work within the 300-foot buffer is necessary then a General Biological Monitor shall 1) oversee excavation of burrows that will be impacted by ground disturbing activities, 2) oversee placement of fill in a manner that avoids burrow entrances, and 3) shall be on-site during all ground-disturbing Covered Activities with the exception of vegetation management, pole replacements, patrols, or inspections. The Designated Biologist shall relocate any live California tiger salamander discovered during burrow excavation in accordance with the CTS Mortality Reduction and Relocation Plan (Condition of Approval 7.10).

**7.13. Avoid Vernal Pools in CTS Hot Zones.** Permittee shall avoid impacts to vernal pools to the extent practicable. For work that cannot avoid vernal pool impacts that are in CTS Hot Zones, Permittee shall conduct Covered Activities only when vernal pools are completely dry.

**7.14. California Tiger Salamander Protection during Upland Movements or Exclusion Fencing.** Permittee shall implement the following additional protective measures for Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and E14 (Minor Substation Expansion), as well as E15 (Underground Line Construction) when the activity occurs outside of existing roadways or urban areas, in CTS habitat within 0.5 mile of known or potential breeding habitat between November 1 and April 30:

**7.14.1.** Permittee shall not conduct Covered Activities (specified in 7.13) at night during rain events unless otherwise authorized by CDFW. The following day, crews will

check for CTS around tires, equipment, and materials before resuming work. If a CTS is found, the crew shall avoid the area and contact the Designated Biologist(s) for direction.

- 7.14.2. Prior to a rain event of 0.25 inches or greater within a 24-hour period, Permittee shall install exclusion fencing around the perimeter of Work Areas to prevent CTS movement into the Work Areas. Installation of the exclusion fence shall be overseen and directed by the Designated Biologist(s). The exclusion fence shall be buried a minimum of 4 inches below ground surface and equipped with one-way exits (if the Work Area still has burrows and has not been cleared of CTS) to avoid entrapment of CTS and other amphibians or reptiles within the fenced area. For every 100 feet of exclusion fencing, Permittee shall provide coverboards to provide shelter for CTS.
- 7.14.3. The exclusion fence shall be supported sufficiently to maintain its integrity under all conditions, such as wind and heavy rain, for the duration of the Covered Activities in the Work Area being fenced. The Designated Biologist(s) shall inspect the completed fencing prior to construction. General Biological Monitors shall check the exclusion fence at least once daily and maintain/repair the fence when necessary. Permittee shall install temporary exclusion fencing in a sequential manner that corresponds to the progression of Covered Activities as specified above within a Work Area. When exclusion fencing is not required to be installed simultaneously throughout a Work Area then it shall be installed for only the portion of a Work Area that is under active construction and removed immediately after the construction has ceased to prevent substantial impediments to CTS movement.
- 7.15. Discovery of California Tiger Salamander in Work Area(s). If a CTS, including body parts, is found by any person in a Work Area before or during Covered Activities, Permittee shall stop all work when safe to do so that could potentially injure CTS immediately until the Designated Biologist(s) can relocate the California tiger salamander following the California Tiger Salamander Mortality Reduction and Relocation Plan specified in Condition of Approval 7.10. Covered Activities may commence as directed by the Designated Biologist(s) including recommendation that General Biological Monitor(s) be present at the Work Area to monitor Covered Activities.
- 7.16. California Tiger Salamander Record of Handling. The Designated Biologist shall maintain a record of all CTS captures, relocations, and observations. Records shall include the following information: the date, time, and location of each occurrence using GPS; the name of the party that actually identified the CTS; circumstances of the incident; the general condition and health of each individual CTS; any diagnostic markings, sex, age (juvenile or adult); actions undertaken; and habitat description. The Permittee shall include this information in Annual Reports (Condition of Approval 6.6) and shall submit this information to CDFW.

### *Alameda Whipsnake Specific Conditions*

- 7.17. Alameda Whipsnake Pre-Activity Habitat Features Survey. Pre-construction surveys for Alameda whipsnake and sheltering and sunning habitat features (e.g., burrows, rocky outcrops, fallen trees, etc.) shall be conducted in modeled core and perimeter core habitat for Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and E14 (Minor Substation Expansion). (See also Condition of Approval 7.19 for survey requirements in core habitat). These surveys shall be conducted by a Designated Biologist no more than 30 calendar days prior to any initial ground disturbance. These surveys will consist of walking the work area and, if possible, any accessible adjacent areas within at least 50 feet of the work area. The Designated Biologist shall investigate potential cover sites when it is feasible and safe to do so. This includes thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, tree cavities, and debris. Sheltering, sunning, or other sensitive species features identified by the Designated Biologist shall be identified with flagging. Permittee shall avoid habitat features flagged by the Designated Biologist to the extent practicable. At the recommendation of the Designated Biologist, Permittee shall install an exclusionary barrier (Condition of Approval 7.18).
- 7.18. Exclusionary Barrier. Permittee shall install a temporary barrier, where feasible, to prevent the Covered Species from dispersing into the Work Area, including along construction access routes, prior to commencing any other Covered Activities. The barrier shall be installed immediately after the pre-construction surveys have been completed in accordance with Condition of Approval 7.17 above and shall consist of fencing at least 42 inches tall with 36 inches above the soil surface, designed with a lip to prevent the Covered Species from climbing over the barrier, and buried to a depth of six inches below the soil surface. The soil shall be compacted against both sides of the fence to prevent the Covered Species from gaining access. The stakes shall be placed on the inside of the fence. No gaps or holes are permitted in the fencing system except for access areas as required for vehicular and pedestrian traffic. The exit/entry points shall be constructed so that it is flush to the ground and so that the covered Species cannot access the Work Area. The barrier shall be designed to allow trapped individuals to leave the Work Area by installing one-way funnels, ramps, or other methods approved by CDFW. An alternative barrier design or directional treatment techniques in lieu of fencing may be used after receiving written authorization from CDFW. The Designated Biologist or General Monitoring Biologist shall inspect the barrier daily and the barrier shall remain in place until all construction activities have been completed or where recommended by a Designated Biologist. The Permittee shall maintain and repair barrier immediately, if damaged, to ensure that it is functional and without defects. Permittee shall provide refuge opportunities along or near the outer side of the silt fence for the Covered Species (see also Condition of Approval 7.19).
- 7.19. Refugia Coverboards. Coverboards shall be installed in Work Area(s) as determined by the Designated Biologist in modeled core and perimeter core habitat for Covered

Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and E14 (Minor Substation Expansion) prior to conducting Covered Activities. When coverboards are recommended, they shall be placed to provide refuge for the Covered Species fleeing the area, including areas where a directional treatment methodology is used (e.g., phasing a project to encourage Covered Species to move towards core habitats and away from potentially harmful environs). When coverboards are recommended, they shall be inspected at the end of each workday by a General Monitoring Biologist and use by wildlife shall be recorded.

- 7.20. Alameda Whipsnake Clearance Surveys. Immediately prior to the start of a Covered Activity habitats that impact greater than 0.1 acres that affects core Alameda whipsnake (AWS) habitat, including scrub or chaparral plant communities in modeled habitat, the Designated Biologist(s) shall visually survey the Work Area and adjacent areas, as determined by the Designated Biologist, to clear the area of Alameda whipsnake. If Covered Activities may affect habitat features flagged per Condition of Approval 7.17 then a General Biological Monitor shall conduct daily clearance surveys in the active Work Area(s).
- 7.21. Alameda Whipsnake Pre-Activity Tailboards. The Designated Biologist or General Biological Monitor may prescribe activity-specific tailboards trainings reminding staff of the importance of following measures to minimize impacts on Alameda whipsnake as they relate to the work site. Site specific tailboards shall be conducted for staff working on Covered Activities that impact greater than 0.1 acres in core habitat or perimeter core habitat.
- 7.22. Suspected Alameda Whipsnake in Work Area. If a snake is found by any person in the Work Area before or during Covered Activities, all work that could potentially injure the snake shall stop immediately and the snake will be allowed to leave the work area on its own. If the snake does not leave the work area or cannot move to an area with sufficient habitat outside of the work area, the Designated Biologist will move the snake to suitable habitat outside the work area. Covered activities will resume only after the snake has been confirmed to be out of the Work Area.
- 7.23. Alameda Whipsnake Seasonal Restriction. Disturbance in modeled core and perimeter core habitat for E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and E14 (Minor Substation Expansion) for Alameda whipsnake will only take place between April 15 and October 31 to the extent feasible when Alameda Whipsnake is more active and less likely to be affected by covered activities. For activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and E14 (Minor Substation Expansion) occurring in core or perimeter core habitat for Alameda whipsnake between November 1 and April 14, a Designated Biologist(s) will be present during operations.
- 7.24. Alameda Whipsnake Injury. If an AWS has major or serious injuries as a result of Project-related activities, the Designated Biologist shall immediately take it to a



qualified wildlife rehabilitation or veterinary facility. Permittee shall bear any costs associated with the care or treatment of such injured AWS. If the injury is minor or healing and the AWS is likely to survive as determined by the Designated Biologist, it shall be released immediately to an area out of harm's way. The Permittee shall notify CDFW of the injury to the AWS within 2 working days by telephone and e-mail followed by a written incident report as described in Condition 6.3. Notification shall include the name of the facility where the animal was taken.

#### *California Freshwater Shrimp Specific Conditions*

**7.25. California Freshwater Shrimp Seasonal Restrictions.** Permittee shall restrict Covered Activities in or adjacent to streams in modeled habitat for California freshwater shrimp to the period between July 1 (after females release eggs) and November 15 (before they move to the shallow margins of streams, seeking refuge from high water velocities associated with winter storm events) to the extent possible. If work must occur outside of this period, then the Designated Biologist shall be present during all Covered Activities.

**7.26. California Freshwater Shrimp Relocation Plan.** If Covered Activities in streams in California freshwater shrimp modeled habitat cannot be avoided, Permittee shall prepare a California Freshwater Shrimp Relocation Plan for CDFW review and approval. The California Freshwater Shrimp Relocation Plan shall include, but is not limited to, resumes of individuals qualified to survey and monitor for California freshwater shrimp; survey, capture, and release methods; methods to keep relocated shrimp out of harm's way; and locations with suitable habitat for relocation. Permittee may proceed with Covered Activities described in the California Freshwater Shrimp Relocation Plan upon receipt of CDFW approval of the California Freshwater Shrimp Relocation Plan. Only the Designated Biologist(s) listed in the California Freshwater Shrimp Relocation Plan are authorized to capture and handle California freshwater shrimp. Permittee shall update the California Freshwater Shrimp Relocation Plan upon request by CDFW.

**7.27. Implement California Freshwater Shrimp Relocation Plan.** If Covered Activities may affect California freshwater shrimp potential aquatic habitat, the Designated Biologist shall survey prior to allowing work to proceed. The Designated Biologist shall survey all undercut banks and submerged tree roots with a butterfly net or fish net. If California freshwater shrimp are captured, the Designated Biologist shall relocate them from the Work Area according to the Freshwater Shrimp Relocation Plan.

**8. Habitat Management Land Acquisition and Restoration:** CDFW has determined that permanent protection and perpetual management of compensatory habitat is necessary and required pursuant to CESA to fully mitigate Project-related impacts of the taking on the Covered Species that will result 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 which the Covered Activities will impact the

habitat, and CDFW's estimate of the protected acreage required to provide for adequate compensation.

To meet this requirement, the Permittee shall:

- (1) Before start of Covered Activities, either contribute funds for restoration of 2.9 acres of aquatic habitat for California freshwater shrimp on Conserved Lands and ensure the restoration has been completed and success criteria met according to a CDFW-approved California freshwater shrimp restoration plan OR provide for both the permanent protection and management of 2.9 acres of aquatic California freshwater shrimp Habitat Management (HM) lands pursuant to Condition of Approval 8.5 below and the calculation and deposit of the management funds pursuant to Condition of Approval 8.6 below. Demonstration of restoration efforts' success OR permanent protection and funding for perpetual management of HM lands must be complete before starting Covered Activities, or within 24 months of the effective date of this ITP if Security is provided pursuant to Condition of Approval 9 below for all uncompleted obligations. The Permittee shall also restore on-site 2 acres of temporarily impacted California freshwater shrimp habitat pursuant to Condition of Approval 8.8 below.

AND:

- (2) Purchase AWS and CTS credits from a CDFW-approved mitigation or conservation bank pursuant to Conditions of Approval 8.2 or 8.3 below AND/OR provide for both the permanent protection and management of HM lands for CTS and AWS to meet the amounts required for each as specified in the "Required Mitigation Acreage" column of Table 2 in the manner prescribed below, pursuant to Condition of Approval 8.5 below and the calculation and deposit of the management funds pursuant to Condition of Approval 8.6 below. Permittee shall fulfill at least 2-years' worth of all AWS and CTS HM lands obligations in advance of any impacts prior to the beginning of each "Stay Ahead"<sup>7</sup> period prescribed in Table 3 OR post Security prior to the beginning of each Stay Ahead period pursuant to Condition of Approval 9 below in a manner that shall 1) be in an amount to cover the entirety of a Stay Ahead period of HM Lands and on-site restoration obligations in 2022 Dollars<sup>8</sup> and 2) thereafter recalculate and adjust the Security in 2022 Dollars by the start of the following Stay Ahead period (see Table 3) until Permittee has achieved the 2-year "stay ahead" status. See Table 3 for acreages and stay ahead implementation schedule).

<sup>7</sup> "Stay ahead" is defined as the proportion of each AWS and CTS habitat type that needs to be conserved to meet HM lands requirements in advance of two-years' worth of impacts as a proportion of the total impact expected under the ITP term for each habitat type.

<sup>8</sup> "2022 Dollars" means dollar amounts as adjusted each year based on the annual Home Price Index for the Oakland-Fremont-Hayward, CA Metropolitan Division for the prior calendar year (Office of Federal Housing Enterprise Oversight) and, for the non-land cost portion of the fee amounts, the CPI for the San Francisco-Oakland-San Jose Metropolitan Area (U.S. Bureau of Labor Statistics).

The Permittee shall also restore on-site approximately 4,317<sup>9</sup> acres of temporarily impacted Covered Species habitat for Covered Activities resulting in ground disturbance equal to or greater than 0.1 acres pursuant to Condition of Approval 8.8 below. CDFW may determine that a specific mitigation property or acreage satisfies the required HM land obligation for more than one Covered Species. Permittee must acquire CDFW's written determination as to which AWS and CTS HM lands obligations could be met by acquisition of a property and the associated acreages, prior to submission of HM Lands Documentation per Condition of Approval 8.5.

**Table 2. Maximum Required Mitigation Acreages for Project Impacts to California Tiger Salamander and Alameda Whipsnake over the 30-year ITP Term**

<b>Covered Species</b>	<b>Habitat Type</b>	<b>Permanent Impacts (acres)</b>	<b>Temporary Impacts (acres)<sup>10</sup></b>	<b>Maximum Required Acres</b>
California tiger salamander (outside of Sonoma County)	Upland	298	3,800	4,694 <sup>11</sup>
	Breeding	2	25	31
California tiger salamander (Sonoma County)	Upland and Breeding	13	80	119 <sup>12</sup>
Alameda whipsnake	Core	34	13	115 <sup>13</sup>
	Perimeter Core	25	70	145 <sup>14</sup>
	Movement	27	329	410
<b>Total</b>		399.3	4,317	5,514

<sup>9</sup> This number assumes a worst-case scenario in which all temporary impact sites require restoration to baseline conditions. The exact numbers will be determined over the ITP term.

<sup>10</sup> This number assumes worst case scenario that mitigation for temporary impacts will not occur in advance of temporary impacts throughout the life of the ITP. If Permittee provides for mitigation in advance of impacts, then the reduced mitigation ratio of 0.5:1 will be applied.

<sup>11</sup> This number assumes worst case scenario that mitigation for temporary impacts will not occur in advance of temporary impacts throughout the life of the ITP. If Permittee provides for mitigation in advance of impacts, then the reduced mitigation ratio of 0.5:1 will be applied.

<sup>12</sup> Lands acquired or conserved shall be done in a manner consistent with the Santa Rosa Plain Conservation Strategy.

<sup>13</sup> Required acreages for AWS movement habitats can be substituted with perimeter core or core AWS habitats.

<sup>14</sup> Required acreage for AWS perimeter core habitat can be substituted for AWS core habitat.

**Table 3. HM Lands Requirement Schedule for Project Impacts to California Tiger Salamander and Alameda Whipsnake**

			Stay Ahead HM Land Acreage Requirement for each “Stay Ahead” period					
Stay Ahead Period	Date Two-year Period Begins	Date Two Year Period Ends	CTS Upland (outside Sonoma Co.)	CTS Potential Breeding (outside Sonoma Co.)	CTS (Sonoma County)	AWS Core	AWS Perimeter Core	AWS Movement
1	7/1/2022	6/30/2024	312.93	2.07	7.93	7.67	9.67	27.33
2	7/1/2024	6/30/2026	312.93	2.07	7.93	7.67	9.67	27.33
3	7/1/2026	6/30/2028	312.93	2.07	7.93	7.67	9.67	27.33
4	7/1/2028	6/30/2030	312.93	2.07	7.93	7.67	9.67	27.33
5	7/1/2030	6/30/2032	312.93	2.07	7.93	7.67	9.67	27.33
6	7/1/2032	6/30/2034	312.93	2.07	7.93	7.67	9.67	27.33
7	7/1/2034	6/30/2036	312.93	2.07	7.93	7.67	9.67	27.33
8	7/1/2036	6/30/2038	312.93	2.07	7.93	7.67	9.67	27.33
9	7/1/2038	6/30/2040	312.93	2.07	7.93	7.67	9.67	27.33
10	7/1/2040	6/30/2042	312.93	2.07	7.93	7.67	9.67	27.33
11	7/1/2042	6/30/2044	312.93	2.07	7.93	7.67	9.67	27.33
12	7/1/2044	6/30/2046	312.93	2.07	7.93	7.67	9.67	27.33
13	7/1/2046	6/30/2048	312.93	2.07	7.93	7.67	9.67	27.33
14	7/1/2048	6/30/2050	312.93	2.07	7.93	7.67	9.67	27.33
15	7/1/2050	6/30/2052	312.93	2.07	7.93	7.67	9.67	27.33

8.1. Alameda Whipsnake and California Tiger Salamander Cost Estimates. For the purposes of determining the Security amount, CDFW has estimated the cost sufficient for CDFW or its contractors to complete acquisition, protection, and perpetual management of the HM lands and restoration of temporarily disturbed habitat as follows:

Incidental Take Permit  
No. 2081-2015-031-03  
**PACIFIC GAS & ELECTRIC COMPANY**  
**PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT**

- 8.1.1. Alameda Whipsnake and California tiger salamander Land acquisition costs for HM lands identified in Condition of Approval 8.5 below, estimated at \$26,000/acre for 5,514 acres: **\$143,364,000**. Land acquisitions costs are estimated using local fair market current value per acre for lands with habitat values meeting mitigation requirements;
- 8.1.2. All other costs necessary to review and acquire the land in fee title and record a conservation easement as described in Condition of Approval 8.5.1 and 8.5.2 below: **\$50,000**;
- 8.1.3. Start-up costs for HM lands, including initial site protection and enhancement costs as described in Condition of Approval 8.5.6 below, estimated at **\$854,367**;
- 8.1.4. Interim management period funding as described in Condition of Approval 8.5.7 below, estimated at **\$406,375**;
- 8.1.5. Long-term management funding as described in Condition of Approval 8.6 below, estimated at \$4,000/acre for 5,514 acres: **\$22,056,000**. Long-term management funding is estimated initially for the purpose of providing Security to ensure implementation of HM lands management.
- 8.1.6. 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 CDFW as described in Condition of Approval 8.7, estimated at **\$50,000**.
- 8.1.7. Restoration of on-site temporary effects to Covered Species habitat as described in Condition of Approval 8.8, calculated at \$3,000/acre for 4,317 acres: **\$12,951,000**.
- 8.1.8. All costs associated with CDFW engaging an outside contractor to complete the mitigation tasks, including but not limited to acquisition, protection, and perpetual funding and management of the HM lands and restoration of temporarily disturbed habitat. These costs include but are not limited to the cost of issuing a request for proposals, transaction costs, contract administration costs, and costs associated with monitoring the contractor's work **\$50,000**.
- 8.2. Cost Estimates for California Freshwater Shrimp. For the purposes of determining the Security amount, CDFW has estimated the cost sufficient for CDFW or its contractors to complete acquisition, protection, and perpetual management of the HM lands and restoration of temporarily disturbed habitat as follows:
  - 8.2.1. California freshwater shrimp HM lands identified in Condition of Approval 8.5 below, estimated at \$164,530/acre for 2.9 acres: **\$477,137**. Land acquisitions

costs are estimated using local fair market current value per acre for lands with habitat values meeting mitigation requirements;

- 8.2.2. All other costs necessary to review and acquire the land in fee title and record a conservation easement as described in Condition of Approval 8.5.1 and 8.5.2 below: **\$5,000**;
- 8.2.3. Start-up costs for HM lands, including initial site protection and enhancement costs as described in Condition of Approval 8.5.6 below, estimated at **\$16,188**;
- 8.2.4. Interim management period funding as described in Condition of Approval 8.5.7 below, estimated at **\$6,300**;
- 8.2.5. Long-term management funding as described in Condition of Approval 8.6 below, estimated at \$26,840/acre for 2.9 acres: **\$766,857**. Long-term management funding is estimated initially for the purpose of providing Security to ensure implementation of HM lands management.
- 8.2.6. 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 CDFW as described in Condition of Approval 8.7, estimated at **\$5,000**.
- 8.2.7. Restoration of on-site temporary effects to Covered Species habitat as described in Condition of Approval 8.8, calculated at \$6,000/acre for 2.9 acres: **\$16,200**.
- 8.2.8. All costs associated with CDFW engaging an outside contractor to complete the mitigation tasks, including but not limited to acquisition, protection, and perpetual funding and management of the HM lands and restoration of temporarily disturbed habitat. These costs include but are not limited to the cost of issuing a request for proposals, transaction costs, contract administration costs, and costs associated with monitoring the contractor's work **\$5,000**.
- 8.3. Covered Species Credits. If Permittee elects to purchase Covered Species credits to complete compensatory mitigation obligations, then Permittee shall purchase Covered Species credits from a CDFW-approved mitigation or conservation bank. 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. Permittee shall submit to CDFW a copy of the Bill of Sale(s) and Payment Receipt prior to initiating Covered Activities or within 18 months from issuance of this ITP if Security is provided.
- 8.4. Advanced Purchased Covered Credits. Permittee has purchased Alameda whipsnake and/or California tiger salamander credits from the Ohlone West

Incidental Take Permit  
No. 2081-2015-031-03

PACIFIC GAS & ELECTRIC COMPANY  
PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT

Conservation Bank, 603.5 acres from the Muzzy Ranch Conservation Bank, and the Margaret West Conservation Bank. Prior to transfer 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. Permittee shall submit to CDFW a copy of the executed Credit Transfer Agreement prior to initiating Covered Activities or within 18 months from issuance of this ITP if Security is provided.

- 8.5. 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:
- 8.5.1. Fee Title. Transfer fee title of the HM lands to CDFW pursuant to terms approved in writing by CDFW. Alternatively, CDFW, in its sole discretion, may authorize a governmental entity, special district, non-profit organization, for-profit entity, person, or another entity to hold title to and manage the property provided that the district, organization, entity, or person meets the requirements of Government Code sections 65965-65968, as amended.
  - 8.5.2. Conservation Easement. If CDFW does not hold fee title to the HM lands, CDFW shall act as grantee for a conservation easement over the HM lands or shall, in its sole discretion, approve a non-profit entity, public agency, or Native American tribe to act as grantee for a conservation easement over the HM lands provided that the entity, agency, or tribe meets the requirements of Civil Code section 815.3. If CDFW 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.
  - 8.5.3. HM Lands Approval. Obtain CDFW written approval of the HM lands before acquisition and/or transfer of the land by submitting, at least three months before acquisition and/or transfer of the HM lands, documentation identifying the land to be purchased or property interest conveyed to an approved entity as mitigation for the Project’s impacts on Covered Species;
  - 8.5.4. HM Lands Documentation. Provide a recent preliminary title report, Phase I Environmental Site Assessment, and other necessary documents (please contact CDFW for document list). 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;

Incidental Take Permit  
No. 2081-2015-031-03

PACIFIC GAS & ELECTRIC COMPANY  
PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT

8.5.5. 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. If CDFW will hold fee title to the mitigation land, CDFW will also act as both the interim and long-term land manager unless otherwise specified. 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.

8.5.6. 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 (see <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=137386&inline>) (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;

8.5.7. Interim Management (Initial and Capital). Provide for the interim management of the HM lands. The Permittee shall ensure that the interim land manager implements the interim management of the HM lands as described in the final management plan and conservation easement approved by CDFW. The interim management period shall be a minimum of three years from the date of HM land acquisition and protection and full funding of the Endowment and includes expected management following start-up activities. Interim management period activities described in the final management plan shall include fence repair, continuing trash removal, site monitoring, and vegetation and invasive species management.

Permittee shall either (1) provide Security to CDFW for the minimum of three years of interim management that the land owner, Permittee, or land manager agrees to manage and pay for at their own expense, (2) establish an escrow account with written instructions approved in advance in writing by CDFW to pay the land manager annually in advance, or (3) establish a short-term enhancement account with CDFW or a CDFW-approved entity for payment to the land manager.

8.6. 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 8.5.6. 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.

- 8.6.1. 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. If CDFW does not provide Permittee with a written determination within the thirty-day period, the proposal shall be deemed consistent with Section 2081(b)(3).

- 8.6.2. Calculate the Endowment Funds Deposit. After obtaining CDFW written approval of the HM lands, long-term management plan, and Endowment

Manager, Permittee shall prepare an endowment assessment (equivalent to a Property Analysis Record (PAR)) to calculate the amount of funding necessary to ensure the long-term management of the HM lands (Endowment Deposit Amount). Note that the endowment for the easement holder should not be included in this calculation. The Permittee shall submit to CDFW for review and approval the results of the endowment assessment before transferring funds to the Endowment Manager.

8.6.2.1. 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.

8.6.2.2. 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:

8.6.2.2.1. 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.

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

8.6.2.2.3. 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.

8.6.3. 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.

8.6.4. 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.

- 8.7. 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 CDFW.
- 8.8. Habitat Restoration. Permittee shall restore on-site up to 4,317 acres of Alameda whipsnake and California tiger salamander and 2 acres of California freshwater shrimp habitat that will be temporarily disturbed during construction to pre-project or better conditions. Within 6 months of issuance of this ITP, Permittee shall prepare a standardized Vegetation Restoration Plan (VRP) to facilitate revegetation of up to 4,319 acres of temporary impacts disturbance and shall ensure that the VRP is successfully implemented. The VRP shall include detailed specifications for documenting baseline conditions and restoring all temporarily disturbed areas, such as seed mixes and application methods. The plan shall also indicate the best time of year for seeding to occur. The Plan shall include the following: 1) Areas that have become either barren of vegetation or where ground disturbance has occurred shall be revegetated with native plant species consistent with the vegetative composition immediately surrounding the associated Work Area, and; 2) provide prescriptions of native species shall to be included in seed mixes, and; 3) incorporate the following success criteria:
- Vegetation cover shall consist of no new invasive plant species rated as "high" by the Cal-IPC and the remediated areas shall meet baseline conditions at the end of one year. Vegetation cover of extant invasive species on-site shall not be greater than 20 percent above baseline conditions.
  - Actively restored areas shall be monitored for 1 year after planting and/or hydroseeding. Monitoring shall occur in May of the year following initial impacts and at the end of the 12-month period following initial impacts.

- Restored areas must be returned to baseline conditions within 12 months after impacts initially took place.

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

- 9.1. Security Amount for AWS and CTS. The Security for 1/15<sup>th</sup> of the permit term shall be in the amount of **\$11,985,450 in 2022 Dollars**. This amount is determined by CDFW based on the cost estimates identified in Condition of Approval 8.1 above, sufficient for CDFW or its contractors to complete land acquisition, property enhancement, startup costs, initial management, long-term management, and monitoring.
- 9.2. Security Amount for California Freshwater Shrimp. The Security for California freshwater shrimp HM Lands shall be in the amount of **\$1,297,682**. This amount is determined by CDFW based on the cost estimates identified in Condition of Approval 8.2 above, sufficient for CDFW or its contractors to complete land acquisition, property enhancement, startup costs, initial management, long-term management, and monitoring.
- 9.3. Security Form. Security shall be in the form of an irrevocable letter of credit (see Attachment 6) or another form of Security approved in advance in writing by CDFW's Office of the General Counsel.
- 9.4. Security Timeline. The Security shall be provided to CDFW before Covered Activities begin or within 30 days after the effective date of this ITP, whichever occurs first.
- 9.5. Security Holder. The Security shall be held by CDFW or in a manner approved in advance in writing by CDFW.
- 9.6. Security Transmittal. Permittee shall transmit it to CDFW with a completed Mitigation Payment Transmittal Form (see Attachment 7) or by way of an approved instrument such as an escrow agreement, irrevocable letter of credit, or other.
- 9.7. Security Drawing. The Security shall allow CDFW to draw on the principal sum if CDFW, in its sole discretion, determines that the Permittee has failed to comply with the Conditions of Approval of this ITP.
- 9.8. Security Release. The Security (or any portion of the Security then remaining) shall be released to the Permittee after CDFW has conducted an on-site inspection and received confirmation that all secured requirements have been satisfied, as evidenced by:
  - Copy of Bill of Sale(s) and Payment Receipt(s) or Credit Transfer Agreement for the purchase of Covered Species credits; and

- Timely submission of all required reports.

OR

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

Even if Security is provided, the Permittee must complete the required acquisition, protection and transfer of all HM lands and record any required conservation easements no later than 36 months from the effective date of this ITP. CDFW may require the Permittee to provide additional HM lands and/or additional funding to ensure the impacts of the taking are minimized and fully mitigated, as required by law, if the Permittee does not complete these requirements within the specified timeframe.

#### **X. Amendment:**

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

#### **XI. Stop-Work Order:**

If CDFW determines the 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 the 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.

## **XII. Compliance with Other Laws:**

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

## **XIII. Notices:**

The Permittee shall sign and return this ITP to CDFW. A manual or digital signature is acceptable, provided a digital signature complies with Government Code section 16.5. Digital signatures facilitated by CDFW will be automatically returned. Manual (wet) signatures on duplicate original paper copies shall be returned by the Permittee via registered first-class mail or overnight delivery to the following address:

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

Written notices, reports and other communications relating to this ITP shall be delivered to CDFW by email or registered first class mail at the following address, or at addresses CDFW may subsequently provide the Permittee. Notices, reports, and other communications shall reference the Project name, Permittee, and ITP Number (2081-2015-031-03) in a cover letter and on any other associated documents.

Original cover with attachment(s) to:

Erin Chappell, Regional Manager  
California Department of Fish and Wildlife – Bay Delta Region  
2825 Cordelia Road, Suite 100  
Fairfield, CA 94534  
Telephone (707) 428-2002  
[R3CESA@wildlife.ca.gov](mailto:R3CESA@wildlife.ca.gov)

and a copy to:

Habitat Conservation Planning Branch  
California Department of Fish and Wildlife  
Attention: CESA Permitting Program  
Post Office Box 944209  
Sacramento, CA 94244-2090  
[CESA@wildlife.ca.gov](mailto:CESA@wildlife.ca.gov)

Incidental Take Permit  
No. 2081-2015-031-03  
**PACIFIC GAS & ELECTRIC COMPANY**  
**PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT**

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

Craig Weightman  
 California Department of Fish and Wildlife – Bay Delta Region  
 2825 Cordelia Road, Suite 100  
 Fairfield, CA 94534  
 Telephone (707) 428-2002  
[Craig.Weightman@wildlife.ca.gov](mailto:Craig.Weightman@wildlife.ca.gov)

#### **XIV. Compliance with the California Environmental Quality Act:**

CDFW's issuance of this ITP is subject to CEQA. CDFW is a lead agency pursuant to CEQA with respect to this ITP. (See generally Pub. Resources Code, § 21067). CDFW's environmental review of the Project is set forth in the Pacific Gas and Electric Company Bay Area Operations and Maintenance Incidental Take Permit Environmental Impact Report (SCH No. 2017122028) dated February 2022, that CDFW certified for the PG&E Bay Area Operations and Maintenance Project.

This ITP, along with CDFW's related CEQA findings, which are available as a separate document, provide evidence of CDFW's independent judgment and analysis and the determination that based on the whole record before it, including EIR for the Project and comments received, that there is no substantial evidence that the Project will have a significant effect on the environment.

CDFW finds that issuance of this ITP will not result in any previously undisclosed potentially significant effects on the environment or a substantial increase in the severity of any potentially significant environmental effects previously disclosed by the lead agency. Furthermore, to the extent the potential for such effects exists, CDFW finds adherence to and implementation of the Conditions of Project Approval adopted by CDFW as the lead agency, and that adherence to and implementation of the Conditions of Approval imposed by CDFW through the issuance of this ITP, will avoid or reduce to below a level of significance any such potential effects. CDFW consequently finds that issuance of this ITP will not result in any significant, adverse impacts on the environment.

#### **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, the 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:

Incidental Take Permit  
 No. 2081-2015-031-03  
**PACIFIC GAS & ELECTRIC COMPANY**  
**PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT**

- (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 a minimum of [X] acres of compensatory habitat that is contiguous with other protected Covered Species habitat and/or is of higher quality than the habitat being destroyed by the Project, along with the minimization, monitoring, reporting, and funding requirements of this ITP minimizes and fully mitigates the impacts of the taking caused by the Project;
- (3) The take avoidance and mitigation measures required pursuant to the conditions of this ITP and its attachments are roughly proportional in extent to the impacts of the taking authorized by this ITP;
- (4) The measures required by this ITP maintain Permittee's objectives to the greatest extent possible;
- (5) All required measures are capable of successful implementation;
- (6) This ITP is consistent with any regulations adopted pursuant to Fish and Game Code sections 2112 and 2114;
- (7) Permittee has ensured adequate funding to implement the measures required by this ITP as well as for monitoring compliance with, and the effectiveness of, those measures for the Project; and
- (8) Issuance of this ITP will not jeopardize the continued existence of the Covered Species based on the best scientific and other information reasonably available, and this finding includes consideration of the species' capability to survive and reproduce, and any adverse impacts of the taking on those abilities in light of (1) known population trends; (2) known threats to the species; and (3) reasonably foreseeable impacts on the species from other related projects and activities. Moreover, CDFW's finding is based, in part, on CDFW's express authority to amend the terms and conditions of this ITP without concurrence of the Permittee as necessary to avoid jeopardy and as required by law.



**XVI. Attachments:**

FIGURE 1	Map of Permit Area
FIGURE 2	ROW Management Concept: wire zones and border zones
FIGURE 3	Riparian removals for Transmission ROW Clearing Illustration 1
FIGURE 4	Riparian removals for Transmission ROW Clearing Illustration 2
ATTACHMENT 1	Covered Species Habitat Model Methodology
ATTACHMENT 2	Mitigation Monitoring and Reporting Program
ATTACHMENT 3	Biologist Resume Form
ATTACHMENT 4	Pre-activity Notification Form
ATTACHMENT 5	Environmental Review, Planning and Screening Process
ATTACHMENT 6	Letter of Credit Form
ATTACHMENT 7	Mitigation Payment Transmittal Form

**ISSUED BY THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE**

on 7/6/2022

DocuSigned by:

*Erin Chappell*

B77E9A0211EF400...

Erin Chappell, Regional Manager  
Bay Delta Region**ACKNOWLEDGMENT**

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

DocuSigned by:

By: *Jon Wilcox*

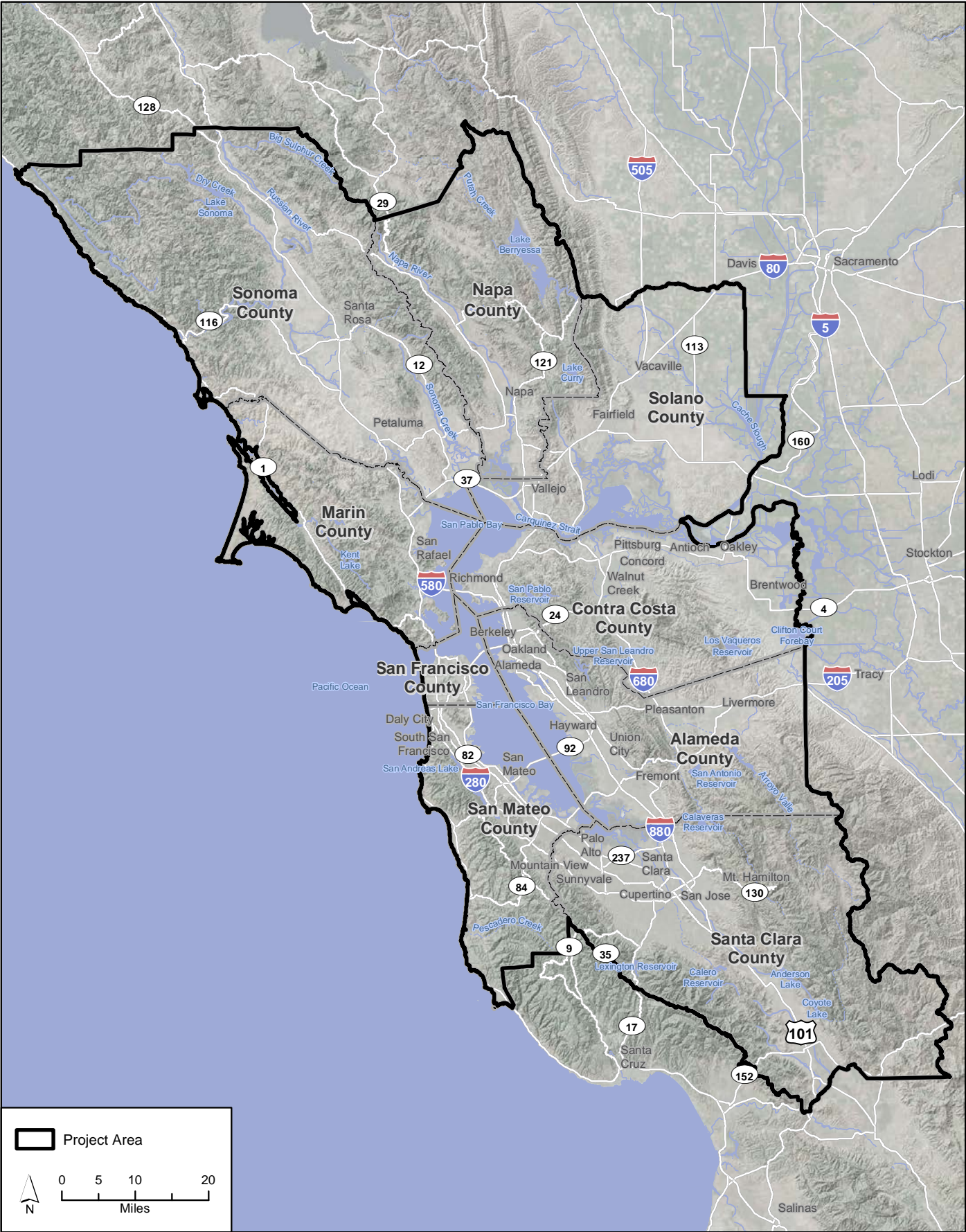
A41D45FF04DA48F...

Date: 7/6/2022

Printed Name: Jon Wilcox

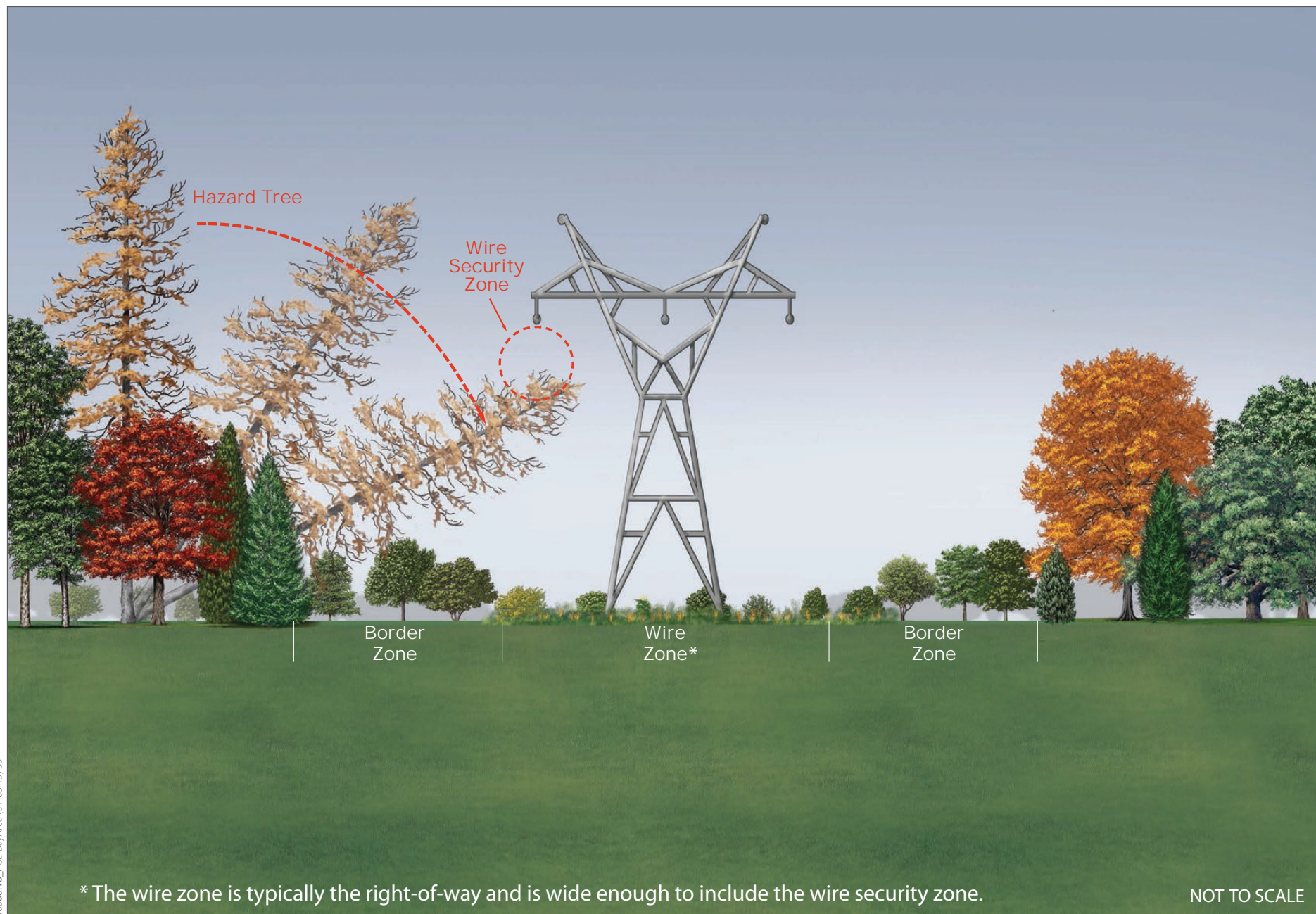
Title: Manager

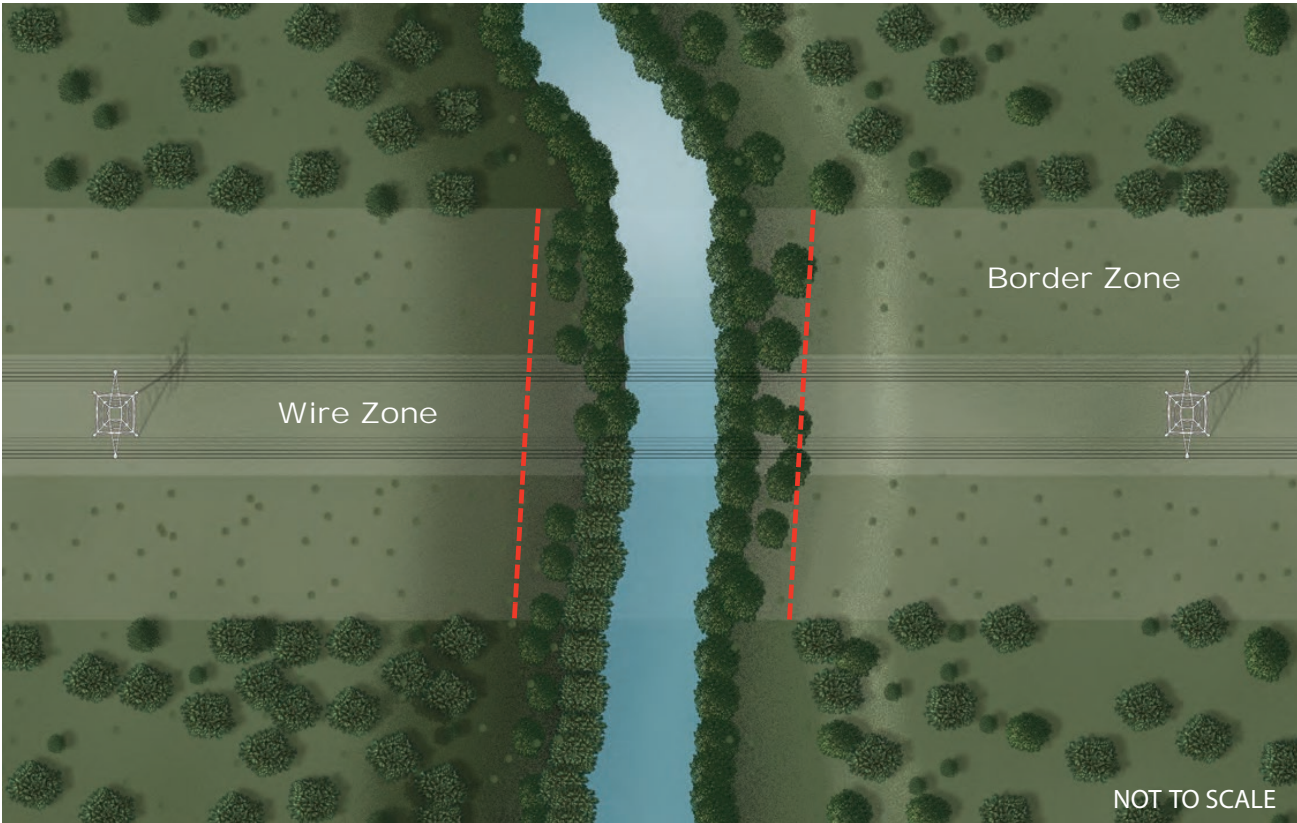
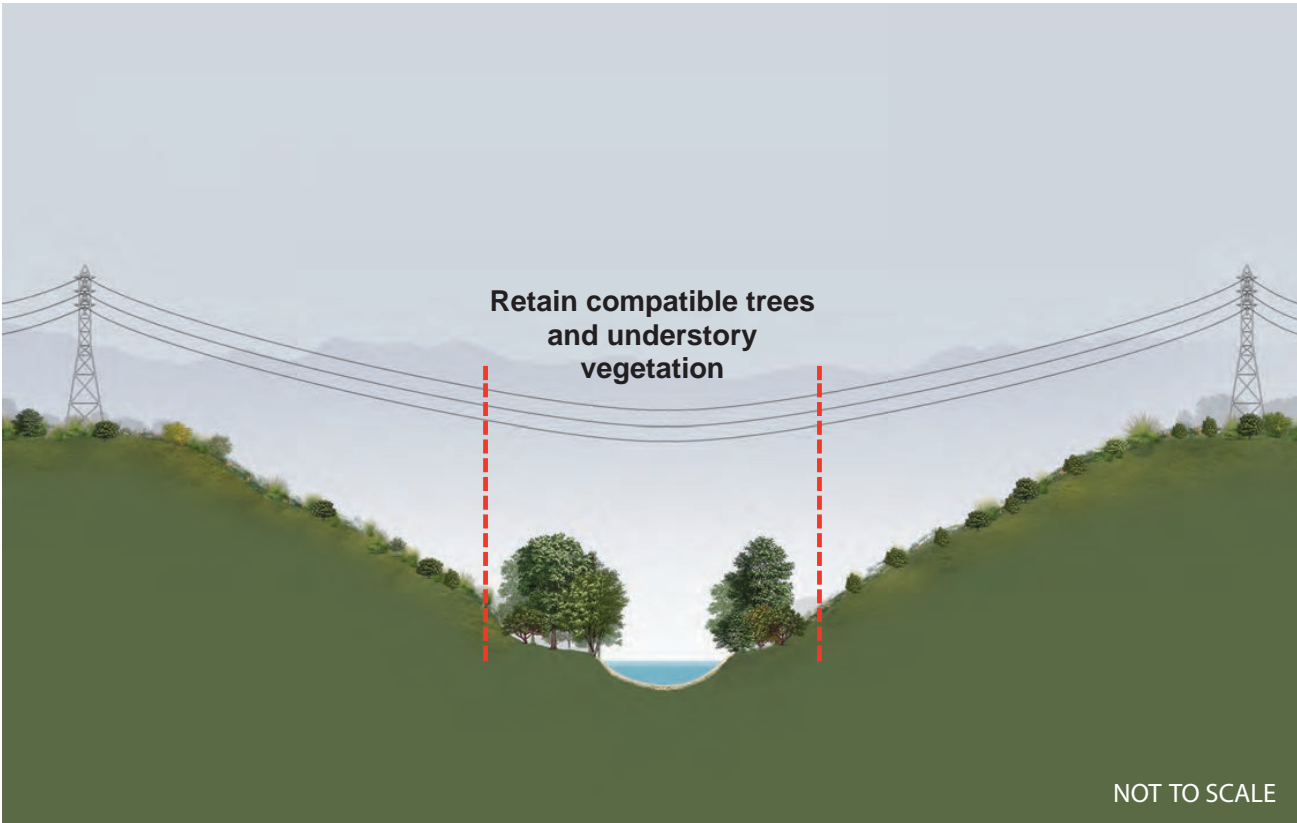
Incidental Take Permit  
No. 2081-2015-031-03**PACIFIC GAS & ELECTRIC COMPANY**  
**PG&E BAY AREA OPERATIONS AND MAINTENANCE PROJECT**





## Wire Zone/Border Zone ROW Management Concept





00068\_18\_PGE-BayArea (01-08-15) 55

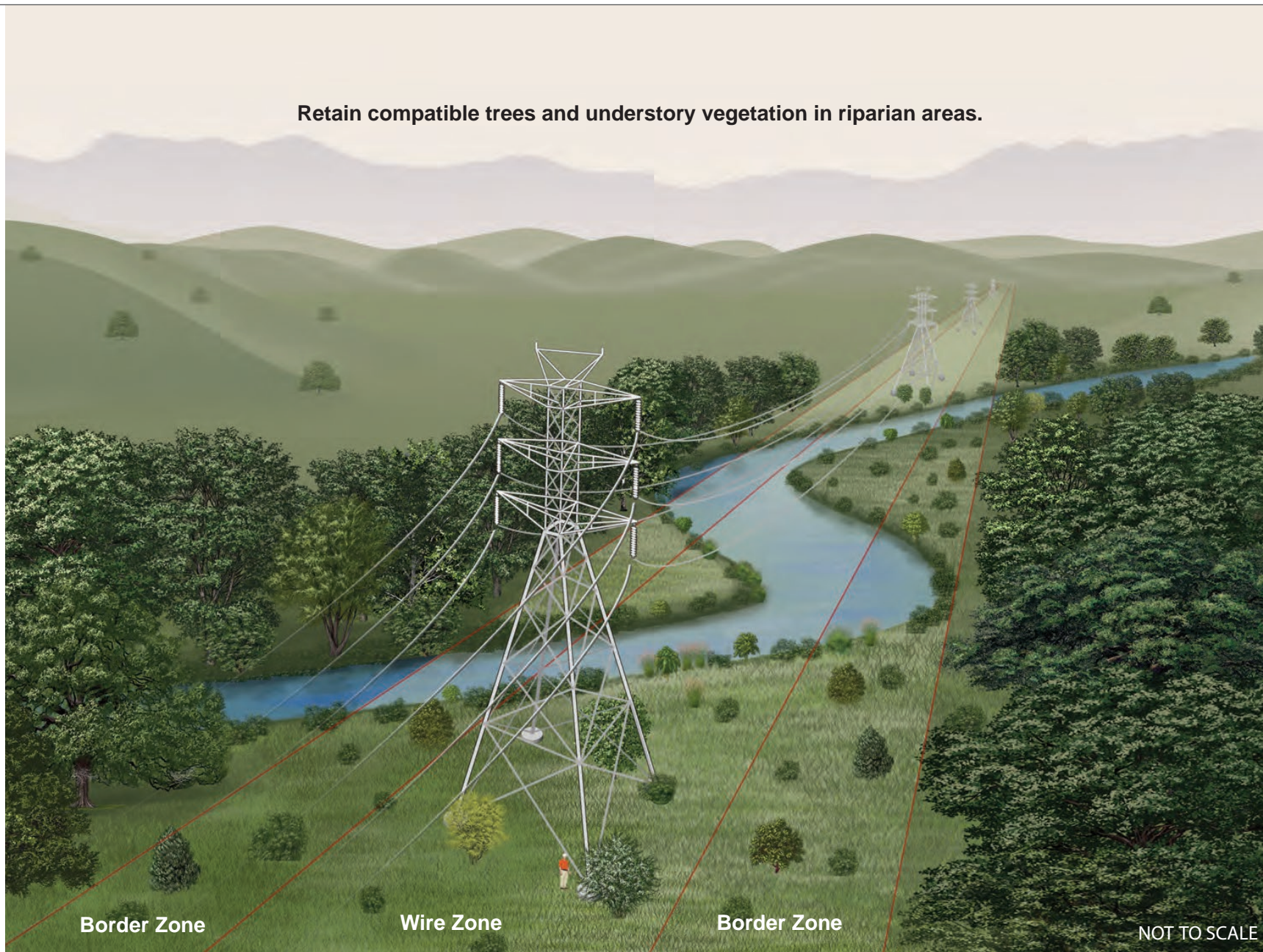


**Figure 2-4**  
**Vegetation Management for Transmission Lines**  
**Perpendicular to Riparian Areas**



## Vegetation Management for Transmission Lines Parallel to Riparian Areas

Retain compatible trees and understory vegetation in riparian areas.

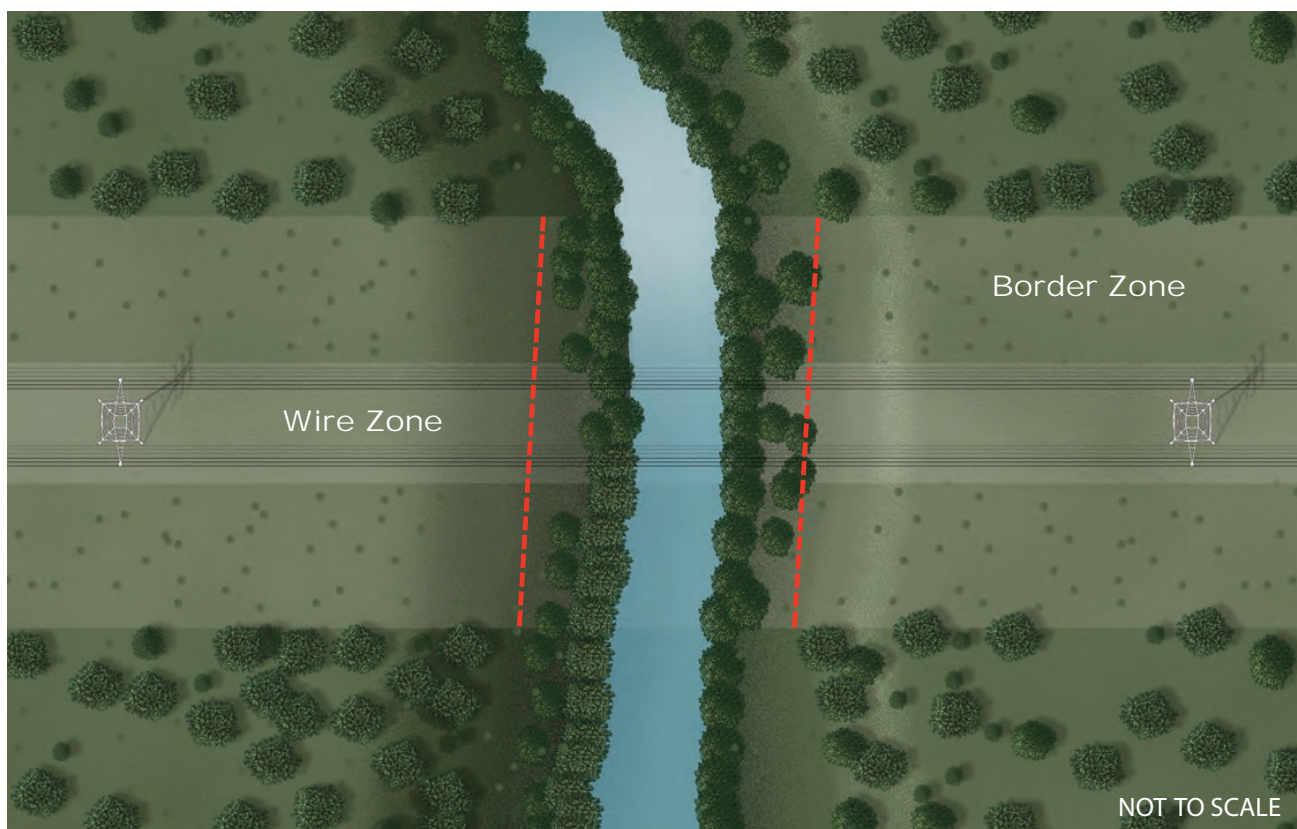
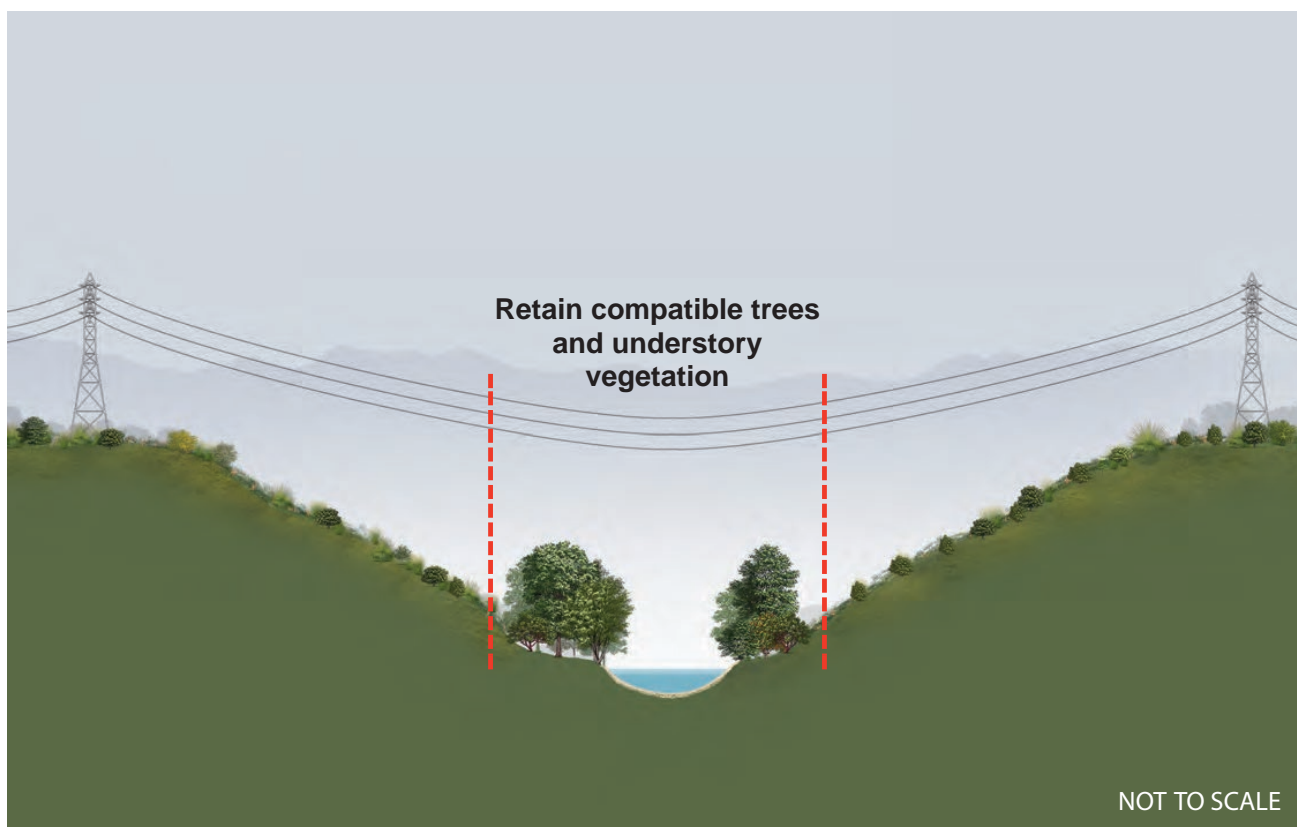


0006818\_PGE-BayArea (01-08-15) SS



Figure 4

## Vegetation Management for Transmission Lines Perpendicular to Riparian Areas



Comps *	Address	Size - Acres	Assessed Land Value	Market Cost per Acre	Inflation adjustment **	Transaction costs adjustment ***	Adjusted Cost per Acre
Property 1	25500 SR1, Tomales CA 94971	15	\$ 1,516,787	\$ 103,535			
Property 2	3770 Warm Springs Rd, Glen Ellen 95442	10	\$ 880,000	\$ 88,000			
Property 3	2980 Warm Springs Rd, Glen Ellen 95442	2	\$ 650,000	\$ 275,424			
Property 4	938 Country Club Ln, Sonoma 95476	15	\$ 2,064,968	\$ 142,412			
Acres of HM lands	2.9			\$ 152,343	\$ -	\$ 12,187	\$ 164,530
Cost per acre	\$ 164,530						
Total Cost	\$ 477,137						

\* Local properties similar to availability of appropriate mitigation sites that were sold within the last 24 months.

\*\* 5% inflation adjustment in case land values go up while DFG holds the Security.

\*\*\* Land acquisition transaction costs in case of default - standard real estate commission is about 8%.

Acres of HM Lands	Labor	Hours per Acre	Number of Employees	Rate per Hour	Extended Cost per Acre	Extended Cost Total Restoration
2.9	Preparing management plan	8.00	1	\$ 100	\$ 800	\$ 2,320
	Baseline vegetation survey (assuming biological assessment was provided before approval)	2.00	1	\$ 100	\$ 200	\$ 580
	Developing and transferring GIS data	1.00	1	\$ 100	\$ 100	\$ 290
	Fencing and signage - labor	1.00	4	\$ 50	\$ 200	\$ 580
	Habitat restoration	0.00	0	\$ -	\$ -	\$ -
	Grazing lease administration	0.00	1	\$ 100	\$ -	\$ -
	Pond Creation	0.00				\$ -
	Artificial Den Establishment	0.00				\$ -
	Dumping and vandalism cleanup	0.50	2	\$ 50	\$ 50	\$ 145
	Security	0.50	1	\$ 50	\$ 25	\$ 73

Materials	Unit	Number of Units	Unit Cost	Extended Cost Total Restoration
Fencing (automatically calculated based on parcel size, assumes square parcel)	Linear ft	\$ 1,180	\$ 10	\$ 11,800
Water troughs	Each	\$ -	\$ 8,000	\$ -
Signage (one sign every 1,320 lf of fenceline and at least one sign per side of parcel)	Each	\$ 4	\$ 100	\$ 400

Total Cost	\$ 9,485	\$ 16,188
------------	----------	-----------



Acres of HM Lands	Labor	Hours per Acre	Number of Employees	Rate per Hour		Extended Cost per Acre	Extended Cost Total Site
2.9	Fence repair	2.00	1	\$	100	\$ 200	\$ 580
	Trash removal	2.00	1	\$	100	\$ 200	\$ 580
	Site monitoring	2.00	1	\$	100	\$ 200	\$ 580
	Vegetation and invasive species management	10.00	2	\$	50	\$ 1,000	\$ 2,900
	Monitoring reports	2.00	1	\$	100	\$ 200	\$ 580
	Other management	2.00	1	\$	100	\$ 200	\$ 580

Materials	Unit	Number of Units	Unit Cost	Extended Cost Total Restoration
Vegetation management supplies and equipment	Each	\$	1 \$ 500	\$ 500
			\$ -	\$ -

Total Cost (for 3 yrs)	\$	2,500	\$	6,300
------------------------	----	-------	----	-------

Acres of HM Lands	Labor	Hours per Acre	Number of Employees	Rate per Hour	Extended Cost per Acre	Extended Cost Total Site
2.9	Fence and signage repair	2.00	1	\$ 50	\$ 100	\$ 290
	Trash removal	2.00	1	\$ 50	\$ 100	\$ 290
	Site monitoring	2.00	1	\$ 100	\$ 200	\$ 580
	Vegetation and invasive species management	10.00	2	\$ 50	\$ 1,000	\$ 2,900
	Administration	2.00	1	\$ 100	\$ 200	\$ 580

Materials	Unit	Number of Units	Unit Cost	Extended Cost Total Restoration
Fencing (25-year replacement interval)	Linear ft	1,180	\$ 10	\$ 11,800
Signage (5-year replacement interval)	Each	4	\$ 100	\$ 400
Water troughs (25-year replacement interval	Each	0	\$ 320	\$ -
Vegetation management supplies and equipment	Each	10	\$ 1,000	\$ 10,000

	Per acre	Total
Total annual cost	\$ 1,710	\$ 26,840

Return rate 0.035

Total Cost	\$ 264,433	\$ 766,857
------------	------------	------------



Task	Cost
Account set-up fees	\$ 1,000
Administrative fees	\$ 1,000
Title and documentation review	\$ 1,000
Other state agency reviews	\$ 1,500
Overhead related to transfer of HM lands to DFG	\$ -
Total Cost	\$ 4,500

Item	Cost
Land acquisition	\$ 477,137
Start-up costs	\$ 16,188
Interim management	\$ 6,300
Long-term management	\$ 766,857
DFG transaction fees	\$ 4,500
Security	\$ 1,270,982
Restoration	\$ 16,200
<b>TOTAL SECURITY</b>	<b>\$ 1,287,182</b>

Adjusted land acquisition costs to account for economies of scale. Could not find many listed properties of the size needed for mitigation.

**Attachment 2****CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE  
MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)  
CALIFORNIA ENDANGERED SPECIES ACT****INCIDENTAL TAKE PERMIT NO. 2081-2015-031-03****PERMITTEE: Pacific Gas and Electric (PG&E)****PROJECT: PG&E Bay Area Operation and Maintenance Project****PURPOSE OF THE MMRP**

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

**OBLIGATIONS OF PERMITTEE**

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

**VERIFICATION OF COMPLIANCE, EFFECTIVENESS**

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

**TABLE OF MITIGATION MEASURES**

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

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
<b>BEFORE COMMENCING COVERED ACTIVITIES</b>					
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.	ITP Condition # 5.1	Before commencing Covered Activities/ Entire Project	Permittee	
2	<p>Designated Biologist(s), General Biological Monitor(s), and/or Veterinarian(s) Requirements and Approvals. Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information of proposed Designated Biologist(s)) using the Biologist Resume Form (Attachment 3) or another format containing the same information at least 15 days before starting Covered Activities in the year 2022. Permittee shall provide a list prior to January 31 every year thereafter seeking annual re-approval of Designated Biologists and Biologist Resume Forms for proposed, and/or submit Biologist Resume Forms for new Designated Biologist approval requests. Permittee shall ensure that the Designated Biologist(s) and General Biological Monitor(s) are knowledgeable and experienced in the biology, natural history, and for Designated Biologists, collecting and handling of the Covered Species. The Designated Biologist(s) and General Biological Monitor(s) 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 as required by this ITP. Permittee shall obtain CDFW approval of the Designated Biologist(s) in writing before starting Covered Activities as prescribed in this Condition of Approval and shall also obtain approval in advance, in writing, if the Designated Biologist(s) must be changed. Permittee shall also provide the resume of General Biological Monitors upon request by CDFW.</p> <p>Designated Biologist(s). Permittee shall ensure that each Designated Biologist is knowledgeable and experienced in the biology, natural history, collecting, and handling of the applicable Covered Species. The Designated Biologist may be approved by CDFW on a species-specific basis, and in those cases will only be authorized to complete surveys and monitoring of the Covered Species for which they are specifically approved. The Designated Biologists shall be responsible for conducting all activities specific to a Covered Species as prescribed in this ITP and any handling or other actions necessary if individuals of Covered Species are found in the Project Area where Covered Activities are being conducted including temporary staging areas and equipment mobilization routes in Covered Species habitat (Work Area). The Designated Biologists shall be responsible for supervising the General Biological Monitors. Please note that the term Designated Biologist is interchangeable with the term Qualified Biologist as defined in the Pacific Gas and Electric Company Bay Area Operations and Maintenance Incidental Take Permit Environmental Impact Report (SCH No. 2017122028).</p> <p>General Biological Monitor(s). General Biological Monitors are biologists with general roles and technical responsibilities. General Biological Monitors may be used instead of Designated Biologist(s) only for general monitoring activities within each discreet Work Area under the direction of the Designated Biologist(s). General Biological Monitors must have a 4-year degree in wildlife biology or related field, have a minimum, of 6 months of construction monitoring</p>	ITP Condition # 5.2 to 5.2.2	15 days before commencing Covered Activities in 2022 and before January 31 every year thereafter	Permittee	

	experience, and be experienced in the general biology, natural history, and identification of the applicable Covered Species. The General Biological Monitors shall receive training and direction from the Designated Biologist(s) for each task performed. The General Biological Monitor(s) shall communicate daily with the Designated Biologist(s) and shall immediately report any occurrence of Covered Species within the Project Area or buffer areas, as well as any apparent non-compliance with any provision of this ITP.				
3	Education Program. Permittee shall conduct an education program for all persons employed or otherwise working in the Project Area before performing any work. The program shall consist of a presentation from the Designated Biologist or General Biological Monitor that includes a discussion of the biology and general behavior of the Covered Species, information about the distribution and habitat needs of the Covered Species, sensitivity of the Covered Species to human activities, its status pursuant to CESA including legal protection, recovery efforts, penalties for violations and Project-specific protective measures described in this ITP. Permittee shall provide interpretation for non-English speaking workers, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project Area. Upon completion of the education program, employees or contractors shall sign a form or equivalent acknowledging that 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 or contractors that will be conducting work in the Project Area. See also Conditions of Approval for activity specific Designated Biologist tailboards.	ITP Condition # 5.4	Before commencing Covered Activities/ Entire Project	Permittee	
4	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.	ITP Condition # 5.6	Before commencing Covered Activities/ Entire Project	Permittee	
5	Erosion Control. Permittee shall implement and install all erosion and sediment control measures and devices prior to conducting Covered Activities that include grading, excavation, or placement of fill. Permittee shall utilize erosion control measures where sediment runoff from exposed slopes or surfaces could enter a drainage, stream, wetland or pond. Permittee shall repair and/or replace ineffective measures or contrivances whose integrity has been compromised immediately.	ITP Condition # 5.9	Before commencing Covered Activities/ Entire Project	Permittee	
6	Delineation and Avoidance of Sensitive Habitat Features. For Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement) and minor new construction, a Designated Biologist shall clearly identify sensitive resources that crews must avoid for the duration of the activities with posted signs, posting stakes, flags, and/or rope or cord, and place fencing as necessary to minimize or avoid disturbance.	ITP Condition # 5.12	Before commencing specified Covered Activities/ Entire Project	Permittee	
7	CDFW Access. Permittee shall provide CDFW staff with reasonable access to Work Areas 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.	ITP Condition # 5.17	Before commencing ground- or vegetation-disturbing activities/ During Construction/ Post-Construction/ Entire Project	Permittee	
8	Notifications Before Commencement of Certain Activities. The Designated Representative shall provide notification (ATTACHMENT 4) to CDFW for the following Covered Activities when the activity occurs outside of urban areas in modeled habitat and shall document compliance with all pre-activity Conditions of Approval before starting Covered Activities:	ITP Condition # 6.1	Before commencing specified Covered Activities/ Entire Project	Permittee	



	<ul style="list-style-type: none"> <li>• Minor New Construction</li> <li>• E9a (Reconductoring);</li> <li>• G9 (Pipeline Lowering);</li> <li>• G11 (Pipeline Replacement);</li> <li>• E15 (Underground Line Construction) when the activity occurs outside of existing roadways or urban areas;</li> <li>• G10 (Pipeline Coating Replacement) – when excavation or trenching needed in wetlands or streams;</li> <li>• G13b (Pipeline Access Road Maintenance) – when the activity includes culvert or headwall replacement;</li> <li>• Construction of temporary or permanent access roads in modeled or potential Covered Species habitats;</li> <li>• Covered Activities that occur within or over California freshwater shrimp habitat and those that may affect undercut banks and the trees that support undercut banks within shrimp habitat;</li> <li>• All Covered Activities in wetted potential CTS breeding habitat;</li> <li>• Covered Activities that include bridge replacement or culvert replacements in modeled California freshwater shrimp or California tiger salamander habitats.</li> <li>• Other Covered Activities that may result in ground disturbance of 1 acre or greater in Covered Species habitats.</li> </ul> <p>Notifications shall be submitted at least 45 days in advance and prior to “release to construction” by the Designated Representative for review by CDFW. Within 14 days of request by CDFW and if not possible then at least 5 days prior to the beginning of the Covered Activity, Permittee shall provide any requested additional information and provide access for a CDFW field review of the proposed Work Area. The proposed Covered Activity may not commence until Permittee has provided the additional information to the specifications of the request by CDFW, or until field review access has been provided to CDFW. If there continues to be unresolved issues or questions, then Permittee or CDFW may request to meet and confer within 10 business of the request to resolve any outstanding issues. CDFW retains the right to determine whether a proposed Covered Activity will not be provided coverage under this ITP.</p> <p>Notification for Covered Activities listed in Condition of Approval 6.1 that are identified as “Emergency Work” (i.e., work that requires immediate action due to a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services) shall be provided within 48 hours of identification. Regulatory compliance deadlines or actions that are to be taken in response to violation notices do not qualify as “Emergency Work”.</p>				
9	<p>Environmental Review, Planning and Screening Process. Permittee shall use an Automated Environmental Assessment (AEA) screening tool to screen many of the small electric (e.g., pole replacements) and small gas Covered Activities. The AEA tool shall automatically use a variety of current data layers (e.g., waterways, CNDDDB, serpentine soils, conservation easements, critical habitat, kit fox dens, levees, protected lands, anadromous fish streams, and vernal pools) and then release to construction if no data layers are flagged for manual review. If any</p>	ITP Condition # 6.2	Before commencing specified Covered Activities/ Entire Project	Permittee	

	<p>AEA data layers are flagged for manual review, the activity will be evaluated further by a land planner or biologist before being released to construction. Modeled habitat and Hot Zones shall be integrated into the AEA screening process, and a Covered Activity that falls within modeled habitat or a Hot Zone shall be flagged for review. A team of land planners, biologists, foresters, arborists, and tree inspectors shall conduct environmental review of vegetation management covered activities before work in the field commences. Impacted acreages of Covered Species' habitats shall also be calculated either using estimates from modeled habitat or ground-truthed. The Permittee shall also adhere to and implement the Environmental Review, Planning and Screening Process (see ATTACHMENT 5) for each Covered Activity. At a minimum, Permittee's HCP Implementation Staff shall first review, plan, and screen Covered Activities. After the completion of any required surveys, studies, or analyses, the Permittee shall develop a release-to-construction memorandum that identifies the natural resource protection measures that will be implemented in addition to relevant Conditions of Approval required by this ITP.</p>				
10	<p>California Tiger Salamander Mortality Reduction and Relocation Plan. Permittee shall prepare a CTS standardized mortality reduction and relocation plan (CTS Plan) that includes, but is not limited to, techniques to exclude salamanders from Work Areas; techniques to excavate burrows; and techniques to capture, handle, and relocate CTS safely if they are encountered in aquatic or upland habitats; and protocols for encounters with injured CTS. The CTS Plan shall also include information on materials to use, disease prevention, injuries, and nearby wildlife rehabilitation centers or veterinary facilities capable of evaluating or treating salamanders. The CTS Plan shall incorporate measures from the Fieldwork Code of Practice developed by the Declining Amphibian Populations Task Force to prevent disease transmission when working directly in aquatic habitat. Annual reports (see Condition of Approval 6.6) shall include a summary of the results of implementation of the CTS Plan. Covered Activities where CTS may be present shall not proceed until the CTS Plan is approved in writing by CDFW. Only the Designated Biologist(s) are authorized to handle or capture CTS. Any variance requests for an individual Covered Activity within a specified Work Area shall be approved in writing by CDFW. Upon request by either party, Permittee and CDFW shall meet and confer to update the CTS Plan, otherwise Permittee shall perform a scientific literature review and provide a list of in-line changes with the 5-year Compliance Report (Condition of Approval 6.7).</p>	<p>ITP Condition # 7.10</p>	<p>Before commencing work in CTS aquatic or upland habitats</p>	<p>Permittee</p>	
11	<p>California Tiger Salamander Pre-Activity Clearance Surveys. When Covered Activities will result in ground disturbance in potential CTS aquatic habitat (seasonal or perennial), the Designated Biologist(s) shall perform a pre-activity clearance survey no more than 14 days prior to the start of Covered Activities. If Covered Activities will be conducted within 500 meters of a known or suspected CTS breeding pond that will result in displacement of soil to a depth of 3-inches or greater and over an area of 0.1 acres or greater, the Designated Biologist(s) shall perform a pre-activity clearance survey no more than 14 days prior to the start of Covered Activities. For Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and E14 (Minor Substation Expansion) in modeled habitat, the Designated Biologist(s) shall also conduct a pre-activity clearance survey. If a California tiger salamander in any life stage (adult, metamorph, larval, eggs, etc.) is encountered in a Work Area or at the recommendation of the Designated Biologist, Permittee shall implement the standardized mortality reduction and relocation plan (Condition of Approval 7.10). Pre-activity clearance surveys shall provide 100 percent visual coverage of a Work Area and a 50-foot buffer zone. All small mammal burrows within the Work Area and a 50-foot buffer zone shall be flagged to alert General Biological Monitors and work crews to their presence. Where feasible, an avoidance buffer of 50 feet or greater around active small mammal burrows shall be maintained. The Designated Biologist(s) shall submit a report documenting the results of the pre-construction surveys to CDFW within five days after performing the surveys. If any California tiger salamander are found within the</p>	<p>ITP Condition # 7.11</p>	<p>At least 14 days before commencing ground-disturbing activities in potential CTS aquatic habitat</p>	<p>Permittee</p>	

	Work Area or 50-foot buffer zone, the Designated Biologist will relocate them from the Work Area or buffer zone(s) in accordance with the CTS standardized mortality reduction and relocation plan (Condition of Approval 7.10).				
12	Alameda Whipsnake Pre-Activity Habitat Features Survey. Pre-construction surveys for Alameda whipsnake and sheltering and sunning habitat features (e.g., burrows, rocky outcrops, fallen trees, etc.) shall be conducted in modeled core and perimeter core habitat for Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and E14 (Minor Substation Expansion). (See also Condition of Approval 7.19 for survey requirements in core habitat). These surveys shall be conducted by a Designated Biologist no more than 30 calendar days prior to any initial ground disturbance. These surveys will consist of walking the work area and, if possible, any accessible adjacent areas within at least 50 feet of the work area. The Designated Biologist shall investigate potential cover sites when it is feasible and safe to do so. This includes thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, tree cavities, and debris. Sheltering, sunning, or other sensitive species features identified by the Designated Biologist shall be identified with flagging. Permittee shall avoid habitat features flagged by the Designated Biologist to the extent practicable. At the recommendation of the Designated Biologist, Permittee shall install an exclusionary barrier (Condition of Approval 7.18).	ITP Condition # 7.17	At least 30 days before commencing initial ground-disturbing activities/ Entire Project	Permittee	
13	Exclusionary Barrier. Permittee shall install a temporary barrier, where feasible, to prevent the Covered Species from dispersing into the Work Area, including along construction access routes, prior to commencing any other Covered Activities. The barrier shall be installed immediately after the pre-construction surveys have been completed in accordance with Condition of Approval 7.17 above and shall consist of fencing at least 42 inches tall with 36 inches above the soil surface, designed with a lip to prevent the Covered Species from climbing over the barrier, and buried to a depth of six inches below the soil surface. The soil shall be compacted against both sides of the fence to prevent the Covered Species from gaining access. The stakes shall be placed on the inside of the fence. No gaps or holes are permitted in the fencing system except for access areas as required for vehicular and pedestrian traffic. The exit/entry points shall be constructed so that it is flush to the ground and so that the covered Species cannot access the Work Area. The barrier shall be designed to allow trapped individuals to leave the Work Area by installing one-way funnels, ramps, or other methods approved by CDFW. An alternative barrier design or directional treatment techniques in lieu of fencing may be used after receiving written authorization from CDFW. The Designated Biologist or General Monitoring Biologist shall inspect the barrier daily and the barrier shall remain in place until all construction activities have been completed or where recommended by a Designated Biologist. The Permittee shall maintain and repair barrier immediately, if damaged, to ensure that it is functional and without defects. Permittee shall provide refuge opportunities along or near the outer side of the silt fence for the Covered Species (see also Condition of Approval 7.19).	ITP Condition # 7.18	Before commencing Covered Activities/ Entire Project	Permittee	
14	Refugia Coverboards. Coverboards shall be installed in Work Area(s) as determined by the Designated Biologist in modeled core and perimeter core habitat for Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and E14 (Minor Substation Expansion) prior to conducting Covered Activities. When coverboards are recommended, they shall be placed to provide refuge for the Covered Species fleeing the area, including areas where a directional treatment methodology is used (e.g., phasing a project to encourage Covered Species to move towards core habitats and away from potentially harmful environs). When coverboards are recommended, they shall be inspected at the end of each workday by a General Monitoring Biologist and use by wildlife shall be recorded.	ITP Condition # 7.19	Before commencing Covered Activities/ Entire Project	Permittee	

15	Alameda Whipsnake Clearance Surveys. Immediately prior to the start of a Covered Activity habitats that impact greater than 0.1 acres that affects core Alameda whipsnake (AWS) habitat, including scrub or chaparral plant communities in modeled habitat, the Designated Biologist(s) shall visually survey the Work Area and adjacent areas, as determined by the Designated Biologist, to clear the area of Alameda whipsnake. If Covered Activities may affect habitat features flagged per Condition of Approval 7.17 then a General Biological Monitor shall conduct daily clearance surveys in the active Work Area(s).	ITP Condition # 7.20	Immediately before commencing Covered Activities in AWS habitat	Permittee	
16	California Freshwater Shrimp Relocation Plan. If Covered Activities in streams in California freshwater shrimp modeled habitat cannot be avoided, Permittee shall prepare a California Freshwater Shrimp Relocation Plan for CDFW review and approval. The California Freshwater Shrimp Relocation Plan shall include, but is not limited to, resumes of individuals qualified to survey and monitor for California freshwater shrimp; survey, capture, and release methods; methods to keep relocated shrimp out of harm's way; and locations with suitable habitat for relocation. Permittee may proceed with Covered Activities described in the California Freshwater Shrimp Relocation Plan upon receipt of CDFW approval of the California Freshwater Shrimp Relocation Plan. Only the Designated Biologist(s) listed in the California Freshwater Shrimp Relocation Plan are authorized to capture and handle California freshwater shrimp. Permittee shall update the California Freshwater Shrimp Relocation Plan upon request by CDFW.	ITP Condition # 7.26	Before commencing Covered Activities in streams with modeled freshwater shrimp habitat	Permittee	
17	Implement California Freshwater Shrimp Relocation Plan. If Covered Activities may affect California freshwater shrimp potential aquatic habitat, the Designated Biologist shall survey prior to allowing work to proceed. The Designated Biologist shall survey all undercut banks and submerged tree roots with a butterfly net or fish net. If California freshwater shrimp are captured, the Designated Biologist shall relocate them from the Work Area according to the Freshwater Shrimp Relocation Plan.	ITP Condition # 7.27	Before commencing Covered Activities in freshwater shrimp potential aquatic habitat	Permittee	
18	<p>Habitat Management Land Acquisition and Restoration: CDFW has determined that permanent protection and perpetual management of compensatory habitat is necessary and required pursuant to CESA to fully mitigate Project-related impacts of the taking on the Covered Species that will result 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 which the Covered Activities will impact the habitat, and CDFW's estimate of the protected acreage required to provide for adequate compensation.</p> <p>To meet this requirement, the Permittee shall:</p> <p>(1) Before start of Covered Activities, either contribute funds for restoration of 2.9 acres of aquatic habitat for California freshwater shrimp on Conserved Lands and ensure the restoration has been completed and success criteria met according to a CDFW-approved California freshwater shrimp restoration plan OR provide for both the permanent protection and management of 2.9 acres of aquatic California freshwater shrimp Habitat Management (HM) lands pursuant to Condition of Approval 8.5 below and the calculation and deposit of the management funds pursuant to Condition of Approval 8.6 below. Demonstration of restoration efforts' success OR permanent protection and funding for perpetual management of HM lands must be complete before starting Covered Activities, or within 24 months of the effective date of this ITP if Security is provided pursuant to Condition of Approval 9 below for all uncompleted obligations. The Permittee shall also restore on-site 2 acres of temporarily impacted California freshwater shrimp habitat pursuant to Condition of Approval 8.8 below.</p> <p>AND:</p>	ITP Condition # 8	Before commencing Covered Activities (or within 24 months of issuance of the ITP if Security is provided)	Permittee	

	<p>(2) Purchase AWS and CTS credits from a CDFW-approved mitigation or conservation bank pursuant to Conditions of Approval 8.2 or 8.3 below AND/OR provide for both the permanent protection and management of HM lands for CTS and AWS to meet the amounts required for each as specified in the "Required Mitigation Acreage" column of Table 2 in the manner prescribed below, pursuant to Condition of Approval 8.5 below and the calculation and deposit of the management funds pursuant to Condition of Approval 8.6 below. Permittee shall fulfill at least 2-years' worth of all AWS and CTS HM lands obligations in advance of any impacts prior to the beginning of each "Stay Ahead" period prescribed in Table 3 OR post Security prior to the beginning of each Stay Ahead period pursuant to Condition of Approval 9 below in a manner that shall 1) be in an amount to cover the entirety of a Stay Ahead period of HM Lands and on-site restoration obligations in 2022 Dollars and 2) thereafter recalculate and adjust the Security in 2022 Dollars by the start of the following Stay Ahead period (see Table 3) until Permittee has achieved the 2-year "stay ahead" status. See Table 3 for acreages and stay ahead implementation schedule).</p> <p>The Permittee shall also restore on-site approximately 4,317 acres of temporarily impacted Covered Species habitat for Covered Activities resulting in ground disturbance equal to or greater than 0.1 acres pursuant to Condition of Approval 8.8 below. CDFW may determine that a specific mitigation property or acreage satisfies the required HM land obligation for more than one Covered Species. Permittee must acquire CDFW's written determination as to which AWS and CTS HM lands obligations could be met by acquisition of a property and the associated acreages, prior to submission of HM Lands Documentation per Condition of Approval 8.5.</p>				
19	<p>Alameda Whipsnake and California Tiger Salamander Cost Estimates. For the purposes of determining the Security amount, CDFW has estimated the cost sufficient for CDFW or its contractors to complete acquisition, protection, and perpetual management of the HM lands and restoration of temporarily disturbed habitat as follows:</p> <p>Alameda Whipsnake and California tiger salamander Land acquisition costs for HM lands identified in Condition of Approval 8.5 below, estimated at \$26,000/acre for 5,514 acres: \$143,364,000. Land acquisitions costs are estimated using local fair market current value per acre for lands with habitat values meeting mitigation requirements;</p> <p>All other costs necessary to review and acquire the land in fee title and record a conservation easement as described in Condition of Approval 8.5.1 and 8.5.2 below: \$50,000;</p> <p>Start-up costs for HM lands, including initial site protection and enhancement costs as described in Condition of Approval 8.5.6 below, estimated at \$854,367;</p> <p>Interim management period funding as described in Condition of Approval 8.5.7 below, estimated at \$406,375;</p> <p>Long-term management funding as described in Condition of Approval 8.6 below, estimated at \$4,000/acre for 5,514 acres: \$22,056,000. Long-term management funding is estimated initially for the purpose of providing Security to ensure implementation of HM lands management.</p> <p>Related transaction fees including but not limited to account set-up fees, administrative fees, title and documentation review and related title transactions, expenses incurred from other state agency reviews, and overhead related to transfer of HM lands to CDFW as described in Condition of Approval 8.7, estimated at \$50,000.</p> <p>Restoration of on-site temporary effects to Covered Species habitat as described in Condition of Approval 8.8, calculated at \$3,000/acre for 4,317 acres: \$12,951,000.</p>	ITP Condition # 8.1 to 8.1.8	Before commencing Covered Activities (or within 24 months of issuance of the ITP if Security is provided)	Permittee	

	All costs associated with CDFW engaging an outside contractor to complete the mitigation tasks, including but not limited to acquisition, protection, and perpetual funding and management of the HM lands and restoration of temporarily disturbed habitat. These costs include but are not limited to the cost of issuing a request for proposals, transaction costs, contract administration costs, and costs associated with monitoring the contractor's work \$50,000.				
20	<p>Cost Estimates for California Freshwater Shrimp. For the purposes of determining the Security amount, CDFW has estimated the cost sufficient for CDFW or its contractors to complete acquisition, protection, and perpetual management of the HM lands and restoration of temporarily disturbed habitat as follows:</p> <p>California freshwater shrimp HM lands identified in Condition of Approval 8.5 below, estimated at \$164,530/acre for 2.9 acres: \$477,137. Land acquisitions costs are estimated using local fair market current value per acre for lands with habitat values meeting mitigation requirements;</p> <p>All other costs necessary to review and acquire the land in fee title and record a conservation easement as described in Condition of Approval 8.5.1 and 8.5.2 below: \$5,000;</p> <p>Start-up costs for HM lands, including initial site protection and enhancement costs as described in Condition of Approval 8.5.6 below, estimated at \$16,188;</p> <p>Interim management period funding as described in Condition of Approval 8.5.7 below, estimated at \$6,300;</p> <p>Long-term management funding as described in Condition of Approval 8.6 below, estimated at \$26,840/acre for 2.9 acres: \$766,857. Long-term management funding is estimated initially for the purpose of providing Security to ensure implementation of HM lands management.</p> <p>Related transaction fees including but not limited to account set-up fees, administrative fees, title and documentation review and related title transactions, expenses incurred from other state agency reviews, and overhead related to transfer of HM lands to CDFW as described in Condition of Approval 8.7, estimated at \$5,000.</p> <p>Restoration of on-site temporary effects to Covered Species habitat as described in Condition of Approval 8.8, calculated at \$6,000/acre for 2.9 acres: \$16,200.</p> <p>All costs associated with CDFW engaging an outside contractor to complete the mitigation tasks, including but not limited to acquisition, protection, and perpetual funding and management of the HM lands and restoration of temporarily disturbed habitat. These costs include but are not limited to the cost of issuing a request for proposals, transaction costs, contract administration costs, and costs associated with monitoring the contractor's work \$5,000.</p>	ITP Condition # 8.2 to 8.2.8	Before commencing Covered Activities (or within 24 months of issuance of the ITP if Security is provided)	Permittee	
21	Covered Species Credits. If Permittee elects to purchase Covered Species credits to complete compensatory mitigation obligations, then Permittee shall purchase Covered Species credits from a CDFW-approved mitigation or conservation bank. 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. Permittee shall submit to CDFW a copy of the Bill of Sale(s) and Payment Receipt prior to initiating Covered Activities or within 18 months from issuance of this ITP if Security is provided.	ITP Condition # 8.3	Before commencing Covered Activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	

22	<p>Advanced Purchased Covered Credits. Permittee has purchased Alameda whipsnake and/or California tiger salamander credits from the Ohlone West Conservation Bank, 603.5 acres from the Muzzy Ranch Conservation Bank, and the Margaret West Conservation Bank. Prior to transfer 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. Permittee shall submit to CDFW a copy of the executed Credit Transfer Agreement prior to initiating Covered Activities or within 18 months from issuance of this ITP if Security is provided.</p>	ITP Condition # 8.4	Before commencing Covered Activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
23	<p>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:</p> <p>Fee Title. Transfer fee title of the HM lands to CDFW pursuant to terms approved in writing by CDFW. Alternatively, CDFW, in its sole discretion, may authorize a governmental entity, special district, non-profit organization, for-profit entity, person, or another entity to hold title to and manage the property provided that the district, organization, entity, or person meets the requirements of Government Code sections 65965-65968, as amended.</p> <p>Conservation Easement. If CDFW does not hold fee title to the HM lands, CDFW shall act as grantee for a conservation easement over the HM lands or shall, in its sole discretion, approve a non-profit entity, public agency, or Native American tribe to act as grantee for a conservation easement over the HM lands provided that the entity, agency, or tribe meets the requirements of Civil Code section 815.3. If CDFW 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.</p> <p>HM Lands Approval. Obtain CDFW written approval of the HM lands before acquisition and/or transfer of the land by submitting, at least three months before acquisition and/or transfer of the HM lands, documentation identifying the land to be purchased or property interest conveyed to an approved entity as mitigation for the Project's impacts on Covered Species;</p> <p>HM Lands Documentation. Provide a recent preliminary title report, Phase I Environmental Site Assessment, and other necessary documents (please contact CDFW for document list). 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;</p> <p>Land Manager. Designate both an interim and long-term land manager approved by CDFW. The interim and long-term land managers may, but need not, be the same. The interim and/or long-term land managers may be the landowner or another party. Documents related to land management shall identify both the interim and long-term land managers. Permittee shall notify CDFW of any subsequent changes in the land manager within 30 days of the change. If CDFW will hold fee title to the mitigation land, CDFW will also act as both the interim and long-term land manager unless otherwise specified. 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.</p>	ITP Condition # 8.5 to 8.5.7	Before commencing Covered Activities (or within 24 months of issuance of the ITP if Security is provided)	Permittee	

	<p>Start-up Activities. Provide for the implementation of start-up activities, including the initial site protection and enhancement of HM lands, once the HM lands have been approved by CDFW. Start-up activities include, at a minimum: (1) preparing a final management plan for CDFW approval (see <a href="https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=137386&amp;inline">https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=137386&amp;inline</a>)</p> <p>(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;</p> <p>(5) conducting litter removal; (6) conducting initial habitat restoration or enhancement, if applicable; and (7) installing signage;</p> <p>Interim Management (Initial and Capital). Provide for the interim management of the HM lands. The Permittee shall ensure that the interim land manager implements the interim management of the HM lands as described in the final management plan and conservation easement approved by CDFW. The interim management period shall be a minimum of three years from the date of HM land acquisition and protection and full funding of the Endowment and includes expected management following start-up activities. Interim management period activities described in the final management plan shall include fence repair, continuing trash removal, site monitoring, and vegetation and invasive species management.</p> <p>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, (2) establish an escrow account with written instructions approved in advance in writing by CDFW to pay the land manager annually in advance, or (3) establish a short-term enhancement account with CDFW or a CDFW-approved entity for payment to the land manager.</p>				
24	<p>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 8.5.6. 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.</p> <p>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.</p>	ITP Condition # 8.6 to 8.6.4	Before commencing Covered Activities (or within 24 months of issuance of the ITP if Security is provided)	Permittee	



<p>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.</p> <p>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).</p> <p>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. If CDFW does not provide Permittee with a written determination within the thirty-day period, the proposal shall be deemed consistent with Section 2081(b)(3).</p> <p>Calculate the Endowment Funds Deposit. After obtaining CDFW written approval of the HM lands, long-term management plan, and Endowment Manager, Permittee shall prepare an endowment assessment (equivalent to a Property Analysis Record (PAR)) to calculate the amount of funding necessary to ensure the long-term management of the HM lands (Endowment Deposit Amount). Note that the endowment for the easement holder should not be included in this calculation. The Permittee shall submit to CDFW for review and approval the results of the endowment assessment before transferring funds to the Endowment Manager.</p> <p>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.</p> <p>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:</p> <p>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.</p> <p>Three Years Delayed Spending. The endowment shall be established assuming spending will not occur for the first three years after full funding.</p> <p>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.</p> <p>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.</p>				
--	--	--	--	--

	<p>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.</p> <p>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.</p> <p>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.</p>				
25	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 CDFW.	ITP Condition # 8.7	Before commencing Covered Activities (or within 24 months of issuance of the ITP if Security is provided)	Permittee	
26	<p>Habitat Restoration. Permittee shall restore on-site up to 4,317 acres of Alameda whipsnake and California tiger salamander and 2 acres of California freshwater shrimp habitat that will be temporarily disturbed during construction to pre-project or better conditions. Within 6 months of issuance of this ITP, Permittee shall prepare a standardized Vegetation Restoration Plan (VRP) to facilitate revegetation of up to 4,319 acres of temporary impacts disturbance and shall ensure that the VRP is successfully implemented. The VRP shall include detailed specifications for documenting baseline conditions and restoring all temporarily disturbed areas, such as seed mixes and application methods. The plan shall also indicate the best time of year for seeding to occur. The Plan shall include the following: 1) Areas that have become either barren of vegetation or where ground disturbance has occurred shall be revegetated with native plant species consistent with the vegetative composition immediately surrounding the associated Work Area, and; 2) provide prescriptions of native species shall to be included in seed mixes, and; 3) incorporate the following success criteria:</p> <ul style="list-style-type: none"> <li>• Vegetation cover shall consist of no new invasive plant species rated as "high" by the Cal-IPC and the remediated areas shall meet baseline conditions at the end of one year. Vegetation cover of extant invasive species on-site shall not be greater than 20 percent above baseline conditions.</li> <li>• Actively restored areas shall be monitored for 1 year after planting and/or hydroseeding. Monitoring shall occur in May of the year following initial impacts and at the end of the 12-month period following initial impacts.</li> <li>• Restored areas must be returned to baseline conditions within 12 months after impacts initially took place.</li> </ul>	ITP Condition # 8.8	Within 6 months of issuance of the ITP/ During Construction/ Entire Project	Permittee	

27	Security Amount for AWS and CTS. The Security for 1/15th of the permit term shall be in the amount of \$11,985,450 in 2022 Dollars. This amount is determined by CDFW based on the cost estimates identified in Condition of Approval 8.1 above, sufficient for CDFW or its contractors to complete land acquisition, property enhancement, startup costs, initial management, long-term management, and monitoring.	ITP Condition # 9.1	Before commencing Covered Activities (or within 24 months of issuance of the ITP if Security is provided)	Permittee	
28	Security Amount for California Freshwater Shrimp. The Security for California freshwater shrimp HM Lands shall be in the amount of \$1,297,682. This amount is determined by CDFW based on the cost estimates identified in Condition of Approval 8.2 above, sufficient for CDFW or its contractors to complete land acquisition, property enhancement, startup costs, initial management, long-term management, and monitoring.	ITP Condition # 9.2	Before commencing Covered Activities (or within 24 months of issuance of the ITP if Security is provided)	Permittee	
29	<p>Security Form. Security shall be in the form of an irrevocable letter of credit (see Attachment 6) or another form of Security approved in advance in writing by CDFW's Office of the General Counsel.</p> <p>Security Timeline. The Security shall be provided to CDFW before Covered Activities begin or within 30 days after the effective date of this ITP, whichever occurs first.</p> <p>Security Holder. The Security shall be held by CDFW or in a manner approved in advance in writing by CDFW.</p> <p>Security Transmittal. Permittee shall transmit it to CDFW with a completed Mitigation Payment Transmittal Form (see Attachment 7) or by way of an approved instrument such as an escrow agreement, irrevocable letter of credit, or other.</p> <p>Security Drawing. The Security shall allow CDFW to draw on the principal sum if CDFW, in its sole discretion, determines that the Permittee has failed to comply with the Conditions of Approval of this ITP.</p> <p>Security Release. The Security (or any portion of the Security then remaining) shall be released to the Permittee after CDFW has conducted an on-site inspection and received confirmation that all secured requirements have been satisfied, as evidenced by:</p> <ul style="list-style-type: none"> <li>• Copy of Bill of Sale(s) and Payment Receipt(s) or Credit Transfer Agreement for the purchase of Covered Species credits; and</li> <li>• Timely submission of all required reports.</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• Written documentation of the acquisition of the HM lands;</li> <li>• Copies of all executed and recorded conservation easements;</li> <li>• Written confirmation from the approved Endowment Manager of its receipt of the full Endowment; and</li> <li>• Timely submission of all required reports.</li> </ul> <p>Even if Security is provided, the Permittee must complete the required acquisition, protection and transfer of all HM lands and record any required conservation easements no later than 36 months from the effective date of this ITP. CDFW may require the Permittee to provide additional HM lands and/or additional funding to ensure the impacts of the taking are minimized</p>	ITP Condition # 9.3 to 9.8	Before commencing Covered Activities (or within 24 months of issuance of the ITP if Security is provided)	Permittee	

	and fully mitigated, as required by law, if the Permittee does not complete these requirements within the specified timeframe.				
<b>DURING CONSTRUCTION</b>					
30	Biological Monitor Authority. To ensure compliance with the Conditions of Approval of this ITP, all Designated Biologists and General Biological Monitors shall immediately stop any activity, when safe to do so, 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 each Work Area and otherwise facilitate the Designated Biologists and General Biological Monitors in the performance of his/her duties. If a Designated Biologist or General Biological Monitor are either unable to comply with the ITP or prevented from performing required ITP compliance, then they 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 Designated Biologists or Biological Monitors 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 result in CDFW taking actions to prevent or remedy a violation of this ITP.	ITP Condition # 5.3	Entire Project	Permittee	
31	Covered Activity Monitoring Documentation. When biological monitoring is required per Condition of Approval 6.4 (Compliance Monitoring) or when required for conducting Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement) and minor new construction in modeled habitat, the Monitoring Biologist(s) shall maintain monitoring documentation on-site in either hard copy or digital format throughout the duration of work, which shall include a copy of this ITP with attachments. Permittee shall ensure a copy of the monitoring documentation is available for review at the Work Area upon request by CDFW.	ITP Condition # 5.5	Entire Project	Permittee	
32	Dust Control. Permittee shall implement dust control measures during Covered Activities to facilitate visibility for monitoring of the Covered Species by Biological Monitors and crews. Permittee shall keep the amount of water used to the minimum amount needed and shall not allow water to form puddles.	ITP Condition # 5.7	Entire Project	Permittee	
33	Prohibition of Firearms. Firearms and domestic dogs shall be prohibited in each Work Area as well as from site access routes during construction and development of the Project, except those firearms and domestic dogs that are in the possession of authorized security personnel or local, state, or federal law enforcement officials.	ITP Condition # 5.8	Entire Project	Permittee	
34	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.	ITP Condition # 5.10	Entire Project	Permittee	
35	Clean Vehicles. Permittee shall implement the following for Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement) and minor new construction that involve ground disturbance:  Mud and/or accumulated soils shall be removed from equipment and vehicles to the maximum extent practicable.  Vehicles and equipment shall be cleaned or washed before entering a new work site.	ITP Condition # 5.11 to 5.11.5	Entire Project	Permittee	

	<p>A log shall be kept for each work site and shall be completed to document each cleaning or washing of vehicles or equipment before entering each new work site.</p> <p>Vehicles shall be staged and stored on paved or cleared areas to the extent practicable.</p> <p>Certified weed-free mulch, straw, hay bales, or equivalent materials shall be used where necessary.</p>				
36	<p>Work Area Access. To the extent practicable, project related personnel shall access a Work Area using existing routes, and shall not cross Covered Species' habitat outside of or en route to a Work Area. Permittee shall restrict Project-related vehicle traffic to established roads, staging, and parking areas to the maximum extent practicable. Permittee shall ensure that vehicle speeds do not exceed 15 miles per hour to avoid Covered Species on or traversing the roads.</p>	ITP Condition # 5.13	Entire Project	Permittee	
37	<p>Staging Areas. Permittee shall confine all Project-related parking, storage areas, laydown sites, equipment storage, and any other surface-disturbing activities to a Work Area using, to the extent possible, previously disturbed areas. No staging areas shall be located in chaparral or scrub habitats, over rock outcroppings or within 300 feet of a stock pond or vernal pool.</p>	ITP Condition # 5.14	Entire Project	Permittee	
38	<p>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 properly contain and dispose of any unused or leftover hazardous products off-site.</p>	ITP Condition # 5.15	Entire Project	Permittee	
39	<p>Pesticides. At no time shall Permittee utilize broadcast baiting of rodenticides within the Project Area. When pesticides are used, PG&amp;E shall follow all applicable state and federal laws, County Agricultural Commissioner regulations, label requirements, and when applicable, according to requirements in habitat management plans associated with Condition of Approval 8.5 (Habitat Acquisition and Protection).</p>	ITP Condition # 5.16	Entire Project	Permittee	
40	<p>Extent of Hardscape in Streams. Permittee shall limit the extent of concrete, Ercon mat, or concrete pillow systems within a watercourse to a maximum length of 100 feet and a maximum width of 50 feet at any one location unless otherwise approved in writing by CDFW.</p>	ITP Condition # 5.19	Entire Project	Permittee	
41	<p>Notification of Non-compliance. The Designated Representative shall immediately notify CDFW if the Permittee is not in compliance with any Condition of Approval of this ITP, including but not limited to any actual or anticipated failure to implement measures within the time periods indicated in this ITP and/or the MMRP. The Designated Representative shall follow up within 72 hours with a written report to CDFW describing, in detail, any non-compliance with this ITP and suggested measures to remedy the situation.</p>	ITP Condition # 6.3	Entire Project	Permittee	
42	<p>General Compliance Monitoring. The Designated Biologist shall be on-site:</p> <ul style="list-style-type: none"> <li>• Daily when Covered Species are encountered within a Work Area;</li> <li>• At the determination of the Designated Biologist, when Covered Species are relocated outside a Work Area to monitor and assess relocation success;</li> <li>• When conducting Covered Activities within 500 meters of a known or suspected California tiger salamander (CTS) breeding pond that will result in displacement of soil to a depth of 3-</li> </ul>	ITP Condition # 6.4	Entire Project	Permittee	

	<p>inches or greater and over an area of 0.1 acres or greater, during the clearing and grubbing phase and when conducting any ground disturbing activities;</p> <ul style="list-style-type: none"> <li>• All Covered Activities that may directly affect (e.g., tree work) California freshwater shrimp habitat;</li> <li>• When required by species-specific Conditions of Approval below.</li> </ul> <p>A Biological Monitor shall be on-site:</p> <ul style="list-style-type: none"> <li>• Daily when E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and minor new construction activities are conducted in modeled habitat;</li> <li>• G10 (Pipeline Coating Replacement) when excavation or trenching occurs in wetlands or streams;</li> <li>• When Covered Activities with a Work Area equal to or greater than 0.1 acres are conducted during rain events in modeled California tiger salamander habitat unless otherwise approved by CDFW in writing;</li> <li>• When required by species-specific Conditions of Approval below.</li> </ul> <p>For Covered Activities in Covered Species modeled habitat that require work over a period of two weeks or greater, a General Biological Monitor shall conduct compliance inspections, at a minimum, once every week after clearing, grubbing, and grading are completed and during periods of inactivity. The General Biological Monitor shall conduct compliance inspections to:</p> <ol style="list-style-type: none"> <li>(1) minimize incidental take of the Covered Species;</li> <li>(2) prevent unlawful take of species;</li> <li>(3) check for compliance with all measures of this ITP;</li> <li>(4) check all exclusion zones; and</li> <li>(5) ensure that signs, stakes, and fencing are intact, and that Covered Activities are only occurring in the pre-designated Project Area(s).</li> </ol> <p>The Designated Representative or Monitoring 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.</p>				
43	<p>Quality Assurance Check and Updates to Covered Species Modeled Habitat Maps. During the first year of ITP implementation, Permittee and CDFW shall coordinate to perform a quality assurance check and update as necessary the habitat models for Covered Species to ensure the spatial data accurately represent the modeled habitats available for the Covered Species. Thereafter, Permittee or CDFW may propose updates to habitat models for Covered Species to ensure the output accurately represents the habitat available for the Covered Species in coordination with, and as approved by, CDFW and the USFWS. For example, if Permittee receives better wetland data for Santa Rosa Plain or Solano County, this data can be integrated to better assist Permittee in avoiding wetland habitats.</p>	ITP Condition # 6.5	During first year of ITP implementation/ Entire Project	Permittee	

44	Annual Status Report. Permittee shall provide CDFW with an Annual Status Report (ASR) no later than June 30 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) Biologist compliance monitoring notes/data sheets recorded for the year; (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 including observation reports to the California Natural Diversity Database (Condition of Approval 6.8); (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 including restoration of temporary impacts and return to baseline as prescribed in the Vegetation Restoration Plan (Condition of Approval 8.8); (7) documentation that impacts categorized as temporary have achieved the established baseline and (8) information about other Project impacts on the Covered Species.	ITP Condition # 6.6	Annually	Permittee	
45	5-Year Compliance Report. Permittee shall prepare and submit to CDFW a 5-year compliance report by June 30 each 5-year anniversary of the effective date of this ITP, as described in the Permit Term section of this ITP in addition to the information required in the Annual Status Report (Condition of Approval 6.6). CDFW and Permittee shall meet and confer to discuss the report and any ongoing challenges to successful ITP implementation.	ITP Condition # 6.7	Quinquennially	Permittee	
46	CNDDDB Observations. The Designated Biologist or Permittee shall submit all observations of Covered Species to CDFW's California Natural Diversity Database within 60 calendar days of the observation and the Permittee shall include copies of the submitted forms with the next ASR or 5-year compliance report. If observations occur on lands not owned in fee title by Permittee, then Permittee may elect to inform the landowner of an observation. If the landowner objects to submission of the observation, then Permittee may elect to not submit.	ITP Condition # 6.8	Entire Project	Permittee	
47	Notification of Take or Injury. Permittee shall immediately notify the Designated Biologist if a Covered Species is taken or injured by a Project-related activity, or if a Covered Species is otherwise found dead or injured within the vicinity of the Project. The Designated Biologist or Designated Representative shall provide initial notification to CDFW by calling the Regional Office at (707) 428-2002. The initial notification to CDFW shall include information regarding the location, species, and number of animals taken or injured and the ITP Number. Following initial notification, Permittee shall send CDFW a written report within two working days. The report shall include the date and time of the finding or incident, location of the animal or carcass, and if possible, provide a photograph, explanation as to cause of take or injury, and any other pertinent information.	ITP Condition # 6.10	Entire Project	Permittee	
48	Temporary Impact Criteria. The following criteria shall be used to define temporary impacts for the purposes of calculating mitigation requirements:  For areas less than one-acre, to be considered a temporary impact, the impacts must meet the following criteria: (1) returned to pre-activity conditions when compared to vegetation characteristics (i.e., percentage of cover by species, vegetation heights and species composition), on undisturbed lands adjacent to the Work Area; and (2) temporarily impacted areas must be restored within 12 months of impacts being initiated. Refer to Condition of Approval 8.8 for restoration and monitoring requirements.	ITP Condition # 6.11 to 6.11.2	Entire Project	Permittee	

	For areas equal to or greater than 1-acre, to be considered a temporary impact, the impacts must meet the following criteria: (1) establishment and documentation of baseline conditions, including percentage of cover by species, vegetation heights and species composition, must be completed prior to impacts; (2) temporarily impacted areas must be restored to baseline conditions within 12 months of impacts being initiated. Refer to Condition of Approval 8.8 for restoration and monitoring requirements.				
49	Equipment Fueling. No vehicles or heavy equipment will be refueled within 100 feet of a wetland, stream, or other waterway, or within 250 feet of vernal pools, unless secondary containment is used. The fueling operator must always stay with the fueling operation. Tanks may not be topped off. If refueling must be conducted closer to wetlands, construct a secondary containment area subject to review by an environmental field specialist and/or biologist. Permittee shall maintain spill prevention and cleanup equipment in refueling areas. Sufficient spill containment and cleanup equipment shall be present at all mobile, temporary, and permanent equipment fueling locations.	ITP Condition # 7.1	Entire Project	Permittee	
50	Lighting. Permittee shall ensure that all artificial outdoor lighting shall be limited to lighting for safety and security, and designed using Illuminating Engineering Society's design guidelines, International Dark-Sky Association-approved fixtures, or other industry standards that address lighting impacts. Lighting above ground level shall be directed downward or inward, where consistent with safety concerns, and shielding shall be utilized, where needed, to minimize light scatter off-site. Light fixtures shall have non-glare finishes that will not cause reflective daytime glare.	ITP Condition # 7.2	Entire Project	Permittee	
51	Covered Activities Hours. Construction activities shall cease 30 minutes before sunset and shall not begin prior to 30 minutes after sunrise, to the extent practicable. Emergency night work shall be limited in extent, duration, and brightness, to the extent feasible. For Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and minor new construction, work may not occur at night during rain events in CTS habitat within 0.5 miles of known or potential breeding habitat between November 1 and April 30 unless otherwise authorized by CDFW. Covered Activities shall not occur at night for non-emergency work in California freshwater shrimp habitat any time of year unless otherwise authorized by CDFW.	ITP Condition # 7.3	Entire Project	Permittee	
52	Stored Materials Inspections. Workers shall thoroughly inspect for AWS and CTS in all construction pipe, culverts, or similar structures with a diameter of 7.6 centimeters (three inches) or greater that are stored for one or more overnight periods before the structure is subsequently moved, buried, or capped. If during inspection one of these animals is discovered inside the structure, workers shall notify the Biological Monitors and allow the Covered Species to safely escape that section of the structure before moving and utilizing the structure or moved out of harm's way by a Designated Biologist.	ITP Condition # 7.4	Entire Project	Permittee	
53	Cover or Ramp Open Excavations. Trenches or pits shall be covered or equipped with an escape ramp if left overnight in Covered Species modeled habitat. Crews shall inspect any trench, pit, or hole every morning prior to conducting Covered Activities to ensure no individuals are trapped; if any animals are found staff shall contact the Designated Biologist(s) to identify whether it is a Covered Species and if so, it shall be moved out of harm's way by the Designated Biologist(s). If the animal is not a Covered Species, then a General Monitoring Biologist or other individual with wildlife handling experience in possession of any applicable handling permits may move it out of harm's way.	ITP Condition # 7.5	Entire Project	Permittee	



54	Spoils Stockpiles. Permittee shall ensure that soil stockpiles are placed where soil will not pass into wetlands or any other "waters of the state," in accordance with Fish and Game Code section 5650. Permittee shall cover and protect stockpiles to prevent soil erosion, including wind and rain. Spoils and shall be placed away from chaparral habitat, rock outcroppings, and concentrated ground squirrel, pocket gopher, or other small mammal burrows or habitat features suitable for use by the Covered Species as refugia habitat.	ITP Condition # 7.6	Entire Project	Permittee	
55	Screen or Cap Hollow Pipes or Posts. All hollow pipes or posts that are installed as part of Covered Activities, or encountered in a Work Area that the Permittee owns or is responsible for, that are above ground shall be capped, screened, or filled with material by Permittee prior to the end of the day in which installation occurs.	ITP Condition # 7.7	Entire Project	Permittee	
56	Equipment Inspection. Workers shall inspect for Covered Species under vehicles and equipment before the vehicles and equipment are moved. If a Covered Species is present, the worker shall notify the Biological Monitors and wait for the Covered Species to move unimpeded to a safe location. Alternatively, the Permittee shall contact a Designated Biologist to determine if they can safely move the Covered Species out of harm's way in compliance with this ITP.	ITP Condition # 7.8	Entire Project	Permittee	
57	No Barriers to Covered Species Movement. Permittee shall construct access routes such that there are no steep curbs, v-ditches, berms, straw wattles, or dikes that could prevent Covered Species from traversing through ROWs or from exiting roadways. If curbs/ berms/straw wattles are necessary for safety and/or surface runoff, Permittee shall design and construct them to allow Covered Species to move over them. Permittee shall modify or remove exclusion fencing at the request of Biological Monitors or CDFW staff that may impede Covered Species movements.	ITP Condition # 7.9	Entire Project	Permittee	
58	Work in or Adjacent to Aquatic Breeding Habitat. A Designated Biologist shall be on-site to oversee any Covered Activities that occur within potential CTS breeding habitat (whether surface water is present or not). To the extent practicable, Permittee shall avoid impacts to potential or known CTS breeding habitat unless completely dry. If Covered Activities in wetted breeding habitat cannot be avoided, then the activities shall be performed under the direction of a Designated Biologist and in a manner consistent with the CTS Mortality Reduction and Relocation Plan. Permittee shall restrict placement of fill or other ground-disturbing activities within a 300-foot buffer from the edge of the ordinary high-water mark of known or potential aquatic breeding habitat to the extent practicable. However, if ground-disturbing work within the 300-foot buffer is necessary then a General Biological Monitor shall 1) oversee excavation of burrows that will be impacted by ground disturbing activities, 2) oversee placement of fill in a manner that avoids burrow entrances, and 3) shall be on-site during all ground-disturbing Covered Activities with the exception of vegetation management, pole replacements, patrols, or inspections. The Designated Biologist shall relocate any live California tiger salamander discovered during burrow excavation in accordance with the CTS Mortality Reduction and Relocation Plan (Condition of Approval 7.10).	ITP Condition # 7.12	Entire Project	Permittee	
59	Avoid Vernal Pools in CTS Hot Zones. Permittee shall avoid impacts to vernal pools to the extent practicable. For work that cannot avoid vernal pool impacts that are in CTS Hot Zones, Permittee shall conduct Covered Activities only when vernal pools are completely dry.	ITP Condition # 7.13	Entire Project	Permittee	
60	California Tiger Salamander Protection during Upland Movements or Exclusion Fencing. Permittee shall implement the following additional protective measures for Covered Activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and E14 (Minor Substation Expansion), as well as E15 (Underground Line Construction) when the activity	ITP Condition # 7.14 to 7.14.3	Entire Project	Permittee	

	<p>occurs outside of existing roadways or urban areas, in CTS habitat within 0.5 mile of known or potential breeding habitat between November 1 and April 30:</p> <p>Permittee shall not conduct Covered Activities (specified in 7.13) at night during rain events unless otherwise authorized by CDFW. The following day, crews will check for CTS around tires, equipment, and materials before resuming work. If a CTS is found, the crew shall avoid the area and contact the Designated Biologist(s) for direction.</p> <p>Prior to a rain event of 0.25 inches or greater within a 24-hour period, Permittee shall install exclusion fencing around the perimeter of Work Areas to prevent CTS movement into the Work Areas. Installation of the exclusion fence shall be overseen and directed by the Designated Biologist(s). The exclusion fence shall be buried a minimum of 4 inches below ground surface and equipped with one-way exits (if the Work Area still has burrows and has not been cleared of CTS) to avoid entrapment of CTS and other amphibians or reptiles within the fenced area. For every 100 feet of exclusion fencing, Permittee shall provide coverboards to provide shelter for CTS.</p> <p>The exclusion fence shall be supported sufficiently to maintain its integrity under all conditions, such as wind and heavy rain, for the duration of the Covered Activities in the Work Area being fenced. The Designated Biologist(s) shall inspect the completed fencing prior to construction. General Biological Monitors shall check the exclusion fence at least once daily and maintain/repair the fence when necessary. Permittee shall install temporary exclusion fencing in a sequential manner that corresponds to the progression of Covered Activities as specified above within a Work Area. When exclusion fencing is not required to be installed simultaneously throughout a Work Area then it shall be installed for only the portion of a Work Area that is under active construction and removed immediately after the construction has ceased to prevent substantial impediments to CTS movement.</p>				
61	<p>Discovery of California Tiger Salamander in Work Area(s). If a CTS, including body parts, is found by any person in a Work Area before or during Covered Activities, Permittee shall stop all work when safe to do so that could potentially injure CTS immediately until the Designated Biologist(s) can relocate the California tiger salamander following the California Tiger Salamander Mortality Reduction and Relocation Plan specified in Condition of Approval 7.10. Covered Activities may commence as directed by the Designated Biologist(s) including recommendation that General Biological Monitor(s) be present at the Work Area to monitor Covered Activities.</p>	ITP Condition # 7.15	Entire Project	Permittee	
62	<p>California Tiger Salamander Record of Handling. The Designated Biologist shall maintain a record of all CTS captures, relocations, and observations. Records shall include the following information: the date, time, and location of each occurrence using GPS; the name of the party that actually identified the CTS; circumstances of the incident; the general condition and health of each individual CTS; any diagnostic markings, sex, age (juvenile or adult); actions undertaken; and habitat description. The Permittee shall include this information in Annual Reports (Condition of Approval 6.6) and shall submit this information to CDFW.</p>	ITP Condition # 7.16	Entire Project	Permittee	
63	<p>Alameda Whipsnake Pre-Activity Tailboards. The Designated Biologist or General Biological Monitor may prescribe activity-specific tailboards trainings reminding staff of the importance of following measures to minimize impacts on Alameda whipsnake as they relate to the work site. Site specific tailboards shall be conducted for staff working on Covered Activities that impact greater than 0.1 acres in core habitat or perimeter core habitat.</p>	ITP Condition # 7.21	Entire Project	Permittee	

64	Suspected Alameda Whipsnake in Work Area. If a snake is found by any person in the Work Area before or during Covered Activities, all work that could potentially injure the snake shall stop immediately and the snake will be allowed to leave the work area on its own. If the snake does not leave the work area or cannot move to an area with sufficient habitat outside of the work area, the Designated Biologist will move the snake to suitable habitat outside the work area. Covered activities will resume only after the snake has been confirmed to be out of the Work Area.	ITP Condition # 7.22	Entire Project	Permittee	
65	Alameda Whipsnake Seasonal Restriction. Disturbance in modeled core and perimeter core habitat for E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and E14 (Minor Substation Expansion) for Alameda whipsnake will only take place between April 15 and October 31 to the extent feasible when Alameda Whipsnake is more active and less likely to be affected by covered activities. For activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and E14 (Minor Substation Expansion) occurring in core or perimeter core habitat for Alameda whipsnake between November 1 and April 14, a Designated Biologist(s) will be present during operations.	ITP Condition # 7.23	Entire Project	Permittee	
66	Alameda Whipsnake Injury. If an AWS has major or serious injuries as a result of Project-related activities, the Designated Biologist shall immediately take it to a qualified wildlife rehabilitation or veterinary facility. Permittee shall bear any costs associated with the care or treatment of such injured AWS. If the injury is minor or healing and the AWS is likely to survive as determined by the Designated Biologist, it shall be released immediately to an area out of harm's way. The Permittee shall notify CDFW of the injury to the AWS within 2 working days by telephone and e-mail followed by a written incident report as described in Condition 6.3. Notification shall include the name of the facility where the animal was taken.	ITP Condition # 7.24	Entire Project	Permittee	
67	California Freshwater Shrimp Seasonal Restrictions. Permittee shall restrict Covered Activities in or adjacent to streams in modeled habitat for California freshwater shrimp to the period between July 1 (after females release eggs) and November 15 (before they move to the shallow margins of streams, seeking refuge from high water velocities associated with winter storm events) to the extent possible. If work must occur outside of this period, then the Designated Biologist shall be present during all Covered Activities.	ITP Condition # 7.25	Entire Project	Permittee	
<b>POST-CONSTRUCTION</b>					
68	Refuse Removal. Upon completion of Covered Activities within a Work Area, Permittee shall remove from, and properly dispose of all temporary fill and construction refuse, including, but not limited to, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, and boxes.	ITP Condition # 5.18	Post-construction	Permittee	
69	Final Mitigation Report. Within 30 days of the ITP expiration date, Permittee shall provide CDFW with a Final Mitigation Report. The Permittee shall prepare the Final Mitigation Report which shall include, at a minimum: (1) a summary of all ASRs and 5-year compliance reports; (2) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species; (4) information about other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an assessment of the effectiveness of this ITP's Conditions of Approval in minimizing and fully mitigating Project impacts of the taking on Covered Species; (7) recommendations on how mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future projects on the Covered Species; and (8) any other pertinent information.	ITP Condition # 6.9	Post-construction and within 30 days of the ITP expiration date	Permittee	



Department of Fish and Wildlife

**BIOLOGIST RESUME COVER SHEET**

---

**SUBMIT EACH RESUME AS A SEPARATE DOCUMENT**

Number of Resumes Included in Transmittal: \_\_\_\_\_

Name	Requested Role(s) <sup>1</sup>	Species/Resource(s)

---

<sup>1</sup> Requested roles correspond to the biological staffing requirements indicated in the Lake and Streambed Alteration (LSA) Agreement or California Endangered Species Act Incidental Take Permit (ITP). Roles may include a "Qualified Biologist" or "Designated Biologist" with the necessary experience to survey for special status species, or a "Biological Monitor" with the necessary experience to monitor construction activities for special status species. An individual may request more than one role.



Department of Fish and Wildlife

**BIOLOGIST RESUME FORM**

*This form requests information about the qualifications of the Qualified Biologist, Designated Biologist and Biological Monitor specified in California Endangered Species Act Incidental Take Permits (ITP) and Lake or Streambed Alteration (LSA) Agreements issued by California Department of Fish and Wildlife (CDFW).*

**Completing this form will ensure the receipt of adequate information and expedite CDFW review of qualifications.**

**SECTION I. NAME AND CONTACT INFORMATION**

Name:		Title:	
Company Name & Address:		Phone:	
		Email:	

**SECTION II. EDUCATION**

College/University & Degree Type Related to Natural Resource Science:	
Other Relevant Workshops & Training:	

**SECTION III. ROLE(S) AND PERMIT REQUIREMENTS**

Requested Role(s):	
Relevant LSA Agreement Measures or ITP Conditions <sup>2</sup> :	

**SECTION IV. SPECIES AND RESOURCE EXPERIENCE – SUMMARY**

*This section summarizes experience by special status species and other resource. Use one row for each species or other resource where surveys or special protections are required in the CESA ITP or LSA Agreement for which biologist approval is requested.<sup>3</sup> If more space is needed, add rows to this table. Provide details in Section 5.*

Species or Resource	Number of Field Seasons & Hours, Life Stages Observed <i>Provide project details in Section 5</i>	Life History Knowledge <i>Describe formal workshops &amp; training with dates, or informal training details</i>	CDFW SCP, MOU, & USFWS 10a1a Authorization Number & Authorized Activities <i>This form does not fulfill SCP, MOU, &amp; USFWS 10a1a reporting requirements</i>
Insert Species or Resource 1	Field seasons: Hours: Life Stages:		Issued to: Expiration: Agency contact:
Insert Species or Resource 2	Field seasons: Hours: Life Stages:		Issued to: Expiration: Agency contact:
Insert Species or Resource 3	Field seasons: Hours: Life Stages:		Issued to: Expiration: Agency contact:

<sup>2</sup> List all measures and conditions from the LSA Agreement or ITP requiring biological staff (i.e., Qualified Biologist, Designated Biologist, or Biological Monitor).

<sup>3</sup> Often LSA Agreements/ITPs require surveys and other protections for multiple species and other resources. Include only those for which the biologist has experience and is requesting approval.

## SECTION V. SPECIES AND RESOURCE EXPERIENCE – DETAILS

*This section details experience from the three most recent and relevant projects for each species and resource identified in Section 4. If more space is needed, attach additional pages in the same table format (i.e., copy/paste format).*

<b>A. Species or Resource:</b>			
Project 1 Name & Location:		Project Start & End Dates:	
LSA Agreement, ITP, or Other Agency Permit Number:		Role(s) <sup>4</sup> :	
Survey Type(s) <sup>5</sup> :		Construction Monitoring <sup>6</sup> :	Days: Activities:
Species Life Stages Observed & Handled, Number of Each:	Life Stage: Number Observed: Number Handled: Reported to CNDDDB <sup>7</sup> (Y/N):	Company Name, Professional Reference Name, Phone, Email:	
If <u>not</u> reported to CNDDDB, why:			
CDFW and Other Agency Email:			
Project 2 Name & Location:		Project Start & End Dates:	
LSA Agreement, ITP, or Other Agency Permit Number:		Role(s):	
Survey Type(s):		Construction Monitoring:	Days: Activities:
Species Life Stages Observed & Handled, Number of Each:	Life Stage: Number Observed: Number Handled: Reported to CNDDDB (Y/N):	Company Name, Professional Reference Name, Phone, Email:	
If <u>not</u> reported to CNDDDB, why:			
CDFW and Other Agency Email:			
Project 3 Name & Location:		Project Start & End Dates:	
LSA Agreement, ITP, or Other Agency Permit Number:		Role(s):	
Survey Type(s):		Construction Monitoring:	Days: Activities:

<sup>4</sup> Insert the role as described in the associated LSA Agreement, ITP or other agency permit. If these permits were not issued, describe the role based on the duties, e.g., "lead biologist with handling authorization" or "biological monitor."

<sup>5</sup> For example, pre-construction survey or description of the protocol or guideline followed.

<sup>6</sup> Include the number of days and describe the types of activities monitored (e.g., heavy equipment operation).

<sup>7</sup> CNDDDB is the abbreviation for California Natural Diversity Database.

**Project Name:**  
**LSA Agreement/ITP Number(s):**

Species Life Stages Observed & Handled, Number of Each:	Life Stage: Number Observed: Number Handled: Reported to CNDDDB (Y/N):	Company Name, Professional Reference Name, Phone, Email:	
If <u>not</u> reported to CNDDDB, why:			
CDFW and Other Agency Email:			
Additional Information:			

<b>B. Species or Resource:</b>			
Project 1 Name & Location:		Project Start & End Dates:	
LSA Agreement, ITP, or Other Agency Permit Number:		Role(s):	
Survey Type(s):		Construction Monitoring:	Days: Activities:
Species Life Stages Observed & Handled, Number of Each:	Life Stage: Number Observed: Number Handled: Reported to CNDDDB (Y/N):	Company Name, Professional Reference Name, Phone, Email:	
If <u>not</u> reported to CNDDDB, why:			
CDFW and Other Agency Email:			
Project 2 Name & Location:		Project Start & End Dates:	
LSA Agreement, ITP, or Other Agency Permit Number:		Role(s):	
Survey Type(s):		Construction Monitoring:	Days: Activities:
Species Life Stages Observed & Handled, Number of Each:	Life Stage: Number Observed: Number Handled: Reported to CNDDDB (Y/N):	Company Name, Professional Reference Name, Phone, Email:	
If <u>not</u> reported to CNDDDB, why:			
CDFW and Other Agency Email:			
Project 3 Name & Location:		Project Start & End Dates:	
LSA Agreement, ITP, or Other Agency Permit Number:		Role(s):	
Survey Type(s):		Construction Monitoring:	Days: Activities:

**Project Name:**  
**LSA Agreement/ITP Number(s):**

Species Life Stages Observed & Handled, Number of Each:	Life Stage: Number Observed: Number Handled: Reported to CNDDDB (Y/N):	Company Name, Professional Reference Name, Phone, Email:	
If <u>not</u> reported to CNDDDB, why:			
CDFW and Other Agency Email:			
Additional Information:			

<b>C. Species or Resource:</b>			
Project 1 Name & Location:		Project Start & End Dates:	
LSA Agreement, ITP, or Other Agency Permit Number:		Role(s):	
Survey Type(s):		Construction Monitoring:	Days: Activities:
Species Life Stages Observed & Handled, Number of Each:	Life Stage: Number Observed: Number Handled: Reported to CNDDDB (Y/N):	Company Name, Professional Reference Name, Phone, Email:	
If <u>not</u> reported to CNDDDB, why:			
CDFW and Other Agency Email:			
Project 2 Name & Location:		Project Start & End Dates:	
LSA Agreement, ITP, or Other Agency Permit Number:		Role(s):	
Survey Type(s):		Construction Monitoring:	Days: Activities:
Species Life Stages Observed & Handled, Number of Each:	Life Stage: Number Observed: Number Handled: Reported to CNDDDB (Y/N):	Company Name, Professional Reference Name, Phone, Email:	
If <u>not</u> reported to CNDDDB, why:			
CDFW and Other Agency Email:			
Project 3 Name & Location:		Project Start & End Dates:	
LSA Agreement, ITP, or Other Agency Permit Number:		Role(s):	
Survey Type(s):		Construction Monitoring:	Days: Activities:



**Project Name:****LSA Agreement/ITP Number(s):**

Species Life Stages Observed & Handled, Number of Each:	Life Stage: Number Observed: Number Handled: Reported to CNDDDB (Y/N):	Company Name, Professional Reference Name, Phone, Email:	
If <u>not</u> reported to CNDDDB, why:			
CDFW and Other Agency Email:			
Additional Information:			

FOR DEPARTMENT USE ONLY				
Date Received	Landowner Agreement	Incidental Take Permit	Date Complete	Notification Number

## PG&E Bay Area O&M ITP 2081-2015-031-03 Pre-activity Notification Form

Complete EACH field unless otherwise indicated, following the enclosed instructions and submit ALL required enclosures. Attach additional pages, if necessary.

### 1. ACTIVITY ID NUMBER OR NAME AND DURATION

Activity Identifier				
B. Activity Term		C. Seasonal Work Period		D. Estimated Number of Workdays
Beginning (month/year)	Ending (month/year)	Start Date (month/day)	End Date (month/day)	

### 2. COVERED ACTIVITY AND WORK TYPE (Check each box that applies)

GAS ACTIVITY		ELECTRIC ACTIVITY	
G9: Pipeline Lowering	<input type="checkbox"/>	E9a: Reconductoring	<input type="checkbox"/>
G10: Pipeline Coating Replacement (when excavation or trenching occurs in wetlands or streams)	<input type="checkbox"/>	E14: Minor Substation Expansion	<input type="checkbox"/>
G11: Pipeline Replacement	<input type="checkbox"/>	E15: Electric Underground Line Construction	<input type="checkbox"/>
G13b: Vegetation Management and Access Road Maintenance (when culvert or headwall replacement is required)	<input type="checkbox"/>		
G14: Gas Pressure Limiting Station Construction	<input type="checkbox"/>		
OTHER ACTIVITIES REQUIRING NOTIFICATION			
Construction of temporary or permanent access roads in modeled or potential Covered Species habitats.			<input type="checkbox"/>
Covered Activities that occur within or over California freshwater shrimp habitat and those that may affect undercut banks and the trees that support undercut banks within shrimp habitat.			<input type="checkbox"/>
Covered Activities in wetted potential CTS breeding habitat.			<input type="checkbox"/>
Covered Activities that include bridge replacement or culvert replacements in modeled California freshwater shrimp or California tiger salamander habitats.			<input type="checkbox"/>

Other Covered Activities that may result in ground disturbance of 1 acre or greater in Covered Species habitats. ☐

### 3. ACTIVITY TYPE

Check the applicable box

- ☐ Routine Operations and Maintenance (Submit at Least 45 Days in Advance)
- ☐ Urgent Operation and Maintenance (Requested Start Date: \_\_\_\_\_)
- ☐ Emergency Work (Submit at Least 48 Hours After Identification of Emergency)

### 4. ACTIVITY LOCATION

A. Address or description of activity location. Include a map that marks the location of the activity with a reference to the nearest city or town, and provide driving directions from a major road or highway.

☐ Continued on additional page(s)

B. County

C. USGS 7.5 Minute Quad Map Name

D. Township

E. Range

F.  
Section

G. ¼ Section

☐ Attached or continued on additional page(s)

H. Meridian (check one)

☐ Humboldt

☐ Mt. Diablo

☐ San Bernardino

I. Assessor's Parcel Number(s)

☐ Attached or continued on additional page(s)

J. Coordinates (If available, provide at least latitude/longitude or UTM coordinates and check appropriate boxes)

Latitude/Longitude	Latitude:		Longitude:	
	<input type="checkbox"/> Degrees/Minutes/Seconds		<input type="checkbox"/> Decimal Degrees	
			<input type="checkbox"/> Decimal Minutes	
UTM	Easting:	Northing:	<input type="checkbox"/> Zone 10 <input type="checkbox"/> Zone 11	
Datum used for Latitude/Longitude or UTM		<input type="checkbox"/> NAD 27 <input type="checkbox"/> NAD 83 or WGS 84		

### 5. SITE INSPECTION

Check one box only

- ☐ In the event the Department determines that a site inspection is necessary, I hereby authorize a Department representative to enter the property where the activity described in this notification will take place at any reasonable time, and hereby certify that I am authorized to grant the Department such entry.
- ☐ I request the Department to first contact \_\_\_\_\_ at \_\_\_\_\_ to schedule a date and time to enter the property where the activity described in this notification will take place.

**7. ACTIVITY DESCRIPTION**

A. Describe the Activity (including justification for “urgent” or “emergency” work) and describe the environmental setting where work will occur.

☐ Continued on additional page(s)

B. Enclosure checklist.

- ☐ Google Earth KMZ file or GIS Shape file
- ☐ Map on Aerial Photo for each discrete location with the following information:
- ☐ Location of the activity or if multiple activities, the location of each activity
  - ☐ Project access (public/private roads or proposed new temporary access)
  - ☐ Location of staging area
  - ☐ Any spoils placement
  - ☐ Outline acreages of temporary or permanent habitat impacts
- ☐ Representative photos for large-scale sites or site-specific photos for discrete locations
- ☐ Engineering and/or design plans
- ☐ Other: \_\_\_\_\_

**8. ACTIVITY IMPACTS**

Habitat Type	Temporary Impact (acres or SqFt)	Permanent Impact (acres or SqFt)
CTS Upland (Central DPS)		
CTS Aquatic (Central DPS)		
CTS Upland (Sonoma DPS)		
CTS Aquatic (Sonoma DPS)		
AWS Core		
AWS Perimeter Core		
AWS Movement		
CA Freshwater Shrimp		

**9. MEASURES TO PROTECT FISH, WILDLIFE, AND PLANT RESOURCES**

A. List all applicable HCP AMMs, FPs, or BMPs etc. for this Covered Activity.

☐ Continued on additional page(s)

B. Applicable Pre-Activity Species-Specific ITP Take Minimization Measures.

☐ CTS Pre-Activity Clearance Surveys. Planned survey date(s): \_\_\_\_\_

☐ Work in or Adjacent to CTS Aquatic Breeding Habitat.

☐ Alameda Whipsnake Pre-Activity Habitat Features Survey. Planned survey date(s): \_\_\_\_\_

☐ AWS Exclusionary Barrier.

☐ Alameda Whipsnake Clearance Surveys.

C. ITP Compliance Monitoring Requirements.

☐ Covered Activities are within 500 meters of a known or suspected California tiger salamander (CTS) breeding pond and will result in displacement of soil to a depth of 3-inches or greater and over an area of 0.1 acres or greater. Designated Biologist will be onsite during clearing or grubbing and during active ground disturbance.

☐ Covered Activities may directly affect (e.g., tree work) California freshwater shrimp habitat. Designated Biologist will be onsite during active operations.

☐ Conducting E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and minor new construction activities in any modeled habitat; a General Monitoring biologist will be onsite daily.

☐ Conducting G10 (Pipeline Coating Replacement) when excavation or trenching occurs in wetlands or streams in modeled habitat; a General Monitoring biologist will be onsite daily.

☐ When Covered Activities over 0.1 acres are conducted during precipitation events in modeled California tiger salamander habitat a General Monitoring biologist will be onsite.

☐ Alameda Whipsnake Seasonal Restriction. For activities E9a (Reconductoring), G9 (Pipeline Lowering), G11 (Pipeline Replacement), and E14 (Minor Substation Expansion) occurring in core or perimeter core habitat for Alameda whipsnake between November 1 and April 14, a Designated Biologist(s) will be present during operations.

☐ Covered Activities in Covered Species modeled habitat will require work over a period of two weeks or greater. a General Biological Monitor shall conduct compliance inspections, at a minimum, once every week after clearing, grubbing, and grading are completed and during periods of inactivity.

**10. PERMITS**

List any local, state, and federal permits the activity requires and check the corresponding box (other than the Bay Area HCP). Enclose a copy of each permit issued.

A. \_\_\_\_\_ ☐ Applied ☐ Issued

B. \_\_\_\_\_ ☐ Applied ☐ Issued

C. Unknown whether ☐ local, ☐ state, or ☐ federal permit is needed for the activity. (Check each box that applies.)

☐ Continued on additional page(s)

## Attachment 5

Pacific Gas and Electric's Environmental Review, Planning and Screening Process: Excerpt from Pacific Gas and Electric Company Bay Area Operations and Maintenance Incidental Take Permit Final Environmental Impact Report, SCH No. 2017122028

## 2.9 Overview of PG&E's Environmental Review Process

PG&E employs a large and diverse staff of environmental and regulatory compliance professionals whose primary roles are to ensure that activities are completed in compliance with applicable environmental and natural resource laws and regulations. This process is followed for all PG&E projects, including O&M, minor new construction, and larger projects, although it may be truncated or delayed for emergency projects. Environmental staff screens and reviews projects and activities when natural resources could be affected, and staff routinely identifies and prescribes standard BMPs that are implemented during PG&E's routine O&M activities.

~~Activities that would be covered by the proposed ITP are not necessarily subject to review under CEQA.~~ Most of PG&E's covered activities involve routine O&M activities that are not typically subject to review under CEQA. First, no discretionary permit may be required for the work. If there is discretionary permitting, the operation, repair, maintenance, or minor alteration of existing facilities is considered a Class 1 exemption under CEQA Guidelines Section 15301(b). Replacement or reconstruction of existing structures with no or negligible expansion is considered as a Class 2 exemption under CEQA Guidelines Section 15302(c). Much of PG&E's wildfire prevention work is

covered by the emergency exemption under CEQA Guidelines Section 15369. When there are exceptions to exemptions under CEQA Guidelines Section 15300.2, then formal CEQA review will be required.

When required, PG&E’s environmental staff obtains ministerial and discretionary permits, and assists in implementing the corresponding permit conditions and BMPs. Sections 2.9.1 through 2.9.4 describe PG&E environmental staff practices for reviewing covered activities, with the goals of avoiding and minimizing effects on natural resources as a result of covered activities. To achieve these goals, PG&E’s overall environmental screening processes can be categorized into four phases: project assessment, environmental screening and review, project refinement, and environmental release to construction (Figure 2-6). PG&E’s measures to avoid and minimize impacts are described in Section 2.10, Project Measures to Reduce Impacts.

**2.9.1 Phase 1—Project Assessment**

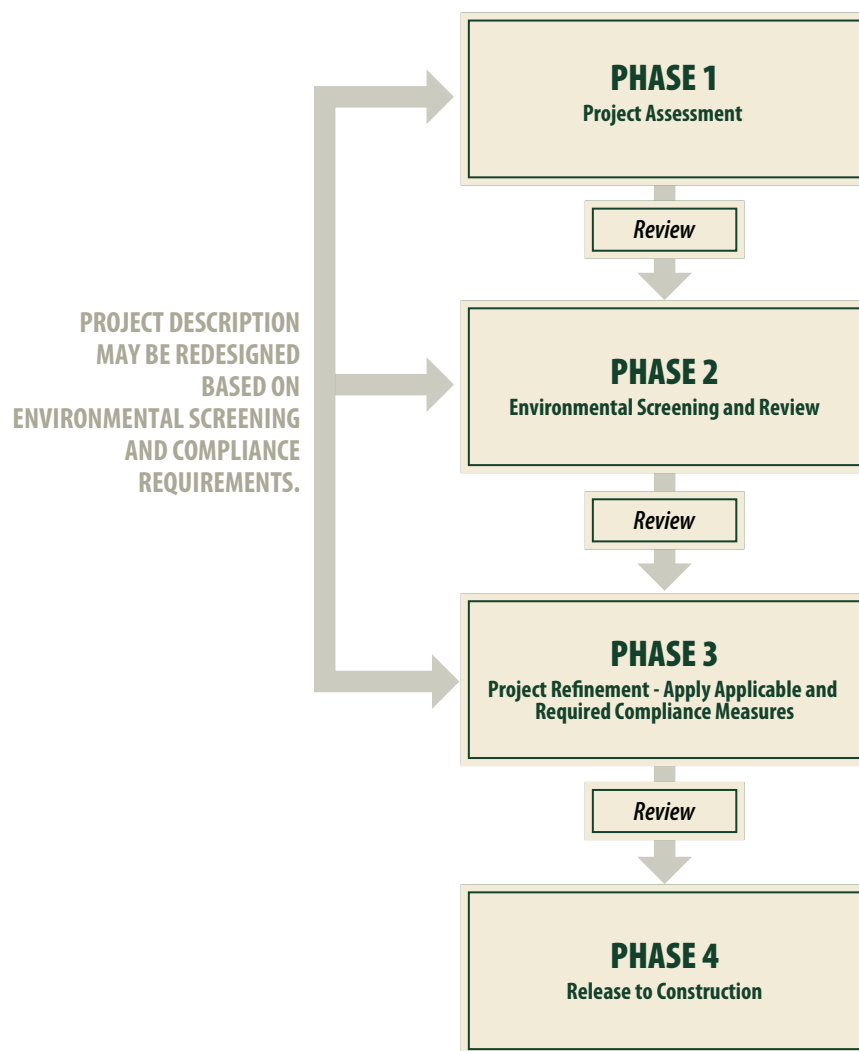
Covered activities arise out of an extensive multi-year planning process that factors in the age of the facilities, life of the equipment, equipment conditions, wear, outage history, and other considerations. During the first phase, PG&E land planners and engineers evaluate a given project and begin developing the project scope and description. The level of detail in the project description varies based on the activity size (e.g., less detailed for small projects and more detailed for large projects) and an initial assessment of the site conditions and constraints. Typically, a project description for a large capital improvement project, such as electric reconductoring or gas pipeline replacement project includes an evaluation of site access, temporary construction areas, construction footprint, construction schedule, and outage schedule, with the ultimate goal of assessing the environmental impacts and potential discretionary permits and environmental review requirements. The time required developing the project scope and description varies from 1 day to greater than 1 year, with some projects taking 2 years or more for assessment and design because of required field surveys.

**2.9.2 Phase 2—Environmental Screening and Review**

During the second phase, PG&E’s staff of land planners, biologists, cultural resource specialists, vegetation management staff, and environmental field specialists conducts initial environmental screening and review of the proposed project and associated work activities. Multiple environmental screening processes are used by the various staff members supporting the project depending on the line of business and type of work. Land planners review ministerial and discretionary permits as well as land rights. Land planners, vegetation management inspectors, and biologists conduct riparian screening for vegetation management activities. During the screening process, projects and activities are evaluated for potential impacts on wetlands, on state and federal waters, on species protected by the CESA or federal Endangered Species Act and other special-status species, and on the habitats for these species. PG&E staff verifies that the necessary land rights are obtained for both temporary and permanent easements. The environmental permitting process may also begin in this phase. Table 2-5 outlines the anticipated permits and approvals that could be required. PG&E maintains a comprehensive geographic information system to evaluate projects, and routinely uses this system to evaluate all aspects of a project’s scope or description.

PG&E’s Environmental Team routinely evaluates the impacts of proposed projects and recommends the appropriate avoidance, and minimization, ~~or mitigation~~ measures, based on best practices and permit requirements, as follows.





03442.03\_PGE-BayAreaHCP (01-08-15) SS



**Figure 2-6**  
**PG&E's Generalized**  
**Environmental Screening Process**

- For siting work locations, land use and planning practices to minimize impacts.
- Visual resource practices to lessen the visual impacts on a sensitive receptor.
- Biological resources evaluation and screening to minimize environmental impacts.
- Geology and soils practices to engineer facilities correctly and minimize erosion.
- Water quality practices to protect water quality.
- Cultural resources practices to protect cultural resources.
- Transportation and circulation practices to minimize traffic impacts.
- Noise and vibration practices to minimize noise and vibration impacts on sensitive receptors.
- Air quality practices to minimize air quality impacts and vehicle emissions.
- Hazardous materials practices to ensure the proper management, use, disposal, and storage of hazardous materials.
- Environmental justice practices to ensure minority communities are not adversely affected.
- Cleanup and restoration practices to ensure work areas are restored.
- Detailed project measures PG&E uses to address these resources are described in Section 2.10, *Project Measures to Reduce Impacts*.

### 2.9.3 Phase 3—Project Refinement

During the third phase, based on the results of the environmental screening and review, PG&E staff (land planners, biologists, field crews, and other specialists) identify appropriate AMMs and BMPs to avoid and minimize impacts from the activity. These AMMs, described in Section 2.10, are added to the project work as required conditions. These AMMs include environmental protection measures, applicant proposed measures (APMs), BMPs, FPs, and required compliance measures, such as permit conditions or agency agreements and mitigation measures. Based on this information and information from the second phase, the project may be refined or modified to minimize its impacts.

### 2.9.4 Phase 4—Environmental Release to Construction

The fourth phase is a release to construction review. PG&E staff implements an environmental release-to-construction (ERTC) process, or an equivalent procedure, to ensure projects and activities are reviewed for environmental constraints or restrictions, and all appropriate measures are included in the work plans. Work crews are given specific directions concerning permit conditions, BMPs, AMMs and other project requirements.

This screening process, in conjunction with PG&E's annual environmental awareness training and project-specific tailboard trainings, helps ensure that PG&E avoids and minimizes project impacts and complies with applicable environmental laws and regulations. Table 2-5 summarizes the range of permits and approvals that may be required for PG&E activities. While the ERTC process is primarily for large activities that would more likely have a potential environmental impact, many small activities are covered by PG&E's automated environmental assessment process or other line of business procedures.

PG&E frequently uses third party contractors to perform O&M and minor new construction work and is responsible for the performance of the work conducted by these contractors. PG&E requires third-party contractors to perform the following actions when applicable.

- Train employees and contractors performing O&M and minor new construction activities on the permit requirements that are applicable to their job duties and work.
- Enter into a new or revised contract with PG&E that contains enforceable provisions committing the third party to comply with provisions of the permit.

The ITP administrator would provide training and training materials for all PG&E crews and contractors to ensure compliance with environmental laws and regulations, including permit conditions associated with the ITP. The ITP administrator maintains a log of all personnel trained on the conditions of the ITP.

With issuance of an ITP, the downstream effects of the environmental screening process would not differ substantially from current practice (baseline), and ITP-related permit conditions issued by CDFW would be integrated into the review process and used, where appropriate, for covered activities.

## 2.10 Project Measures to Reduce Impacts

PG&E implements a suite of measures to avoid and minimize its impacts. These measures consist of its general practices, including BMPs, the AMMs from its Bay Area O&M HCP, and requirements imposed by applicable federal, state or local laws. The general practices, including BMPs, and legal requirements are set forth in the applicable impact chapters. The AMMs from PG&E's Bay Area O&M HCP that are applicable to the ITP are below in Table 2-3. PG&E has also proposed APMs for this project, which are listed in Table 2-4. ~~Finally, the project proposes to include one mitigation measure requiring compensatory mitigation for impacts on the covered species to ensure that any remaining impacts are less than significant under CEQA and to fully mitigate impacts on covered species under CESA.~~

**[Financial institution letterhead]**

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

---

Issue Date: **[date]**

Beneficiary:

California Department of Fish and Wildlife  
Habitat Conservation Planning Branch  
Post Office Box 944209  
Sacramento, CA 94244-2090  
Attn: HCPB Contract Coordinator

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

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

Dear Sirs:

1. At the request and on the instruction of our customer, **[name of applicant]** ("Applicant"), we, **[name of financial institution]** ("Issuer"), hereby establish in favor of the beneficiary, the California Department of Fish and Wildlife ("CDFW"), this irrevocable standby letter of credit ("Credit") in the principal sum of U.S. \$**[dollar number]** **[(dollar amount)]** ("Principal Sum").
2. We are informed this Credit is and has been established for the benefit of CDFW pursuant to the terms of the incidental take permit for the **[name of project]** issued by CDFW to the Applicant on **[date]** (No. **[number]**) ("Permit").
3. We are further informed that pursuant to the Permit, the Applicant has agreed to complete certain mitigation requirements, as set forth in conditions **[numbers]** in the Permit ("Mitigation Requirements").
4. We are finally informed that this Credit is intended by CDFW and the Applicant to serve as a security device for the performance by the Applicant of the Mitigation Requirements.
5. CDFW shall be entitled to draw upon this Credit only by presentation of a duly executed Certificate for Drawing ("Certificate") in the same form as Attachment A,

which is attached hereto, at our office located at [***name and address of financial institution***].

6. The Certificate shall be completed and signed by an Authorized Representative of CDFW as defined in paragraph 12 below. Presentation by CDFW of a completed Certificate may be made in person or by registered mail, return receipt requested, or by overnight courier.
7. Upon presentation of a duly executed Certificate as above provided, payment shall be made to CDFW, or to the account of CDFW, in immediately available funds, as CDFW shall specify.
8. If a demand for payment does not conform to the terms and conditions of this Credit, we shall give CDFW prompt notice that the demand for payment was not effected in accordance with the terms and conditions of this Credit, state the reasons therefore, and await further instruction.
9. Upon being notified that the demand for payment was not effected in conformity with the Credit, CDFW may correct any such non-conforming demand for payment under the terms and conditions stated herein.
10. All drawings under this Credit shall be paid with our funds. Each drawing honored by us hereunder shall reduce, *pro tanto*, the Principal Sum. By paying to CDFW an amount demanded in accordance herewith, we make no representations as to the correctness of the amount demanded.
11. This Credit will be cancelled or the Principal Sum will be reduced upon receipt by us of Certificate of Cancellation/Reduction, which: (i) shall be in the form of Attachment B, which is attached hereto, and (ii) shall be completed and signed by an Authorized Representative of CDFW, as defined in paragraph 12 below.
12. An Authorized Representative shall mean the Director of CDFW; the General Counsel of CDFW; a Regional Manager of CDFW; or the Branch Chief of CDFW's Habitat Conservation Planning Branch.
13. This Credit shall be automatically extended without amendment for additional periods of one year from the present or any future expiration date hereof, unless at least sixty (60) days prior to any such date, we notify CDFW in writing by registered mail, return receipt requested, or by overnight courier that we elect not to consider this Credit extended for any such period.
14. Communications with respect to this Credit shall be in writing and addressed to us at [***name and address of financial institution***], specifically referring upon such writing to this credit by number. The address for notices with respect to this Credit shall be: (i) for CDFW: Department of Fish and Wildlife, Habitat

Conservation Planning Branch, Post Office Box 944209, Sacramento, CA 94244-2090, Attn: HCPB Contract Coordinator; and (ii) for the Applicant: [***name and address of applicant***].

15. This Credit may not be transferred.
16. This Credit is subject to the International Standby Practices 1998 ("ISP 98"). As to matters not covered by the ISP 98 and to the extent not inconsistent with the ISP 98, this credit shall be governed by and construed in accordance with the Uniform Commercial Code, Article 5 of the State of California.
17. This Credit shall, if not canceled, expire on [***expiration date***], or any extended expiration date.
18. We hereby agree with CDFW that documents presented in compliance with the terms of this Credit will be duly honored upon presentation, as specified herein.
19. This Credit sets forth in full the terms of our undertaking. Such undertaking shall not in any way be modified, amended or amplified by reference to any document or instrument referred to herein or in which this Credit is referred to or to which this Credit relates and any such reference shall not be deemed to incorporate herein by reference any document or instrument.

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

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Telephone: \_\_\_\_\_

ATTACHMENT A

CERTIFICATE FOR DRAWING

**[CDFW Letterhead]**

**[Date]**

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

Re: Irrevocable Standby Letter of Credit No. **[number issued by financial institution]**

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

1. **[Insert one of the following statements:** "In the opinion of CDFW, the Applicant has failed to complete the Mitigation Requirements referenced in paragraph 3 of the Credit." **or** "As set forth in paragraph 13, the Issuer has informed CDFW that the Credit will not be extended and the Applicant has not provided CDFW with an equivalent security approved by CDFW to replace the Credit."]
2. The undersigned is authorized under the terms of the Credit to present this Certificate as the sole means of demanding payment on the Credit.
3. CDFW is therefore making a drawing under the Credit in amount of U.S. \$\_\_\_\_\_.
4. The amount demanded does not exceed the Principal Sum of the Credit.

Therefore, CDFW has executed and delivered this certificate as of this \_\_\_\_ day of **[month]**, **[year]**.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

**[Insert one of the following:** "Director" **or** "General Counsel" **or** "Regional Manager, [Name of Regional Office]" **or** "Chief, Habitat Conservation Planning Branch"]

ATTACHMENT B

CERTIFICATE FOR CANCELLATION/REDUCTION

[**CDFW Letterhead**]

[**Date**]

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

Re: Irrevocable Standby Letter of Credit No. [**number issued by financial institution**]

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

1. [**Insert one of the following statements:** "The Applicant has presented documentary evidence of full compliance with the Mitigation Requirements referenced in paragraph 3 of the Credit." **or** "The Applicant has presented documentary evidence of compliance with the following Mitigation Requirement[(s)] referenced in paragraph 3 of the Credit: [**insert brief description of requirement(s) or requirement number(s) completed**]." **or** "The Applicant has provided CDFW with an equivalent security approved by CDFW to replace the Credit."]
2. [**Insert one of the following statements:** "CDFW therefore requests the cancellation of the Credit." **or** "CDFW therefore requests a reduction in the Principal Sum in the amount of \$\_\_\_\_\_, thereby making the new Principal Sum \$\_\_\_\_\_."]

Therefore, CDFW has executed and delivered this certificate as of this \_\_\_\_ day of [**month**], [**year**].

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

\_\_\_\_\_  
[**Insert one of the following:** "Director" **or** "General Counsel" **or** "Regional Manager, [**Name of Regional Office**]" **or** "Chief, Habitat Conservation Planning Branch"]



State of California - Department of Fish and Wildlife

**MITIGATION PAYMENT TRANSMITTAL FORM**

DFW 1057 (REV.05/18/21)

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

<b>1. DATE:</b> _____  <b>TO:</b> _____ Regional Manager  _____ Region Office Address	<b>2. FROM:</b> _____ Name  _____ Mailing Address  _____ City, State, Zip  _____ Telephone Number/FAX Number
<b>3. RE:</b> _____ Project Name as appears on permit/agreement	

**4. AGREEMENT/ACCOUNT INFORMATION:** (check the applicable type)
☐ 2081 Permit    ☐ Conservation Bank    ☐ 2835 NCCP    ☐ 1802 Agreement    ☐ 1600 Agreement    ☐ Other \_\_\_\_\_

 \_\_\_\_\_  
 Project Tracking Number
**5. PAYMENT TYPE** (One check per form only): The following funds are being remitted in connection with the above referenced project:Check information:

Total \$ \_\_\_\_\_ Check No. \_\_\_\_\_

Account No. \_\_\_\_\_ Bank Routing No. \_\_\_\_\_

a. Endowment: for Long-Term Management Subtotal \$ \_\_\_\_\_

b. Habitat Enhancement Subtotal \$ \_\_\_\_\_

c. Security:

1. Cash Refundable Security Deposit Subtotal \$ \_\_\_\_\_

2. Letter of Credit Subtotal \$ \_\_\_\_\_

1. Financial Institution: \_\_\_\_\_

2. Letter of Credit Number: \_\_\_\_\_

3. Date of Expiration: \_\_\_\_\_

<b>ACCOUNTING OFFICE USE ONLY</b>	
Description	FI\$Cal Coding
Speedchart (Project, Program, Reference, Fund)	
Reporting Structure	
Category	
Date Established: _____ By: _____	

Please send this form to [asbmitigation@wildlife.ca.gov](mailto:asbmitigation@wildlife.ca.gov)