



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. 2081-2022-022-03

**THE RANCH IN ANTIOCH PROJECT**

**I. Authority:**

This California Endangered Species Act (CESA) incidental take permit (ITP) is issued by the California Department of Fish and Wildlife (CDFW) pursuant to Fish and Game Code section 2081, subdivisions (b) and (c), and California Code of Regulations, Title 14, section 783.0 et seq and 786.9, subdivision (b). 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) (See Cal. Code Regs., tit. 14, § 783.4).

<b>Permittee:</b>	<b>Richland Planned Communities</b>
<b>Principal Officer:</b>	<b>Kyle Masters, Director – Land Entitlements</b>
<b>Contact Person:</b>	<b>Kyle Masters, <a href="mailto:kmasters@richlandcommunities.com">kmasters@richlandcommunities.com</a></b>
<b>Mailing Address:</b>	<b>Richland Planned Communities 601 University Avenue, Suite 125 Sacramento, CA 95825</b>

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

This ITP is effective as of the date signed by CDFW below. Unless renewed by CDFW, this ITP and its authorization to take the Covered Species shall expire on **December 31, 2037**.

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 6.8 of this ITP.

**III. Project Location:**

The Ranch in Antioch (Project) is located at 6275 Deer Valley Road (Assessor Parcel Numbers 057-010-002, 057-010-003, and 057-021-003), in the southeastern portion of the city of Antioch, Contra Costa County within the Sand Creek Focus Area, which is also

<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.

referred to as Future Urban Area 1 (FUA-1). The Project is bounded on the north by existing single-family homes, on the east by Deer Valley Road and (across the road) a Kaiser Hospital, on the south by undeveloped grazing land, and on the west by Empire Mine Road, Black Diamond Mine Preserve and undeveloped grazing land (Figure 1). The Project area corresponds to portions of Sections 5, 6, 7, 8, and 9, Township 1 North, and Range 2 East (Mount Diablo Base and Meridian) of the "Antioch South, California" 7.5-minute quadrangle (U.S. Geological Survey [USGS] 2015).

#### **IV. Project Description:**

The total Project area consists of development of a residential development within an approximately 553-acre site, as well as approximately 9 acres of off-site infrastructure improvements, including the extension of Sand Creek Road and sewer to support the Project (see Figure 2). The Applicant plans to develop up to 1,177 residential units divided into various neighborhoods that will be arranged into two development areas separated by Sand Creek, accompanied by parks, a system of improved and natural pedestrian trails, a trail staging area, a private recreation facility, a fire station, a series of roads throughout the development, a vehicular bridge, two storm drain basins with outfalls into the creek, and a village center located across from Kaiser Hospital. Off-site road improvements will consist of utility construction that will include a sewer extension, potable and non-potable water connections, a storm drain system to collect street run-off, and joint trench for streetlights.

The proposed Project would be comprised of two development areas on either side of the Sand Creek corridor; North Village and South Village (referred to as the North Development and South Development). Sand Creek Road would connect into the Project Area from the north and would extend through to Deer Valley Road, creating a central arterial street to serve the developments located to the north and to the south.

Phase 1 includes the eastern half of the North Development and is projected to take approximately five years to construct. Phase 2 includes the western half of the North Development and is projected to take approximately five years to construct. Phase 3 consists of constructing the South Development over approximately eight years.

Permittee will phase the mixed-use development over an approximately 15-year period and three phases. Phase 1A and 1B includes the eastern half of the North Development and includes a Village Center, park, and fire station.

#### **North Development:**

The North Development neighborhoods would be situated along Deer Valley Road and along the eastern segment of Sand Creek Road and would average 4,500 square feet in lot size. Approximately 410 Low Density units would comprise the balance of the north development area, starting from Deer Valley Road and spanning to the west along the extension of Sand Creek Road. The Low Density lots would average 7,000 square feet in size, although the lots abutting the northern property line would have a minimum lot size of 8,000 square feet and include larger rear setbacks than the standard low-density lot to serve as a buffer to the

neighborhood to the north. A six-acre neighborhood park and a two-acre linear parkway would form a central outdoor feature for the North Development. The linear parkway would provide a trail linkage for the full length of the North Development, from the proposed trail staging area on the west through the neighborhoods to the Village Center, Deer Valley Road, to Kaiser Permanente Antioch Medical Center and the abutting land uses to the East.

### *Fire Station*

The Project proposes building an approximately two-acre fire station site to be located on the south side of Sand Creek Road, west of the intersection of Sand Creek Road and Deer Valley Road, near the eastern entrance of the Project.

### *Amenities*

A five-acre Village Center site to accommodate commercial, office, and retail space is proposed to be constructed at the northwest corner of Deer Valley Road and Sand Creek Road. A total of approximately 22 acres of active parks and recreational open space are proposed for the Project Area. There will be five Neighborhood Parks, ranging in size from 1.5 to six acres, as well as numerous “pocket” parks that are generally less than one acre in size. A trail will be constructed along the perimeter of the development for recreational use. The Project would construct an approximately 1.5-acre trail head to provide public parking, restrooms, a drinking fountain, and informational kiosks.

### South Development

The South Development would be accessed via Street C, a new collector street which would extend from the roundabout on Street B, south of Sand Creek. Street B is planned to continue south to serve the property due south of the Project Area. The South Development would be comprised of three distinct residential neighborhoods, based on topography and view sheds.

The Age-Restricted (AR) neighborhood would be approximately 75 acres and have a gentler topography and overlook the western portion of the Sand Creek Corridor. The neighborhood would be gated and provide age-restricted housing. The 5,000-square-foot lots would be organized around a central neighborhood park, which would have a private clubhouse and recreation center as the central amenity, as well as access to the creek trail.

### *Road Configuration and Sewer Lines*

Sand Creek Road will be extended to connect the Deer Valley intersection to the Dozier-Libbey Road intersection. The street section will have a 112-foot-wide right of way with two 12-foot lanes in each direction, a 16-foot-wide median, 8-foot-wide bike lanes, 10-foot-wide landscape strips, and 6-foot-wide sidewalks. Utility construction will include a sewer extension, potable and non-potable water connections, a storm drain system to collect street run-off, and joint trench for streetlights. The required road alignment includes a seasonal wetland, which will be filled.

Street B, an arterial road (four lanes) leading from the central roundabout into the South Development, will ultimately include a 65-foot open bottom arch culvert over Sand Creek with armoring to protect the integrity of the culvert. Three dry wildlife crossing structures will be installed adjacent to the Sand Creek road crossing to promote connectivity for California tiger salamander (CTS) and other wildlife. These structures are planned to be eight feet wide and four feet tall, with a natural substrate to encourage wildlife usage. Wildlife exclusion fencing designed specifically to prohibit CTS passage will be utilized to guide CTS away from the future roadway and toward a wildlife crossing.

### *Pedestrian/Bike Bridge*

The Project will construct one pedestrian/bicycle bridge across Sand Creek. The bridge will be ten feet wide and constructed across Sand Creek at the narrowest point between the north and south drainage basins, near the Homestead Park site. Sewer pipes will be placed underneath the pedestrian/bicycle bridge at an elevation above the 100-year water surface elevation. No storm drain is anticipated at this crossing. Potable water and dry utilities may also be attached to the underside of the pedestrian bridge.

### Storm Drainage/Detention throughout all Project Phases

The Project includes constructing subsurface and surface drainage systems, including new pipe and channel conveyance systems, and culverts and/or pipelines in bridges over waterway crossings. In particular, 36- to 72-inch storm drain pipes will be located in Sand Creek Road. The unnamed collector road in the South Development and the extension of Wellness Way will have 24- to 48-inch storm drain pipes. All storm water runoff from the Project Area will be treated on-site within two main storm water detention basins and will discharge into Sand Creek through two separate storm drain outfalls. There will be a third small stormwater basin located in the northeast corner of the Project adjacent to Deer Valley Road. The main northern basin will be located on the east side of Project, south of Sand Creek Road, just west of the intersection with Deer Valley Road. The basin design incorporates a cistern component to mitigate the increase in drainage flows resulting from development and a bioretention component to satisfy water quality requirements for the Project; sized to serve the watershed north of Sand Creek and will be approximately 11.6 acres in size. Drainage from the northern watershed will be channeled first into the cistern component of the basin and then be metered out into the bioretention component of the basin. A 72-inch storm drain pipe will ultimately release flows to Sand Creek west of the basin.

The southern basin is proposed to be located south of Sand Creek, just west of the location where Sand Creek crosses the southern Project boundary. The basin design incorporates a cistern component to mitigate the increase in drainage flows resulting from development and a bioretention component to satisfy water quality requirements for the Project. It will be sized to serve the watershed south of Sand Creek and will be approximately 9.3 acres in size. Drainage from the southern watershed will be channeled first into the cistern component of the basin and then be metered out into the bioretention component of the basin. A 72-inch

storm drain pipe will release flows from the basin to the creek at an outfall location east of the basin.

**V. 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>

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

**VI. Impacts of the Taking on Covered Species:**

Project activities and their resulting impacts are expected to result in the incidental take of individuals of the Covered Species. The activities described above expected to result in incidental take of individuals of the Covered Species include: preparing the construction work areas; mowing; disking; grading and contouring; excavating; trenching; filling in ponds; stockpiling of soil and materials; spoils disposal; constructing temporary access routes; preparing staging areas; operating heavy equipment; removing trees and vegetation; constructing roads and structures; vehicular movement; installing and maintaining Covered Species barrier fencing; installing barrier/drift fencing and trapping arrays, capturing, handling, and relocating the Covered Species; installing pond and wetland fencing; applying herbicides; revegetation; surveying for Covered Species; surveying for plant and wildlife species; livestock grazing; and hydrologic assessments (Collectively the 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 of individuals during construction; cut and fill grading; road construction and widening; vehicular access; installing vegetation; fencing and filling of ponds; collapsing of burrows; and entrapment in excavated pits, trenches, or within construction materials. Incidental take of individuals of the Covered Species may occur from the Covered Activities in the form of pursue, catch, capture, or attempt to do so of the Covered Species from surveying and relocating operations. Covered Activities could also result in pursuit or capture of individual Covered Species during habitat enhancement, maintenance and monitoring on the Project’s proposed mitigation land(s).

The Project is expected to cause the permanent loss of 380.25 acres of upland habitat and 0.10 acres of aquatic breeding habitat for the Covered Species. Impacts of the authorized taking also include adverse impacts to the Covered Species related to temporal losses, increased habitat fragmentation and edge effects, and the Project’s incremental contribution to cumulative impacts (indirect impacts). These impacts include: stress resulting from noise and vibrations from tunneling and capture and relocation, and long-term effects due to

<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).

increased water pollution, displacement of previously productive habitat, increased competition for food and space, and increased vulnerability to predation.

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

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

## **VIII. Conditions of Approval:**

Unless specified otherwise, the following measures apply to all Covered Activities within the Project Area, including areas used for vehicular ingress and egress, staging and parking, and noise and vibration generating activities that may/will cause take. CDFW's issuance of this ITP and Permittee's authorization to take the Covered Species are subject to Permittee's compliance with and implementation of the following Conditions of Approval:

- 1. Legal Compliance:** Permittee shall comply with all applicable federal, state, and local laws in existence on the effective date of this ITP or adopted thereafter.
- 2. CEQA Compliance:** Permittee shall implement and adhere to the mitigation measures related to the Covered Species in the Biological Resources section of The Ranch Project Environmental Impact Report (SCH No.: 2019060012) certified by the City of Antioch on August 13, 2020 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 Ranch in Antioch project (official Biological Opinion No. 2022-0045141) 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 1 to this ITP.

## 5. General Provisions:

- 5.1 Designated Representative.** Before starting Covered Activities, Permittee shall designate a representative (Designated Representative) responsible for communications with CDFW and overseeing compliance with this ITP. Permittee shall notify CDFW in writing before starting Covered Activities of the Designated Representative's name, business address, and contact information, and shall notify CDFW in writing if a substitute Designated Representative is selected or identified at any time during the term of this ITP.
- 5.2 Designated Biologist(s), Biological Monitor(s), and/or Veterinarian(s).** Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information of the Designated Biologist(s) and Biological Monitor(s) using the Biologist Resume Form (Attachment 2) or another format containing the same information at least 30 days before starting Covered Activities. Permittee shall ensure that the Designated Biologist(s) and Biological Monitor(s) are knowledgeable and experienced in the biology, natural history, collecting and handling of the Covered Species. The Designated Biologist(s) and 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. Permittee shall obtain CDFW approval of the Designated Biologist(s) and Biological Monitor(s) in writing before starting Covered Activities and shall also obtain approval in advance, in writing, if the Designated Biologist(s) or Biological Monitor(s) must be changed.
- 5.3 Designated Biologist Authority.** To ensure compliance with the Conditions of Approval of this ITP, the Designated Biologist shall immediately stop any activity that does not comply with this ITP and/or order any reasonable measure to avoid the unauthorized take of an individual of the Covered Species. Permittee shall provide unfettered access to the Project Site and otherwise facilitate the Designated Biologist in the performance of his/her duties. If the Designated Biologist is unable to comply with the ITP, then the Designated Biologist shall notify the CDFW Representative immediately. Permittee shall not enter into any agreement or contract of any kind, including but not limited to non-disclosure agreements and confidentiality agreements, with its contractors and/or the Designated Biologist 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 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 prepare and distribute wallet-sized cards or a fact sheet handout containing this information for workers to carry in the Project Area. Permittee shall provide interpretation for non-English speaking workers, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project Area. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees that will be conducting work in the Project Area. For employees that have received the in-person education training previously, subsequent annual trainings may be repeated annually either via pre-recorded video or in-person.

- 5.5** Construction Monitoring Documentation. The Designated Biologist(s) and Biological Monitor(s) shall maintain construction-monitoring documentation on-site in either hard copy or digital format throughout the construction period, which shall include a copy of this ITP with attachments and a list of signatures of all personnel who have successfully completed the education program. Permittee shall ensure a copy of the construction-monitoring documentation is available for review at the Project site 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 the Designated Biologist. Permittee shall keep the amount of water used to the minimum amount needed and shall not allow water to form puddles that last more than four hours on-site.
- 5.8** Delineation of Project Boundaries. Before starting Covered Activities along each part of the route in active construction, Permittee shall clearly delineate the boundaries of the Project Area with fencing, stakes, or flags. Permittee shall restrict all Covered Activities to within the fenced, staked, or flagged areas. Permittee shall maintain all fencing, stakes, and flags until the completion of Covered Activities in that area.
- 5.9** Delineation of Habitat. To protect habitat that will be preserved on the property from project disturbance, Permittee shall clearly delineate habitat of the Covered Species within the Project Area with posted signs, posting stakes, flags, and/or rope or cord, and place fencing as necessary to minimize the disturbance of Covered Species' habitat.



- 5.10 Project Access.** Project-related personnel shall access the Project Area using all routes described in the Project Description, including existing routes, and shall not cross Covered Species' habitat outside of or en route to the Project Area, including habitat within a Project phase that has not commenced with construction (e.g., during Project Phases 1 or 2, personnel shall not cross habitat within Phase 3 before the commencement of Phase 3 construction activities). Permittee shall restrict Project-related vehicle traffic to established roads, staging, and parking areas. Permittee shall ensure that vehicle speeds do not exceed 15 miles per hour to avoid Covered Species on or traversing the roads. If Permittee determines construction of routes for travel are necessary outside of the Project Area, the Designated Representative shall contact CDFW for written approval before carrying out such an activity. CDFW may require an amendment to this ITP, among other reasons, if additional take of Covered Species will occur as a result of the Project modification.
- 5.11 Staging Areas.** Permittee shall confine all Project-related parking, storage areas, laydown sites, equipment storage, and any other surface-disturbing activities to the Project Area using, to the extent possible, previously disturbed areas. Additionally, Permittee shall not use or cross Covered Species' habitat outside of the marked Project Area unless provided for as described in Conditions of Approval 5.9 of this ITP.
- 5.12 Hazardous Waste.** Permittee shall immediately stop and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so. Permittee shall exclude the storage and handling of hazardous materials from the Project Area and shall properly contain and dispose of any unused or leftover hazardous products off-site.
- 5.13 CDFW Access.** Permittee shall provide CDFW staff with reasonable access to the Project and 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.
- 5.14 Refuse Removal.** Upon completion of Covered Activities, Permittee shall remove from the Project Area and properly dispose of all temporary fill and construction refuse, including, but not limited to, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, and boxes.
- 5.15 Firearms and Dogs.** Permittee shall prohibit firearms and domestic dogs from the Project Area and Project site access routes during Covered Activities, except those that are in the possession of authorized security personnel or local, State, or federal law enforcement officials.
- 5.16 Wildfire Prevention.** Permittee shall keep basic fire suppression supplies on site at all times. Hand removal of vegetation, mowing, weed-whacking, and/or grazing by

livestock are the authorized methods that shall be used to reduce fuel loads. The Designated Biologist or Biological Monitor shall inspect for Covered Species all non-living or living vegetation marked for removal by hand, mowing or weed-whacking prior to removal and the Designated Biologist or Biological Monitor shall be on-site to monitor these fuels reduction activities.

## **6. Monitoring, Notification and Reporting Provisions:**

- 6.1. Notification Before Commencement.** The Designated Representative shall notify CDFW 14 calendar days before starting Covered Activities and shall document compliance with all pre-Project Conditions of Approval before starting Covered Activities.
- 6.2. 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 24 hours with a written report to CDFW describing, in detail, any non-compliance with this ITP and suggested measures to remedy the situation.
- 6.3. Compliance Monitoring.** The Designated Biologist shall be on-site daily when Covered Activities occur. The Designated Biologist shall conduct compliance inspections a minimum of one day per week during periods of inactivity and after clearing, grubbing, and grading are completed. The Designated Biologist shall conduct compliance inspections to:
- (1) minimize incidental take of the Covered Species;
  - (2) prevent unlawful take of species;
  - (3) check for compliance with all measures of this ITP;
  - (4) check all exclusion zones; and
  - (5) ensure that signs, stakes, and fencing are intact, and that Covered Activities are only occurring in the Project Area.

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

- 6.4. Monthly Compliance Report.** During Project construction, the Designated Representative or Designated Biologist shall compile the observation and inspection records identified in Condition of Approval 6.3 into a Monthly Compliance Report and submit it to CDFW along with a copy of the MMRP table with notes showing the

current implementation status of each mitigation measure. Monthly Compliance Reports shall be submitted to the CDFW offices listed in the Notices section of this ITP and via e-mail to CDFW's Regional Representative and Headquarters CESA Program. At the time of this ITP's approval, the CDFW Regional Representative is Mia Bianchi at [Mia.Bianchi@wildlife.ca.gov](mailto:Mia.Bianchi@wildlife.ca.gov) and Headquarters CESA Program email is [CESA@wildlife.ca.gov](mailto:CESA@wildlife.ca.gov). CDFW may at any time increase the timing and number of compliance inspections and reports required under this provision depending upon the results of previous compliance inspections. If CDFW determines the reporting schedule must be changed, CDFW will notify Permittee in writing of the new reporting schedule.

- 6.5. Annual Status Report.** Permittee shall provide CDFW with an Annual Status Report (ASR) no later than January 31 of every year beginning with issuance of this ITP and continuing until CDFW accepts the Final Mitigation Report identified below. Each ASR shall include, at a minimum: (1) a summary of all Monthly Compliance Reports for that year identified in Condition of Approval 6.4; (2) a general description of the status of the Project Area and Covered Activities, including actual or projected completion dates, if known; (3) a copy of the table in the MMRP with notes showing the current implementation status of each mitigation measure; (4) an assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing and mitigating Project impacts; (5) all available information about Project-related incidental take of the Covered Species; (6) an accounting of the number of acres subject to permanent disturbance, both for the prior calendar year, and a total since ITP issuance; and (7) information about other Project impacts on the Covered Species.
- 6.6. Phase Schedule.** Permittee shall submit to CDFW final Covered Activity Schedules specific to each Project Phase according to the following Conditions of Approval:
- 6.6.1. Project Phase Construction Schedules.** Permittee shall submit a final construction schedule to CDFW within 15 calendar days prior to the start of each Project construction phase. The construction schedule shall identify the approximate beginning and completion date of Covered Activities to take place during the Construction Phase (including construction activities and installation of permanent barrier sections per Project Phase (See Condition of Approval 7.11)). During each Project phase, Permittee shall notify CDFW of any major changes in the construction schedule at least seven days prior to the change being implemented.
- 6.7. CNDDDB Observations.** The Designated Biologist shall submit all observations of Covered Species to CDFW's California Natural Diversity Database (CNDDDB) within 60 calendar days of the observation and the Designated Biologist shall include copies of the submitted forms with the next Monthly Compliance Report or ASR, whichever is submitted first relative to the observation.

- 6.8. Final Mitigation Report.** No later than 45 days after completion of all mitigation required by this ITP, Permittee shall provide CDFW with a Final Mitigation Report. The Designated Biologist shall prepare the Final Mitigation Report which shall include, at a minimum: (1) a summary of all Monthly Compliance Reports and all ASRs; (2) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species; (4) information about other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an assessment of the effectiveness of this ITP's Conditions of Approval in minimizing and fully mitigating Project impacts of the taking on Covered Species; (7) recommendations on how mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future projects on the Covered Species; and (8) any other pertinent information.
- 6.9. Tracking Impacts.** Permittee shall track permanent impacts and notify CDFW if take authorization is likely to be exceeded. Permittee shall submit an appropriately revised Project Phase schedule (Condition of Approval 6.6.1) within 15 days of starting each Phase. If Permittee or CDFW determines that this ITP's take authorization is likely to be exceeded, then the Permittee shall obtain an amendment to this ITP as provided by California Code of Regulations, Title 14, section 783.6, subdivision (c), and other applicable law, unless otherwise authorized by CDFW under Condition of Approval 8 of this ITP.
- 6.10. Notification of Take/Injury.** Permittee shall immediately notify the Designated Biologist if a Covered Species is taken (including relocation) 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 the CDFW Regional Representative via email at [Mia.Bianchi@wildlife.ca.gov](mailto:Mia.Bianchi@wildlife.ca.gov), with a cc to [R3CESA@wildlife.ca.gov](mailto:R3CESA@wildlife.ca.gov), and by calling the direct line to the CDFW Representative at (707) 815-8722 by the end of the business day. The initial notification to CDFW shall include information regarding the location, species, and number of animals taken or injured and the ITP Number. Following initial notification, Permittee shall send CDFW a written report within two calendar days. The report shall include the date and time of the finding or incident, GPS location (including GPS error estimated in feet and datum) of the Covered Species, photographs of the location and the Covered Species, explanation as to cause of take or injury, and any other pertinent information.
- 6.11. Submit Designs for Storm Water Infrastructure.** Permittee shall ensure that storm water-related infrastructure (e.g., storm drains, storm drain grates, v-ditches, catchment basins and detention basins) are designed and constructed in a manner that minimizes take of Covered Species to the maximum extent feasible. At least 45 days prior to commencement of Covered Activities, Permittee shall submit design plans and obtain written acceptance from CDFW confirming that the infrastructure incorporates design elements to avoid and reduce impacts to Covered Species prior to installation of such infrastructure to CDFW. CDFW shall provide written comments

to Permittee within 45 calendar days of receipt of the storm drain designs. If no response is received from CDFW within 45 calendar days of submittal of the storm drain designs, the storm drain designs shall be considered accepted by CDFW. Permittee shall construct drop inlets or other storm drain infrastructure according to the designs accepted by CDFW.

- 6.11.1.** V-ditches shall be designed so that their walls do not form an angle greater than 45° with the substrate and shall have velocity breaks at regular intervals that will allow for refuge and volitional escape by the Covered Species. V-ditches shall not direct or lead the Covered Species into hazardous or terminal (dead-end) areas.
- 6.11.2.** Catchment basins shall be fitted with escape ramps or ladders that will allow the Covered Species to volitionally escape. Ramps and/or ladders shall be placed along a wall of the catchment basin and must span the distance from the lowest point in the basin (sump pit) to the grate covering.
- 6.11.3.** Escape ramps or ladders shall be fashioned from perforated metal sheeting covered with an open structured synthetic matting material that will allow for sufficient traction for the Covered Species to volitionally escape from the catchment basin if entrained.
- 6.11.4.** Alternatively, catchment basins shall be designed to have walls that are slanted outward and the walls shall be covered with open structured synthetic matting material together with an escape ramp or ladder that allows for volitional escape of the Covered Species.
- 6.11.5.** Detention basins shall be designed with exclusion fencing to prevent access by the Covered Species. The exclusion fencing shall be solid or opaque for at least 15 vertical inches from where it meets the substrate, and may consist of plastic, metal or other impermeable material that serves to block sensory access by the Covered Species and reduce take that may arise from “pacing” or “giving up” behavior.
- 6.11.6.** Vehicle entry/exit points of access to the detention basins shall have crossing structures installed (e.g., grated trenches) to prevent road mortality of the Covered Species.
- 6.11.7.** To prevent one-way entrainment of Covered Species in specially designated area(s), Permittee shall ensure that grated drop inlets or other types of storm drain infrastructure shall be constructed in a manner or outfitted with devices to prevent entrainment. Permittee shall obtain written acceptance from CDFW confirming that the infrastructure incorporates design elements to avoid and reduce impacts to Covered Species prior to installation of such infrastructure.

**6.12. Submit Designs for Bridges, Roads, and Road Crossings.** Permittee shall submit the plans for bridges, roads, and road crossings over Sand Creek to CDFW for written acceptance at least 30 days prior to the initiation of Covered Activities as relevant to each Project Phase. Bridges and crossings shall be designed and constructed to prevent conflicts with or take of Covered Species. CDFW may require an amendment to this ITP, among other reasons, if additional take of Covered Species will occur due to the location, quantity, or structure of bridge or road crossing infrastructure.

**6.12.1.** Permittee shall incorporate roadway designs such that there are no steep curbs, berms, straw wattles, or dikes that could prevent California tiger salamander from crossing or exiting the roadway. If curbs, berms, and/or straw wattles are necessary for safety and/or surface runoff, Permittee shall design and construct them to allow California tiger salamander to walk over them. If steep dikes are required, Permittee shall design and construct them to include over-side drains or curb/dike breaks spaced at intervals of 16.4 to 32.8 feet to allow California tiger salamander passage.

**6.13. Submit Designs for Utility Infrastructure.** Permittee shall submit design plans for all utility infrastructure (i.e. domestic and recycled water tanks, etc.) to CDFW for written acceptance at least 30 days prior to the initiation of Covered Activities. Infrastructures shall be designed and constructed to prevent conflicts with or take of Covered Species. CDFW may require an amendment to this ITP, among other reasons, if additional take of Covered Species will occur due to the location, quantity, or structure of utility infrastructure.

## **7. Take Minimization Measures:**

**7.1. Seasonal Work Window Restriction.** Permittee shall limit Covered Activities that will result in either initial ground disturbance (such as excavation, grading, trenching, contouring, or clearing and grubbing) from April 1 through October 15. Once habitat has been removed and exclusion fencing is in place, activities within the exclusion fencing may occur year-round. If areas have become fallow after initial disturbance and grasses or shrubs have become reestablished, Covered Activities shall only resume during the period from April 1 through October 15, and shall only occur outside this work window after habitat is removed and exclusion fencing is in place.

**7.2. Daily Work Window Restriction.** All Covered Activities shall terminate 30 minutes before sunset and shall not resume until 30 minutes after sunrise unless otherwise approved by the Designated Biologist. Permittee shall use sunrise and sunset times established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area ([http://aa.usno.navy.mil/data/docs/RS\\_OneYear.php](http://aa.usno.navy.mil/data/docs/RS_OneYear.php)).

**7.3. Seasonal Work Window Extensions.** Permittee shall adhere to the seasonal work window required in Condition of Approval 7.1 unless an expanded work window is approved by CDFW. Permittee shall submit any requests for extensions in writing at

least 14 days prior to the desired date of construction or 14 days prior to the expiration of the seasonal work window. If work is approved the following conditions shall apply:

- 7.3.1.** All construction vehicles and heavy equipment travel shall be limited to daylight hours from 30 minutes after sunrise until 30 minutes before sunset, to the maximum extent feasible, unless otherwise approved by the Designated Biologist.
- 7.3.2.** Wet Season Work Restriction: If CDFW has approved a seasonal work window extension per Condition of Approval 7.3, then, during the wet season between October 15 through April 30, Covered Activities shall cease 24 hours prior to a 30 percent or greater forecast of rain. Construction may continue 24 hours after the rain ceases and there is less than a 30 percent chance of precipitation in the 24-hour forecast. CDFW may approve work when there is a 30 percent or more chance of precipitation in the 24-hour forecast subject to full implementation of Condition of Approval 7.3 and the following condition:
- 7.3.3.** If work is approved when a greater than 30 percent chance of rain is forecast, the Designated Biologist(s) shall survey the Project Area where Covered Activities are planned before they begin each day rain is forecast. If rain exceeds 0.50 inches during a 24-hour period, work shall cease until there is a less than 30 percent chance of precipitation in the 24-hour forecast. All night-time work and construction-related traffic shall be suspended during rain events.
- 7.4.** Erosion Control. Erosion and sediment control measures shall be installed around the perimeter of the active work area prior to earth moving Covered Activities. Permittee shall utilize erosion control measures for Project activities where sediment runoff from exposed slopes could leave the Project Area and/or enter a stream or pond. Permittee, Designated Representative or other trained staff shall monitor erosion control measures before, during, and after each storm event and repair and/or replace ineffective measures immediately.
- 7.5.** No Project Activities without Erosion Control. No Covered Activities may be started if those activities and their associated erosion control measures cannot be completed prior to the onset of a storm event if that construction phase may cause the introduction of sediments into a drainage, stream, or pond. Permittee shall consult 72-hour weather forecasts from the National Weather Service prior to startup of any phase of the Project that may result in sediment runoff to the stream.
- 7.6.** Geo-Textile and Monofilament Netting Restriction. To minimize the risk of ensnaring and strangling wildlife, Permittee shall not place erosion control materials containing synthetic (e.g., plastic or nylon) monofilament netting where it is exposed to air, with the exception of silt fencing and exclusion fencing. Exposed erosion control shall only consist only of fiber rolls, and other erosion control measures shall be made of

loose-weave mesh, such as jute, coconut (coir) fiber, or other products without welded weaves. No geotextile fabrics shall be placed where they may be exposed to stream flows.

- 7.6.1.** Geotextile materials shall be buried by organic material, including rock and soil, to a depth of at least 12 inches, and shall remain buried at all times while installed. For the duration of the geotextile implementation in the soil throughout the project, areas containing geotextile fabric shall be monitored by the Permittee and/or its successors and arrears, for exposure of the fabric above the soil. If geotextile is exposed, the Permittee shall cover exposed areas immediately and include documentation of steps taken to recover the geotextile in monitoring reports sent to CDFW. If geotextile fabric fails, all remnant geotextile materials shall be removed from site and disposed of immediately upon discovery.
- 7.7.** Location of Spoil Sites. Spoil sites shall not be located where it may be washed back into a watercourse or within any potential Covered Species habitat throughout the Project Area.
- 7.8.** Cover Spoil Piles. Prior to the initiation of Covered Activities, Permittee shall submit the Project's Stormwater Pollution and Prevention Plan and Dust Control Permit Plan for that Project Phase and comply with each plan's requirements. Permittee shall take any necessary precautions to prevent loose soils or dust from entering streams or stormwater infrastructure that discharges into streams.
- 7.9.** Discharge of Water in Upland Habitat. To prevent untimely emergence of estivating adult California tiger salamanders, water shall not be discharged in upland habitats for the Covered Species outside of the wet season (October 15 through April 30). Any water discharged into upland habitat must be free of chemicals (e.g., chlorine), contaminants, sediment, and debris.
- 7.10.** Temporary Exclusion Barrier. At least 30 days prior to the initiation of Covered Activities, the Permittee shall submit to CDFW for written approval plans for an exclusion fencing system and access routes as appropriate. The plan shall include a map indicating location of exclusion fencing in relation to the Project Area, location of special-status wildlife habitat features, dimension specifications and a description of fencing materials, and fencing monitoring measures. Permittee shall be responsible for implementation and upkeep of the fencing system. In addition, the following criteria for the exclusion fencing system shall be met:
- 7.10.1.** The exclusion fencing shall consist of material appropriate for exclusion of Covered Species.
- 7.10.2.** Any work site located within 0.5 miles of Covered Species habitat, including where equipment will be stored overnight, shall be completely fenced with a temporary wildlife exclusion barrier with coverboards. All construction work



shall take place within the fenced area. Installation of exclusion fencing does not apply to graveled or well-traveled roads.

There shall be a section of exclusion fencing placed between disturbance areas and aquatic habitat for Covered Species along Sand Creek to prevent individuals from entering any slated ground disturbance areas from the creek.

- 7.10.3.** Coverboards shall be placed around the inside and outside perimeter of the temporary exclusion barrier as described in Condition of Approval 7.10.10.
- 7.10.4.** The exclusion fencing shall either measure at least 36 inches tall above the soil surface or be of an appropriate height for exclusion of the Covered Species.
- 7.10.5.** The Designated Biologist shall inspect the fencing immediately after every rain event to ensure it maintains structural integrity. Holes or burrows which appear to extend under the fencing will be blocked inside the fence line to prevent California tiger salamander from accessing work areas.
- 7.10.6.** The bottom of the exclusion fencing shall not allow wildlife to pass through gaps or holes with the bottom of the fencing buried six inches below grade.
- 7.10.7.** The exclusion fencing shall be taut between the supporting stakes and shall have the supporting stakes oriented on the inside edge towards the development areas.
- 7.10.8.** The exclusion fencing shall feature coverboards inside and outside the perimeter placed at 100-foot intervals and one-way escape doors or an appropriate design for preventing special-status species and other wildlife from being trapped within the Project Area that is under active construction.
- 7.10.9.** Temporary fencing shall be inspected within one hour of sunrise every morning for trapped California tiger salamanders during periods when they are likely to be migrating above-ground. During construction (including clearing, grubbing and grading), these daily inspections shall occur from May 1 through August 31 when salamander metamorphs are likely to be migrating away from their natal ponds, and all year on mornings following any rain event greater than 0.1 inches, when adults may be migrating to their breeding ponds. During periods of project inactivity, the Designated Biologist shall conduct compliance inspections of the temporary fencing a minimum of one day per week until the temporary fencing is removed. If a California tiger salamander is encountered during inspections, and is in danger of being harmed, then the Designated Biologist shall temporarily stop all activities that threaten harm, remove the animal from the area, and relocate it to the pre-approved location as described in the Covered Species Relocation Plan (Condition of Approval 7.12).

- 7.10.10.** Coverboards shall be inspected within one hour of sunrise every morning for trapped California tiger salamanders during periods when they are likely to be migrating above-ground. During construction (including clearing, grubbing and grading), these inspection periods shall occur a minimum of once per day from May 1 through August 31 when salamander metamorphs are likely to be migrating away from their natal ponds, and all year on mornings following any rain event greater than 0.1 inches, when adults may be migrating to their breeding ponds. During periods of inactivity after clearing, grubbing, and grading, the Designated Biologist shall conduct coverboard inspections a minimum of one day per week until the temporary fencing is removed, unless there is a rain event greater than 0.1 inches. The Designated Biologist shall conduct coverboard inspections each day there is a rainfall event greater than 0.1 inches, regardless of whether the project is inactive or active. If a California tiger salamander is encountered during coverboard inspections, and is in danger of being harmed, then the Designated Biologist shall temporarily stop all activities that threaten harm, remove the animal from the area, and relocate it to the pre-approved location as described in the Covered Species Relocation Plan (Condition of Approval 7.12).
- 7.10.11.** If fencing becomes damaged, it will be immediately repaired upon detection and the Designated Biologist shall stop work in the vicinity of the fencing as needed to ensure that no California tiger salamanders have entered the construction area.
- 7.10.12.** Fencing system entry/exit points for vehicular and pedestrian traffic shall be constructed so wildlife cannot access the area within a Project Phase under active construction during non-work hours.
- 7.10.13.** The Designated Biologist shall inspect the Project Area prior to installation of the exclusion fencing. The exclusion fencing system shall remain in place until all construction activities have been completed in the in the Project Area. All components of the exclusion fencing will be removed for storage or disposal off-site immediately upon completion of construction activities. All vegetation slated for removal within the Project Area shall be inspected by a Designated Biologist prior to the initiation of removal. Exclusion fencing shall be inspected daily by the Designated Biologist and repaired as necessary, including inspection of coverboards and replacement of wetted sponges as necessary to minimize wildlife distress.
- 7.11. Covered Species Barriers.** Permittee shall provide a Covered Species Barriers Plan and submit it for CDFW approval no later than 60 days prior to start of Covered Activities. The permanent barrier shall only consist of masonry construction materials, including concrete block wall construction, cast-in-the place concrete construction, or pre-cast concrete construction. Any proposed deviation of construction materials from the three listed options requires explicit written approval by CDFW. Only masonry materials will be considered as an alternative option. The

Barriers Plan shall include the following elements for permanent barriers: 1) the footprint of all permanent barriers, including those constructed to prevent detention basin and water quality treatment basins from becoming an attractive nuisance to CTS, 2) identification of the legal instrument or detail of assurances regarding the right to construct and maintain the barriers in perpetuity, 3) identification of the party responsible for maintenance of permanent barriers, and 4) the funding source, such as an endowment for the responsible party to draw from for management and maintenance of the permanent barriers. The Barriers Plan shall also include the designs and placement of a low wall to prevent Covered Species from entering backyards from neighboring undeveloped properties and a construction schedule for each section of barrier that is tied to each Project phase as identified in the Phase Schedule (Condition 6.6). Permittee shall implement the Barriers Plan and follow the implementation schedule, including any necessary recording of deeds and funding of financial instruments, upon CDFW approval. Except for the first phase of the Project, Covered Activities for subsequent Project phases shall not commence until the Barriers Plan has been approved by CDFW.

- 7.12. Covered Species Relocation.** If a California tiger salamander is encountered during site inspections (including fence inspections), and is in danger of being harmed, the Designated Biologist shall temporarily stop all activities that threaten harm, remove the animal from the area, and relocate it to the pre-approved relocation location as described in Attachment 6. California tiger salamanders that will be relocated and released by the Designated Biologist outside the construction area, preferably within 300 feet of where it was found, in protected suitable habitat in the Conservation Easement Area. Under no circumstances will a California tiger salamander be released on a site other than the Conservation Easement Area unless the written permission of the landowner has been obtained prior to the start of construction of each phase.
- 7.13. Avoidance or Treatment of Burrows.** All mammal burrows within the Development Area that cannot be avoided shall be inspected and scoped for occupancy. If unoccupied, the burrows shall be hand-excavated and collapsed so that they do not attract California tiger salamanders during Covered Activities. This shall occur prior to and during any earth moving Covered Activities.
- 7.14. Pesticides.** No rodenticides or herbicides shall be used within the Project Area until Covered Activities have been completed or in the Conservation Easement Area unless specifically approved in the final management plan required in Condition of Approval 8.2.6 (Habitat Acquisition and Protection) or in writing by CDFW.

- 7.15. Development Area Lighting.** All lighting shall be designed so that exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated, with little to no horizontal spread, as low to the ground as feasible and so that backscatter to the nighttime sky is minimized. The design of the lighting will be such that the luminescence or light sources are shielded to prevent light trespass outside the Development Area boundary and neither the lamp nor the reflector interior surface would be visible from outside the footprint of the Development Area except for public roadways. Only narrow spectrum bulbs shall be used to limit the range of species affected by lighting. All lighting will be of minimum necessary brightness consistent for worker safety. No lighting shall be permitted within CTS breeding habitat. The number of lighting fixtures on buildings and roadways shall be limited to the minimum required by the City of Antioch.
- 7.16. Covered Species Checks.** During ground disturbing activities, before the start of work each morning, the Designated Biologist shall check for California tiger salamander individuals under all vehicles, equipment, materials, or otherwise suitable locations for a California tiger salamander to hide. Workers shall inspect under vehicles and equipment for California tiger salamanders before the vehicles and equipment are moved. If a California tiger salamander is present, the worker shall notify the Designated Biologist. All ruts and holes near root structures, foundations, abutments, etc., shall be inspected for California tiger salamanders prior to and during excavation or removal. If a California tiger salamander is discovered, the Designated Biologist shall relocate individuals as required by Conditions of Approval 7.12.
- 7.17. Inspection of Pipes and Similar Structures.** All construction pipes or similar structures with a diameter of two inches or greater (including any hollow openings of battery storage containers) that are stored in the Project Area for one or more overnight periods shall be either securely capped prior to storage or thoroughly inspected by the Designated Biologist and/or the construction foreman/manager for California tiger salamanders or other animals before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a California tiger salamander is found, it shall be relocated as described in Conditions of Approval 7.12.
- 7.18. Open Excavations.** To prevent inadvertent entrapment of California tiger salamanders during construction activities, the Designated Biologist or the biological monitor under the direction of the Designated Biologist shall check all open excavations, including but not limited to open holes and trenches more than 6-inches deep, for trapped animals no later than 9:00 AM each day. During the workday, before any open trenches or holes are filled, the Designated Biologist shall thoroughly inspect the trenches or holes for California tiger salamander. At the close of each working day, the Designated Biologist shall check open excavations and ensure that all excavated, steep-walled holes or trenches more than 6 inches deep are provided with one or more escape ramps constructed of earthen fill or wooden planks with a slope of 3:1 (run:rise) or covered with boards or metal plates placed flush to the ground with edges overlaid by loose dirt leaving no gaps for Covered Species entry. At any of these times, if a California tiger salamander is discovered by

the Designated Biologist or anyone else, the Designated Biologist shall move the individual as required by Condition of Approval 7.11.

**7.18.1.** If any open holes, trenches or other excavations greater than six inches deep cannot be covered or fitted with escape ramps as described above, then temporary exclusion fencing shall be installed around these trenches, holes, or other excavations to prevent California tiger salamander from becoming trapped. Refuge opportunities, such as coverboards (two-foot x three-foot or larger plywood), shall be provided on the outside perimeter of the temporary exclusion fences.

**7.19. Notification of Non-Native Tiger Salamanders or Hybrids.** The Designated Biologist shall immediately notify CDFW if a non-native tiger salamander (tiger salamander, *Ambystoma tigrinum*; barred tiger salamander, *A. mavortium*; or plateau tiger salamander, *A. velasci*) or California tiger salamander hybrid is found or suspected within the Project Area within 24 hours by calling CDFW's Regional Representative. The Designated Biologist shall not release any non-native or hybrid salamanders back to the wild until directed to do so by CDFW. The Designated Biologist shall follow the Covered Species Handling and Injury measures outlined in this ITP (see Condition of Approval 6.10) from or otherwise vacated the partially destroyed den.

**8. Habitat Management Land Acquisition:** 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 provide for both the permanent protection and management of 1,141.05 acres of Habitat Management (HM) lands pursuant to Condition of Approval 8.2 below and the calculation and deposit of the management funds pursuant to Condition of Approval 9.4 below. Purchase of Covered Species credits AND/OR permanent protection and funding for perpetual management of HM lands must be complete before starting Covered Activities, or within 18 months of the effective date of this ITP if Security is provided pursuant to Condition of Approval 9 below for all uncompleted obligations. The Permittee shall meet the mitigation acreage requirement through the purchase of Covered Species credits, the permanent protection and funding for perpetual management of HM lands, or through a combination of these two methods.

HM lands shall meet the minimum habitat requirements for the Covered Species including, but not limited to: 1) one or more aquatic features on-site which have been documented to support successful Covered Species breeding in an average or below average rainfall year (abundance and distribution) or adjacent to aquatic features which have been documented to support successful Covered Species breeding in an average or below average rainfall year (abundance and distribution) and already conserved and managed to the satisfaction

of CDFW for the Covered Species; 2). Properties with no less than 100 contiguous acres of suitable, uniform upland habitat with low edge effects or that is adjacent to suitable upland already conserved and managed for the Covered Species. CDFW may elect to provide reduced credit toward proposed mitigation properties that do not meet all of the above standards. This determination will be made at the discretion of CDFW. To meet the fully mitigated standard, additional acres of habitat shall be provided to make up the difference of reduced habitat credits accepted.

**8.1. 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 as follows:

- 8.1.1.** Land acquisition costs for HM lands identified in Condition of Approval 8.2 below, estimated at \$20,000 acre for 1,141 acres: **\$22,820,000**. 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 8.2.1 and 8.3.2 below: **\$20,000**.
- 8.1.3.** Start-up costs for HM lands, including initial site protection and enhancement costs as described in Condition of Approval 8.2.6 below, estimated at **\$450,000**.
- 8.1.4.** Interim management period funding as described in Condition of Approval 8.2.7 below, estimated at **\$575,000**.
- 8.1.5.** Long-term management funding as described in Condition of Approval 8.3 below, estimated at \$5,000/acre for 1,141 acres: **\$5,705,000**. 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 9.5, estimated at **\$4,500**.
- 8.1.7.** 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. 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: **\$100,000**.

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

**8.2.1. 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.

**8.2.2. 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. The Permittee shall obtain CDFW written approval of any conservation easement before its execution or recordation. No conservation easement shall be approved by CDFW unless it complies with 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.

**8.2.3. 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;

**8.2.4. 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;

**8.2.5. 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.

- 8.2.6. 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;

**8.2.6.1.** The final management plan shall include:

**8.2.6.1.1.** A minimum of one pond suitable for Covered Species breeding in non-drought years will be constructed, enhanced, or preserved (i.e. has an existing occupied Covered Species breeding pond on-site) per separate accepted mitigation property. Total pond acreage across properties should add up to a minimum of 0.3 acres.

**8.2.6.1.2.** Grazing management will be instituted that targets the maintenance of suitable dispersal and upland habitat for the Covered Species.

**8.2.6.1.3.** No rodent control will occur unless approved in advance in writing by CDFW.

- 8.2.7. 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, fence repair, vegetation and invasive species management, pond monitoring, potential remedial measures and costs, amphibian surveys, trespass, and grazing 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.

- 8.3. Endowment Fund.** If the Permittee elects to provide for the acquisition, permanent protection, and perpetual management of HM lands to complete compensatory mitigation obligations, then the Permittee shall ensure that the HM lands are perpetually managed, maintained, and monitored by the long-term land manager as described in this ITP, the conservation easement, and the final management plan approved by CDFW. After obtaining CDFW approval of the HM lands, Permittee shall provide long-term management funding for the perpetual management of the HM lands by establishing a long-term management fund (Endowment). The Endowment is a sum of money, held in a CDFW-approved fund that 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 8.2.6. 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.

- 8.3.1. 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).

- 8.3.2.** 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.

**8.3.2.1.** 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.

**8.3.2.2.** 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:

**8.3.2.2.1.** 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.

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

**8.3.2.2.3.** 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.

**8.3.2.3.** 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.

**8.3.2.4.** 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.

**8.4.** 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.

**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. The Security shall be in the amount of **\$29,684,500**. or in the amount identified in specific to the obligation that has not been completed. 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 Form. The Security shall be in the form of an irrevocable letter of credit (see Attachment 3) or another form of Security approved in advance in writing by CDFW's Office of the General Counsel.
- 9.3. Security Timeline. The Security shall be provided to CDFW before Covered Activities begin or within 30 days after the effective date of this ITP, whichever occurs first.
- 9.4. Security Holder. The Security shall be held by CDFW or in a manner approved in advance in writing by CDFW.
- 9.5. Security Transmittal. Permittee shall transmit it to CDFW with a completed Mitigation Payment Transmittal Form (see Attachment 5) or by way of an approved instrument such as an escrow agreement, irrevocable letter of credit, or other.
- 9.6. Security Drawing. The Security shall allow CDFW to draw on the principal sum if CDFW, in its sole discretion, determines that the Permittee has failed to comply with the Conditions of Approval of this ITP.
- 9.7. Security Release. The Security (or any portion of the Security then remaining) shall be released to the Permittee after CDFW has conducted an on-site inspection and received confirmation that all secured requirements have been satisfied, as evidenced by:
  - Written documentation of the acquisition of the HM lands;
  - Copies of all executed and recorded conservation easements;
  - Written confirmation from the approved Endowment Manager of its receipt of the full Endowment; and
  - Timely submission of all required reports.

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

## **IX. Amendment:**

This ITP may be amended as provided by California Code of Regulations, Title 14, section 783.6, subdivision (c), and other applicable law. This ITP may be amended without the

concurrence of 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.

#### **X. 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.

#### **XI. 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.

#### **XII. Notices:**

Written notices, reports and other communications relating to this ITP shall be delivered to CDFW by email or registered first class mail at the following address, or at addresses CDFW may subsequently provide the Permittee. Notices, reports, and other communications shall reference the Project name, Permittee, and ITP Number 2081-2022-022-03 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  
Email: [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  
Email: [CESA@wildlife.ca.gov](mailto:CESA@wildlife.ca.gov)

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

Mia Bianchi  
California Department of Fish and Wildlife – Bay Delta Region  
2825 Cordelia Road, Suite 100  
Fairfield, CA 94534  
Telephone: 707-815-8722  
Email: [Mia.Bianchi@wildlife.ca.gov](mailto:Mia.Bianchi@wildlife.ca.gov)

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

CDFW's issuance of this ITP is subject to CEQA. CDFW is a responsible agency pursuant to CEQA with respect to this ITP because of prior environmental review of The Ranch in Antioch Master Planned Residential Community the Project by the lead agency, City of Antioch. (See generally Pub. Resources Code, §§ 21067, 21069.) The lead agency's prior environmental review of the Project is set forth in The Ranch Project EIR (SCH No.: 2019060012) dated April 29, 2020 that the City of Antioch certified for The Ranch in Antioch Master Planned Residential Community Project on August 13, 2020. At the time the lead agency certified the EIR and approved the Project it also adopted various mitigation measures for the Covered Species as conditions of Project approval.

This ITP, along with CDFW's related CEQA findings, which are available as a separate document, provide evidence of CDFW's consideration of the lead agency's EIR for the Project and the environmental effects related to issuance of this ITP (CEQA Guidelines, § 15096, subd. (f)). CDFW finds that issuance of this ITP will not result in any previously undisclosed potentially significant effects on the environment or a substantial increase in the severity of any potentially significant environmental effects previously disclosed by the lead

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

#### **XIV. 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 Ranch in Antioch Master Planned Residential Community Project EIR, and the results of site visits and consultations, and the administrative record of proceedings, that issuance of this ITP complies and is consistent with the criteria governing the issuance of ITPs pursuant to CESA:

- (1) Take of Covered Species as defined in this ITP will be incidental to the otherwise lawful activities covered under this ITP;
- (2) Impacts of the taking on Covered Species will be minimized and fully mitigated through the implementation of measures required by this ITP and as described in the MMRP. Measures include: (1) permanent habitat protection; (2) establishment of avoidance zones; (3) worker education; and (4) Monthly Compliance Reports. CDFW evaluated factors including an assessment of the importance of the habitat in the Project Area, the extent to which the Covered Activities will impact the habitat, 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 1,141 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

Incidental Take Permit  
No. 2081-2022-022-03  
RICHLAND PLANNED COMMUNITIES  
THE RANCH IN ANTIOCH

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.

**XV. Attachments:**

FIGURE 1	Project Location
FIGURE 2	Project Layout
FIGURE 3	Project Impacts
ATTACHMENT 1	Mitigation Monitoring and Reporting Program
ATTACHMENT 2	Biological Resume Form
ATTACHMENT 3	Letter of Credit Form
ATTACHMENT 4	CDFW's Permittee Checklist of Documents for Habitat Management Land Property Review and Protection
ATTACHMENT 5	Mitigation Transmittal Form
ATTACHMENT 6	Restraint and Handling of Live Amphibians USGS

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

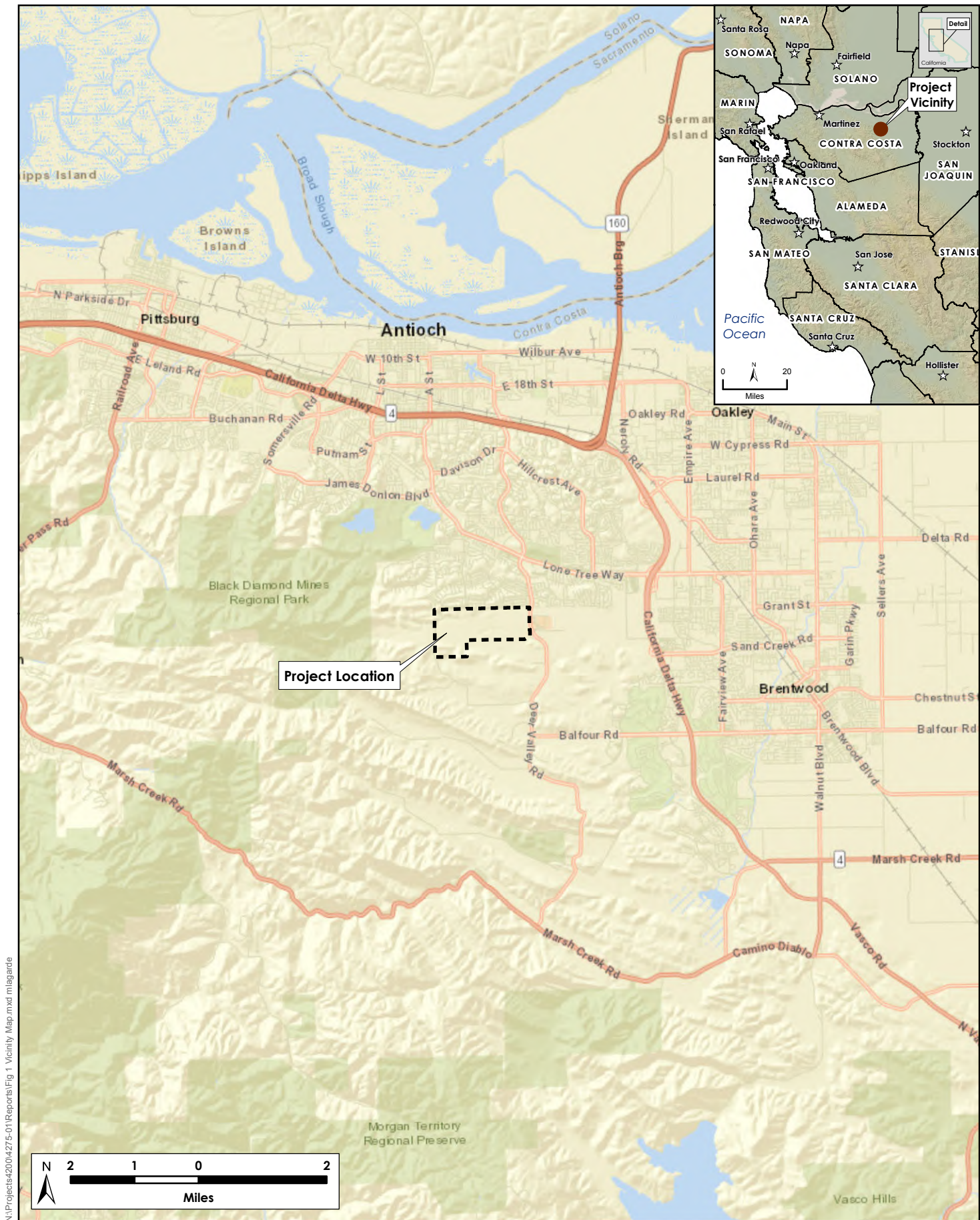
on 1/2/2026.

DocuSigned by:  
*Erin Chappell*  
B77F9A6211FE486

Erin Chappell, Regional Manager  
Bay Delta Region

Incidental Take Permit  
No. 2081-2022-022-03  
RICHLAND PLANNED COMMUNITIES  
THE RANCH IN ANTIOCH





N:\Projects\4200\4275-01\Reports\Fig 1 Vicinity Map.mxd mlagarde

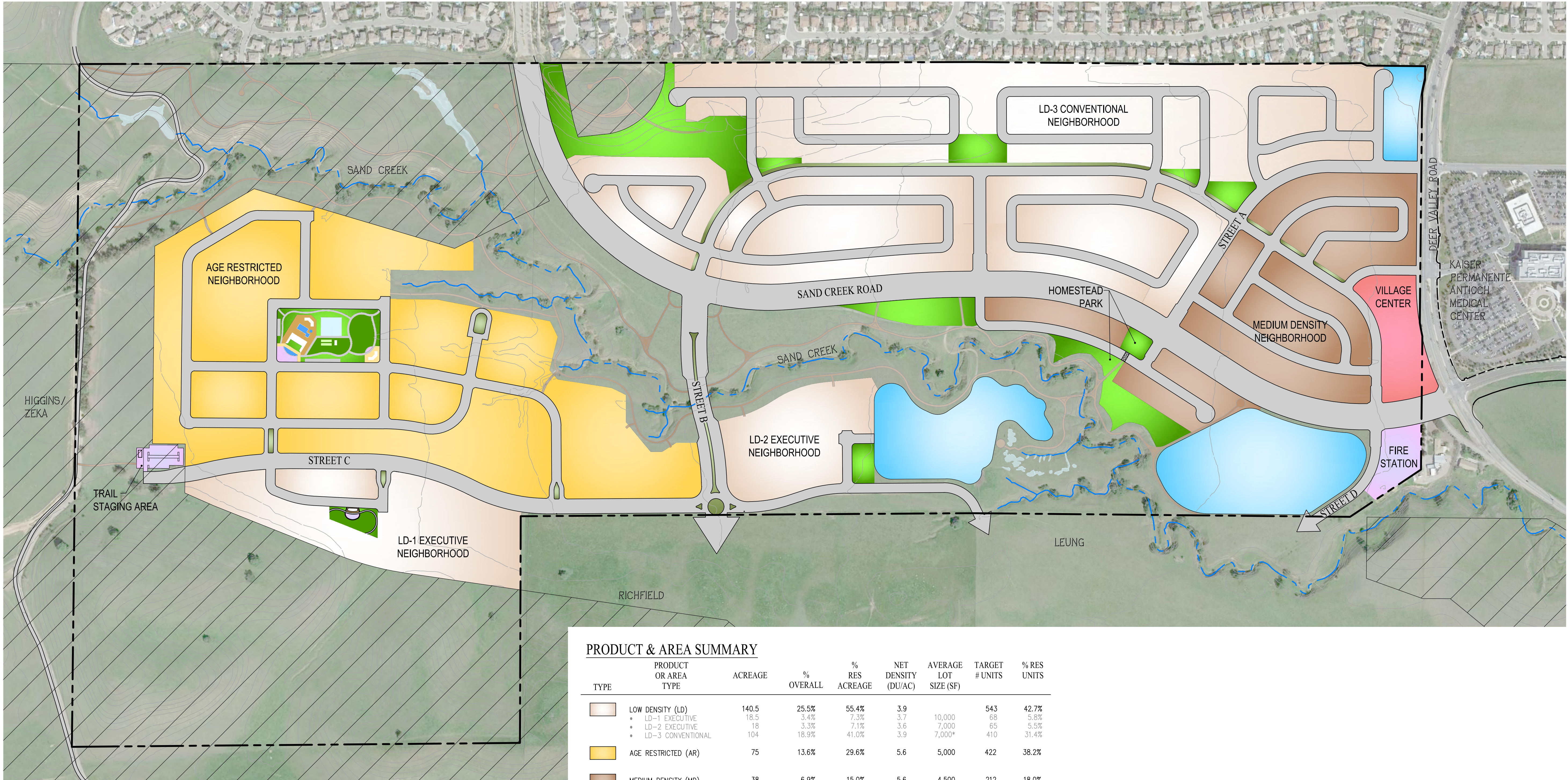


**H. T. HARVEY & ASSOCIATES**  
Ecological Consultants

**Figure 1. Vicinity Map**

The Ranch at Antioch San Joaquin Kit Fox Surveys (4275-01)  
March 2019





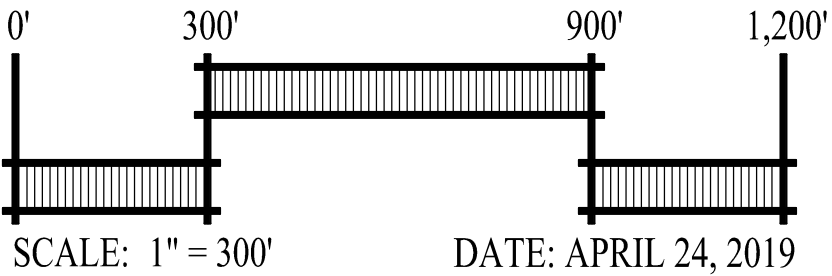
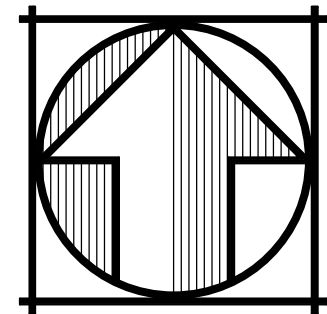
PRODUCT & AREA SUMMARY

TYPE	PRODUCT OR AREA TYPE	ACREAGE	% OVERALL	% RES ACREAGE	NET DENSITY (DU/AC)	AVERAGE LOT SIZE (SF)	TARGET # UNITS	% RES UNITS
	LOW DENSITY (LD)	140.5	25.5%	55.4%	3.9		543	42.7%
	• LD-1 EXECUTIVE	18.5	3.4%	7.3%	3.7	10,000	68	5.8%
	• LD-2 EXECUTIVE	18	3.3%	7.1%	3.6	7,000	65	5.5%
	• LD-3 CONVENTIONAL	104	18.9%	41.0%	3.9	7,000*	410	31.4%
	AGE RESTRICTED (AR)	75	13.6%	29.6%	5.6	5,000	422	38.2%
	MEDIUM DENSITY (MD)	38	6.9%	15.0%	5.6	4,500	212	18.0%
	RESIDENTIAL TOTAL	253.5	46.0%	100.0%	4.6		1,177	100.0%
	VILLAGE CENTER	5	0.9%					
	PUBLIC USE (PQ)	3	0.5%					
	• FIRE STATION (PQ-F)	2	0.4%					
	• TRAIL STAGING AREA (PQ-S)	1	0.2%					
	PARKS (P)	20	3.6%					
	LANDSCAPE (L)	2.5	0.5%					
	OPEN SPACE (OS)	229.5	41.6%					
	MAJOR ROADWAYS	38	6.9%					
	TOTAL	551.5	100%					

\*NOTE: A ROW OF MINIMUM 8,000 SF LOTS IS REQUIRED WHERE ABUTTING EXISTING SINGLE FAMILY DEVELOPMENT TO THE NORTH.  
AREA SUMMARY BASED ON THE RANCH AT ANTIOCH DEVELOPMENT STANDARDS AND DESIGN GUIDELINES, ASCENT ENVIRONMENTAL, OCTOBER 2018

ILLUSTRATIVE SITE PLAN  
THE RANCH

CITY OF ANTIOCH    CONTRA COSTA COUNTY    CALIFORNIA



SCALE: 1" = 300'

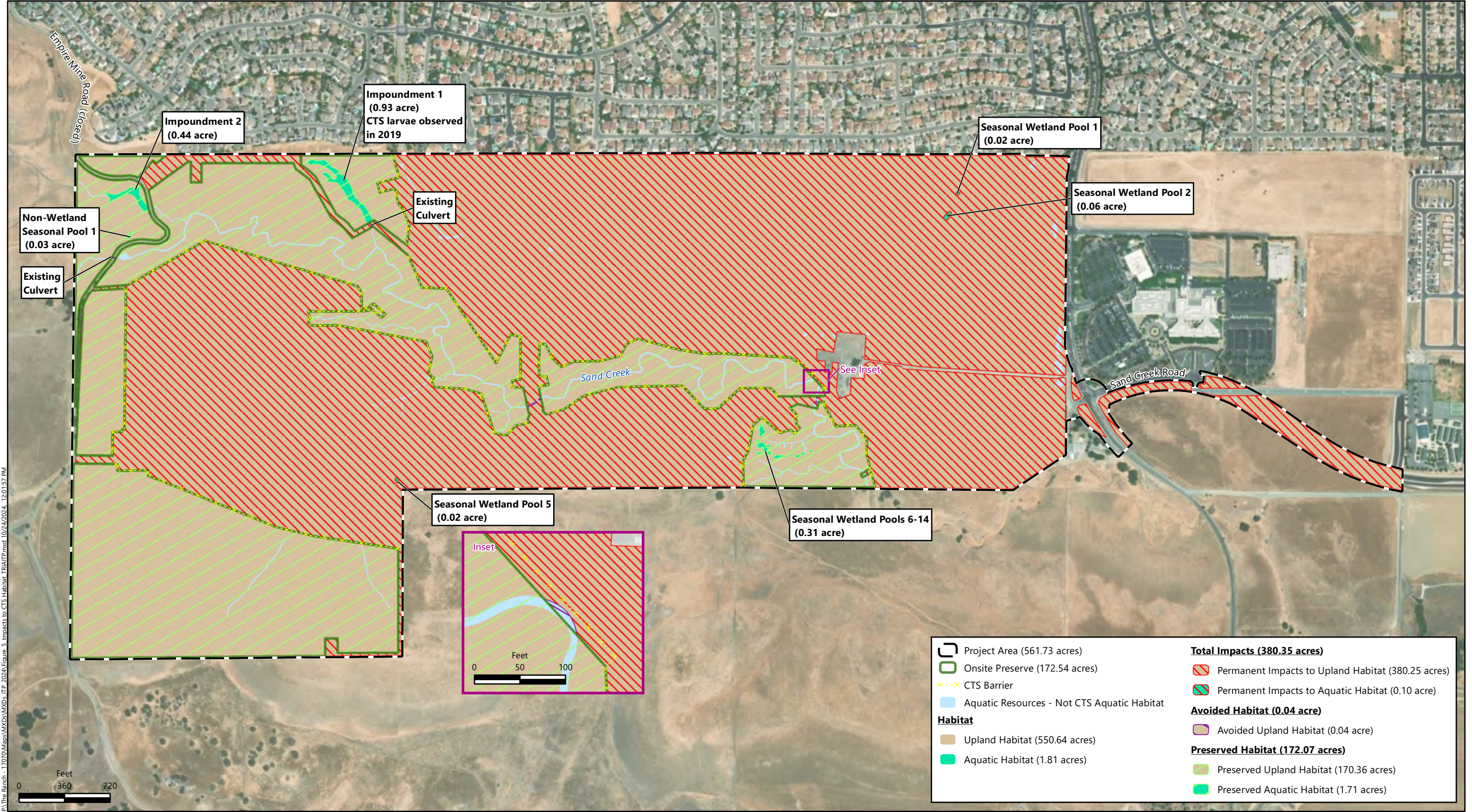
DATE: APRIL 24, 2019  
REVISED: APRIL 25, 2019  
REVISED: MAY 10, 2019  
REVISED: JUNE 4, 2019



CIVIL ENGINEERS    SURVEYORS    PLANNERS

SAN RAMON    (925) 866-0322  
SACRAMENTO    (916) 375-1877  
WWW.CBANDG.COM





P:\The Ranch - 17070\Maps\MXDs\ITP 2024\Figure 5 - Impacts to CTS Habitat TRIA\ITP.mxd 10/24/2024, 12:01:57 PM



Note: Small summation errors may occur due to rounding.  
Aquatic Resources Source: Live Oak Associates, Inc., March 2015,  
Madrone Ecological Consulting, LLC, 2019 and 2021.  
Aerial Source: Maxar, 23 July 2022.



## **Attachment 1**

### **CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE MITIGATION MONITORING AND REPORTING PROGRAM (MMRP) CALIFORNIA ENDANGERED SPECIES ACT INCIDENTAL TAKE PERMIT NO. 2081-2081-022-03**

**PERMITTEE:** Craig Cristina

**PROJECT:** The Ranch in Antioch

#### **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 DISTURBING SOIL OR VEGETATION</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 ground- or vegetation-disturbing activities/ Entire Project	Permittee	
2	Designated Biologist(s), Biological Monitor(s), and/or Veterinarian(s). Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information of the Designated Biologist(s) and Biological Monitor(s) using the Biologist Resume Form (Attachment 2) or another format containing the same information at least 30 days before starting Covered Activities. Permittee shall ensure that the Designated Biologist(s) and Biological Monitor(s) are knowledgeable and experienced in the biology, natural history, collecting and handling of the Covered Species. The Designated Biologist(s) and 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. Permittee shall obtain CDFW approval of the Designated Biologist(s) and Biological Monitor(s) in writing before starting Covered Activities and shall also obtain approval in advance, in writing, if the Designated Biologist(s) or Biological Monitor(s) must be changed.	ITP Condition # 5.2	Before commencing ground- or vegetation-disturbing activities	Permittee	
3	Designated Biologist Authority. To ensure compliance with the Conditions of Approval of this ITP, the Designated Biologist shall immediately stop any activity that does not comply with this ITP and/or order any reasonable measure to avoid the unauthorized take of an individual of the Covered Species. Permittee shall provide unfettered access to the Project Site and otherwise facilitate the Designated Biologist in the performance of his/her duties. If the Designated Biologist is unable to comply with the ITP, then the Designated Biologist shall notify the CDFW Representative immediately. Permittee shall not enter into any agreement or contract of any kind, including but not limited to non-disclosure agreements and confidentiality agreements, with its contractors and/or the Designated Biologist 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	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
4	Education Program. Permittee shall conduct an education program for all persons employed or otherwise working in the Project Area before performing any work. The program shall consist of a presentation from the Designated Biologist that includes a discussion of the biology and general behavior of the Covered Species, information about the distribution and habitat needs of the Covered Species, sensitivity of the Covered Species to human activities, its status pursuant to CESA including legal protection, recovery efforts, penalties for violations and Project-specific protective measures described in this ITP. Permittee shall prepare and distribute wallet-sized cards or a fact sheet handout containing this information for workers to carry in the Project Area. Permittee shall provide interpretation for non-English speaking workers, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project Area. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees that will be conducting work in the Project Area. For employees that have received the in-person education training previously, subsequent annual trainings may be repeated annually either via pre-recorded video or in-person.	ITP Condition # 5.4	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
5	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 ground- or vegetation-disturbing activities/ Entire Project	Permittee	
6	Dust Control. Permittee shall implement dust control measures during Covered Activities to facilitate visibility for monitoring of the Covered Species by the Designated Biologist. Permittee shall keep the amount of water used to the minimum amount needed and shall not allow water to form puddles that last more than four hours on-site.	ITP Condition # 5.7	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
7	Delineation of Project Boundaries. Before starting Covered Activities along each part of the route in active construction, Permittee shall clearly delineate the boundaries of the Project Area with fencing, stakes, or flags. Permittee shall restrict all Covered Activities to within the fenced, staked, or flagged areas. Permittee shall maintain all fencing, stakes, and flags until the completion of Covered Activities in that area.	ITP Condition # 5.8	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
8	Delineation of Habitat. To protect habitat that will be preserved on the property from project disturbance, Permittee shall clearly delineate habitat of the Covered Species within the Project Area with posted signs, posting stakes, flags, and/or rope or cord, and place fencing as necessary to minimize the disturbance of Covered Species' habitat.	ITP Condition # 5.9	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
9	Staging Areas. Permittee shall confine all Project-related parking, storage areas, laydown sites, equipment storage, and any other surface-disturbing activities to the Project Area using, to the extent possible, previously disturbed areas. Additionally, Permittee shall not use or cross Covered Species' habitat outside of the marked Project Area unless provided for as described in Conditions of Approval 5.9 of this ITP.	ITP Condition # 5.11	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
10	Notification Before Commencement. The Designated Representative shall notify CDFW 14 calendar days before starting Covered Activities and shall document compliance with all pre-Project Conditions of Approval before starting Covered Activities.	ITP Condition # 6.1	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
11	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 24 hours with a written report to CDFW describing, in detail, any non-compliance with this ITP and suggested measures to remedy the situation.	ITP Condition # 6.2	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
12	Phase Schedule. Permittee shall submit to CDFW final Covered Activity Schedules specific to each Project Phase according to the following Conditions of Approval:  Project Phase Construction Schedules. Permittee shall submit a final construction schedule to CDFW within 15 calendar days prior to the start of each Project construction phase. The construction schedule shall identify the approximate beginning and completion date of Covered Activities to take place during the Construction Phase (including construction activities and installation of permanent barrier sections per Project Phase (See Condition of Approval 7.11)). During each Project phase, Permittee shall notify CDFW of any major changes in the construction schedule at least seven days prior to the change being implemented.	ITP Condition # 6.6	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
13	Submit Designs for Storm Water Infrastructure. Permittee shall ensure that storm water-related infrastructure (e.g., storm drains, storm drain grates, v-ditches, catchment basins and detention basins) are designed and constructed in a manner that minimizes take of Covered Species to the maximum extent feasible. At least 45 days prior to commencement of Covered Activities, Permittee shall submit design plans and obtain written acceptance from CDFW confirming that the infrastructure incorporates design elements to avoid and reduce impacts to Covered Species prior to installation of such infrastructure to CDFW. CDFW shall provide written comments to Permittee within 45 calendar days of receipt of the storm drain designs. If no response is received from CDFW within 45 calendar days of submittal of the storm drain designs, the storm drain designs shall be considered accepted by CDFW. Permittee shall construct drop inlets or other storm drain infrastructure according to the designs accepted by CDFW.	ITP Condition # 6.11	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
14	V-ditches shall be designed so that their walls do not form an angle greater than 45° with the substrate and shall have velocity breaks at regular intervals that will allow for refuge and volitional escape by the Covered Species. V-ditches shall not direct or lead the Covered Species into hazardous or terminal (dead-end) areas.	ITP Condition # 6.11.1	Before commencing ground- or vegetation-disturbing activities/ Entire Project		
15	Catchment basins shall be fitted with escape ramps or ladders that will allow the Covered Species to volitionally escape. Ramps and/or ladders shall be placed along a wall of the catchment basin and must span the distance from the lowest point in the basin (sump pit) to the grate covering.	ITP Condition # 6.11.2	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
16	Escape ramps or ladders shall be fashioned from perforated metal sheeting covered with an open structured synthetic matting material that will allow for sufficient traction for the Covered Species to volitionally escape from the catchment basin if entrained.	ITP Condition # 6.11.3	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
17	Alternatively, catchment basins shall be designed to have walls that are slanted outward and the walls shall be covered with open structured synthetic matting material together with an escape ramp or ladder that allows for volitional escape of the Covered Species.	ITP Condition # 6.11.4	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
18	Detention basins shall be designed with exclusion fencing to prevent access by the Covered Species. The exclusion fencing shall be solid or opaque for at least 15 vertical inches from where it meets the substrate, and may consist of plastic, metal or other impermeable material that serves to block sensory access by the Covered Species and reduce take that may arise from "pacing" or "giving up" behavior.	ITP Condition # 6.11.5	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
19	Vehicle entry/exit points of access to the detention basins shall have crossing structures installed (e.g., grated trenches) to prevent road mortality of the Covered Species.	ITP Condition # 6.11.6	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
20	To prevent one-way entrainment of Covered Species in specially designated area(s), Permittee shall ensure that grated drop inlets or other types of storm drain infrastructure shall be constructed in a manner or outfitted with devices to prevent entrainment. Permittee shall obtain written acceptance from CDFW confirming that the infrastructure incorporates design elements to avoid and reduce impacts to Covered Species prior to installation of such infrastructure.	ITP Condition # 6.11.7	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	



	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
21	Submit Designs for Bridges, Roads, and Road Crossings. Permittee shall submit the plans for bridges, roads, and road crossings over Sand Creek to CDFW for written acceptance at least 30 days prior to the initiation of Covered Activities as relevant to each Project Phase. Bridges and crossings shall be designed and constructed to prevent conflicts with or take of Covered Species. CDFW may require an amendment to this ITP, among other reasons, if additional take of Covered Species will occur due to the location, quantity, or structure of bridge or road crossing infrastructure.	ITP Condition # 6.12	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
22	Permittee shall incorporate roadway designs such that there are no steep curbs, berms, straw wattles, or dikes that could prevent California tiger salamander from crossing or exiting the roadway. If curbs, berms, and/or straw wattles are necessary for safety and/or surface runoff, Permittee shall design and construct them to allow California tiger salamander to walk over them. If steep dikes are required, Permittee shall design and construct them to include over-side drains or curb/dike breaks spaced at intervals of 16.4 to 32.8 feet to allow California tiger salamander passage.	ITP Condition # 6.12.1	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
23	Submit Designs for Utility Infrastructure. Permittee shall submit design plans for all utility infrastructure (i.e. domestic and recycled water tanks, etc.) to CDFW for written acceptance at least 30 days prior to the initiation of Covered Activities. Infrastructures shall be designed and constructed to prevent conflicts with or take of Covered Species. CDFW may require an amendment to this ITP, among other reasons, if additional take of Covered Species will occur due to the location, quantity, or structure of utility infrastructure.	ITP Condition # 6.13	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
24	Seasonal Work Window Restriction. Permittee shall limit Covered Activities that will result in either initial ground disturbance (such as excavation, grading, trenching, contouring, or clearing and grubbing) from April 1 through October 15. Once habitat has been removed and exclusion fencing is in place, activities within the exclusion fencing may occur year-round. If areas have become fallow after initial disturbance and grasses or shrubs have become reestablished, Covered Activities shall only resume during the period from April 1 through October 15, and shall only occur outside this work window after habitat is removed and exclusion fencing is in place.	ITP Condition # 7.1	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
25	Erosion Control. Erosion and sediment control measures shall be installed around the perimeter of the active work area prior to earth moving Covered Activities. Permittee shall utilize erosion control measures for Project activities where sediment runoff from exposed slopes could leave the Project Area and/or enter a stream or pond. Permittee, Designated Representative or other trained staff shall monitor erosion control measures before, during, and after each storm event and repair and/or replace ineffective measures immediately.	ITP Condition # 7.4	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	

	<b>Mitigation Measure</b>	<b>Source</b>	<b>Implementation Schedule</b>	<b>Responsible Party</b>	<b>Status / Date / Initials</b>
26	No Project Activities without Erosion Control. No Covered Activities may be started if those activities and their associated erosion control measures cannot be completed prior to the onset of a storm event if that construction phase may cause the introduction of sediments into a drainage, stream, or pond. Permittee shall consult 72-hour weather forecasts from the National Weather Service prior to startup of any phase of the Project that may result in sediment runoff to the stream.	ITP Condition # 7.5	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
27	Geo-Textile and Monofilament Netting Restriction. To minimize the risk of ensnaring and strangling wildlife, Permittee shall not place erosion control materials containing synthetic (e.g., plastic or nylon) monofilament netting where it is exposed to air, with the exception of silt fencing and exclusion fencing. Exposed erosion control shall only consist only of fiber rolls, and other erosion control measures shall be made of loose-weave mesh, such as jute, coconut (coir) fiber, or other products without welded weaves. No geotextile fabrics shall be placed where they may be exposed to stream flows.	ITP Condition # 7.6	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
28	Geotextile materials shall be buried by organic material, including rock and soil, to a depth of at least 12 inches, and shall remain buried at all times while installed. For the duration of the geotextile implementation in the soil throughout the project, areas containing geotextile fabric shall be monitored by the Permittee and/or its successors and arrears, for exposure of the fabric above the soil. If geotextile is exposed, the Permittee shall cover exposed areas immediately and include documentation of steps taken to recover the geotextile in monitoring reports sent to CDFW. If geotextile fabric fails, all remnant geotextile materials shall be removed from site and disposed of immediately upon discovery.	ITP Condition # 7.6.1	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
29	Location of Spoil Sites. Spoil sites shall not be located where it may be washed back into a watercourse or within any potential Covered Species habitat throughout the Project Area.	ITP Condition # 7.7	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
30	Cover Spoil Piles. Prior to the initiation of Covered Activities, Permittee shall submit the Project's Stormwater Pollution and Prevention Plan and Dust Control Permit Plan for that Project Phase and comply with each plan's requirements. Permittee shall take any necessary precautions to prevent loose soils or dust from entering streams or stormwater infrastructure that discharges into streams.	ITP Condition # 7.8	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
31	Discharge of Water in Upland Habitat. To prevent untimely emergence of estivating adult California tiger salamanders, water shall not be discharged in upland habitats for the Covered Species outside of the wet season (October 15 through April 30). Any water discharged into upland habitat must be free of chemicals (e.g., chlorine), contaminants, sediment, and debris.	ITP Condition # 7.9	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
32	Temporary Exclusion Barrier. At least 30 days prior to the initiation of Covered Activities, the Permittee shall submit to CDFW for written approval plans for an exclusion fencing system and access routes as appropriate. The plan shall include a map indicating location of exclusion fencing in relation to the Project Area, location of special-status wildlife habitat features, dimension specifications and a description of fencing materials, and fencing monitoring measures. Permittee shall be responsible for implementation and upkeep of the fencing system. In addition, the following criteria for the exclusion fencing system shall be met:	ITP Condition # 7.10	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
33	The exclusion fencing shall consist of material appropriate for exclusion of Covered Species.	ITP Condition # 7.10.1	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
34	Any work site located within 0.5 miles of Covered Species habitat, including where equipment will be stored overnight, shall be completely fenced with a temporary wildlife exclusion barrier with coverboards. All construction work shall take place within the fenced area. Installation of exclusion fencing does not apply to graveled or well-traveled roads.  There shall be a section of exclusion fencing placed between disturbance areas and aquatic habitat for Covered Species along Sand Creek to prevent individuals from entering any slated ground disturbance areas from the creek.	ITP Condition # 7.10.2	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
35	Coverboards shall be placed around the inside and outside perimeter of the temporary exclusion barrier as described in Condition of Approval 7.10.10.	ITP Condition # 7.10.3	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
36	The exclusion fencing shall either measure at least 36 inches tall above the soil surface or be of an appropriate height for exclusion of the Covered Species.	ITP Condition # 7.10.4	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
37	The Designated Biologist shall inspect the fencing immediately after every rain event to ensure it maintains structural integrity. Holes or burrows which appear to extend under the fencing will be blocked inside the fence line to prevent California tiger salamander from accessing work areas.	ITP Condition # 7.10.5	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
38	The bottom of the exclusion fencing shall not allow wildlife to pass through gaps or holes with the bottom of the fencing buried six inches below grade.	ITP Condition # 7.10.6	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
39	The exclusion fencing shall be taut between the supporting stakes and shall have the supporting stakes oriented on the inside edge towards the development areas.	ITP Condition # 7.10.7	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
40	The exclusion fencing shall feature coverboards inside and outside the perimeter placed at 100-foot intervals and one-way escape doors or an appropriate design for preventing special-status species and other wildlife from being trapped within the Project Area that is under active construction.	ITP Condition # 7.10.8	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
41	Temporary fencing shall be inspected within one hour of sunrise every morning for trapped California tiger salamanders during periods when they are likely to be migrating above-ground. During construction (including clearing, grubbing and grading), these daily inspections shall occur from May 1 through August 31 when salamander metamorphs are likely to be migrating away from their natal ponds, and all year on mornings following any rain event greater than 0.1 inches, when adults may be migrating to their breeding ponds. During periods of project inactivity, the Designated Biologist shall conduct compliance inspections of the temporary fencing a minimum of one day per week until the temporary fencing is removed. If a California tiger salamander is encountered during inspections, and is in danger of being harmed, then the Designated Biologist shall temporarily stop all activities that threaten harm, remove the animal from the area, and relocate it to the pre-approved location as described in the Covered Species Relocation Plan (Condition of Approval 7.12).	ITP Condition # 7.10.9	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
42	Coverboards shall be inspected within one hour of sunrise every morning for trapped California tiger salamanders during periods when they are likely to be migrating above-ground. During construction (including clearing, grubbing and grading), these inspection periods shall occur a minimum of once per day from May 1 through August 31 when salamander metamorphs are likely to be migrating away from their natal ponds, and all year on mornings following any rain event greater than 0.1 inches, when adults may be migrating to their breeding ponds. During periods of inactivity after clearing, grubbing, and grading, the Designated Biologist shall conduct coverboard inspections a minimum of one day per week until the temporary fencing is removed, unless there is a rain event greater than 0.1 inches. The Designated Biologist shall conduct coverboard inspections each day there is a rainfall event greater than 0.1 inches, regardless of whether the project is inactive or active. If a California tiger salamander is encountered during coverboard inspections, and is in danger of being harmed, then the Designated Biologist shall temporarily stop all activities that threaten harm, remove the animal from the area, and relocate it to the pre-approved location as described in the Covered Species Relocation Plan (Condition of Approval 7.12).	ITP Condition # 7.10.10	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
43	If fencing becomes damaged, it will be immediately repaired upon detection and the Designated Biologist shall stop work in the vicinity of the fencing as needed to ensure that no California tiger salamanders have entered the construction area.	ITP Condition # 7.10.11	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
44	Fencing system entry/exit points for vehicular and pedestrian traffic shall be constructed so wildlife cannot access the area within a Project Phase under active construction during non-work hours.	ITP Condition # 7.10.12	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
45	The Designated Biologist shall inspect the Project Area prior to installation of the exclusion fencing. The exclusion fencing system shall remain in place until all construction activities have been completed in the in the Project Area. All components of the exclusion fencing will be removed for storage or disposal off-site immediately upon completion of construction activities. All vegetation slated for removal within the Project Area shall be inspected by a Designated Biologist prior to the initiation of removal. Exclusion fencing shall be inspected daily by the Designated Biologist and repaired as necessary, including inspection of coverboards and replacement of wetted sponges as necessary to minimize wildlife distress.	ITP Condition # 7.10.13	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
46	Covered Species Barriers. Permittee shall provide a Covered Species Barriers Plan and submit it for CDFW approval no later than 60 days prior to start of Covered Activities. The permanent barrier shall only consist of masonry construction materials, including concrete block wall construction, cast-in-the place concrete construction, or pre-cast concrete construction. Any proposed deviation of construction materials from the three listed options requires explicit written approval by CDFW. Only masonry materials will be considered as an alternative option. The Barriers Plan shall include the following elements for permanent barriers: 1) the footprint of all permanent barriers, including those constructed to prevent detention basin and water quality treatment basins from becoming an attractive nuisance to CTS, 2) identification of the legal instrument or detail of assurances regarding the right to construct and maintain the barriers in perpetuity, 3) identification of the party responsible for maintenance of permanent barriers, and 4) the funding source, such as an endowment for the responsible party to draw from for management and maintenance of the permanent barriers. The Barriers Plan shall also include the designs and placement of a low wall to prevent Covered Species from entering backyards from neighboring undeveloped properties and a construction schedule for each section of barrier that is tied to each Project phase as identified in the Phase Schedule (Condition 6.6). Permittee shall implement the Barriers Plan and follow the implementation schedule, including any necessary recording of deeds and funding of financial instruments, upon CDFW approval. Except for the first phase of the Project, Covered Activities for subsequent Project phases shall not commence until the Barriers Plan has been approved by CDFW.	ITP Condition # 7.11	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
47	Avoidance or Treatment of Burrows. All mammal burrows within the Development Area that cannot be avoided shall be inspected and scoped for occupancy. If unoccupied, the burrows shall be hand-excavated and collapsed so that they do not attract California tiger salamanders during Covered Activities. This shall occur prior to and during any earth moving Covered Activities.	ITP Condition # 7.13	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
48	<p>Inspection of Pipes and Similar Structures. All construction pipes or similar structures with a diameter of two inches or greater (including any hollow openings of battery storage containers) that are stored in the Project Area for one or more overnight periods shall be either securely capped prior to storage or thoroughly inspected by the Designated Biologist and/or the construction foreman/manager for California tiger salamanders or other animals before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a California tiger salamander is found, it shall be relocated as described in Conditions of Approval 7.12.</p>	ITP Condition # 7.17	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
49	<p>Open Excavations. To prevent inadvertent entrapment of California tiger salamanders during construction activities, the Designated Biologist or the biological monitor under the direction of the Designated Biologist shall check all open excavations, including but not limited to open holes and trenches more than 6-inches deep, for trapped animals no later than 9:00 AM each day. During the workday, before any open trenches or holes are filled, the Designated Biologist shall thoroughly inspect the trenches or holes for California tiger salamander. At the close of each working day, the Designated Biologist shall check open excavations and ensure that all excavated, steep-walled holes or trenches more than 6 inches deep are provided with one or more escape ramps constructed of earthen fill or wooden planks with a slope of 3:1 (run:rise) or covered with boards or metal plates placed flush to the ground with edges overlaid by loose dirt leaving no gaps for Covered Species entry. At any of these times, if a California tiger salamander is discovered by the Designated Biologist or anyone else, the Designated Biologist shall move the individual as required by Condition of Approval 7.11.</p> <p>If any open holes, trenches or other excavations greater than six inches deep cannot be covered or fitted with escape ramps as described above, then temporary exclusion fencing shall be installed around these trenches, holes, or other excavations to prevent California tiger salamander from becoming trapped. Refuge opportunities, such as coverboards (two-foot x three-foot or larger plywood), shall be provided on the outside perimeter of the temporary exclusion fences.</p>	ITP Condition # 7.18	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
50	<p>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 provide for both the permanent protection and management of 1,141.05 acres of Habitat Management (HM) lands pursuant to Condition of Approval 8.2 below and the calculation and deposit of the management funds pursuant to Condition of Approval 9.4 below. Purchase of Covered Species credits AND/OR permanent protection and funding for perpetual management of HM lands must be complete before starting Covered Activities, or within 18 months of the effective date of this ITP if Security is provided pursuant to Condition of Approval 9 below for all uncompleted obligations. The Permittee shall meet the mitigation acreage requirement through the purchase of Covered Species credits, the permanent protection and funding for perpetual management of HM lands, or through a combination of these two methods.</p> <p>HM lands shall meet the minimum habitat requirements for the Covered Species including, but not limited to: 1) one or more aquatic features on-site which have been documented to support successful Covered Species breeding in an average or below average rainfall year (abundance and distribution) or adjacent to aquatic features which have been documented to support successful Covered Species breeding in an average or below average rainfall year (abundance and distribution) and already conserved and managed to the satisfaction of CDFW for the Covered Species; 2). Properties with no less than 100 contiguous acres of suitable, uniform upland habitat with low edge effects or that is adjacent to suitable upland already conserved and managed for the Covered Species. CDFW may elect to provide reduced credit toward proposed mitigation properties that do not meet all of the above standards. This determination will be made at the discretion of CDFW. To meet the fully mitigated standard, additional acres of habitat shall be provided to make up the difference of reduced habitat credits accepted.</p>	ITP Condition # 8	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
51	<p>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 as follows:</p> <p>Land acquisition costs for HM lands identified in Condition of Approval 8.2 below, estimated at \$20,000 acre for 1,141 acres: \$22,820,000. 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 8.2.1 and 8.3.2 below: \$20,000.</p> <p>Start-up costs for HM lands, including initial site protection and enhancement costs as described in Condition of Approval 8.2.6 below, estimated at \$450,000.</p> <p>Interim management period funding as described in Condition of Approval 8.2.7 below, estimated at \$575,000.</p> <p>Long-term management funding as described in Condition of Approval 8.3 below, estimated at \$5,000/acre for 1,141 acres: \$5,705,000. 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 9.5, estimated at \$4,500.</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. 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: \$100,000.</p>	ITP Condition # 8.1	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
52	<p>Habitat Management Lands Acquisition and Protection. If the Permittee elects to provide for the acquisition, permanent protection, and perpetual management of HM lands to complete compensatory mitigation obligations, then the 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>	ITP Condition # 8.2	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	



	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
53	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. The Permittee shall obtain CDFW written approval of any conservation easement before its execution or recordation. No conservation easement shall be approved by CDFW unless it complies with 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.	ITP Condition # 8.2.2	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
54	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;	ITP Condition # 8.2.3	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
55	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;	ITP Condition # 8.2.4	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
56	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.	ITP Condition # 8.2.5	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
57	<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>) (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;</p> <p>The final management plan shall include:</p> <p>A minimum of one pond suitable for Covered Species breeding in non-drought years will be constructed, enhanced, or preserved (i.e. has an existing occupied Covered Species breeding pond on-site) per separate accepted mitigation property. Total pond acreage across properties should add up to a minimum of 0.3 acres.</p> <p>Grazing management will be instituted that targets the maintenance of suitable dispersal and upland habitat for the Covered Species.</p> <p>No rodent control will occur unless approved in advance in writing by CDFW.</p>	ITP Condition # 8.2.6	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
58	<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, fence repair, vegetation and invasive species management, pond monitoring, potential remedial measures and costs, amphibian surveys, trespass, and grazing 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>	ITP Condition # 8.2.7	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
59	<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>	ITP Condition # 8.3.1	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
60	<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>	ITP Condition # 8.3.2	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
61	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.	ITP Condition # 8.3.2.3	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
62	<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>	ITP Condition # 8.3.2.4	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
63	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 # 8.4	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
64	<p>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:</p> <p>Security Amount. The Security shall be in the amount of \$29,684,500. or in the amount identified in specific to the obligation that has not been completed. 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.</p> <p>Security Form. The Security shall be in the form of an irrevocable letter of credit (see Attachment 3) or another form of Security approved in advance in writing by CDFW's Office of the General Counsel.</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 5) 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>• 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 18 months from the effective date of this ITP. CDFW may require the Permittee to provide additional HM lands and/or additional funding to ensure the impacts of the taking are minimized and fully mitigated, as required by law, if the Permittee does not complete these requirements within the specified timeframe.</p>	ITP Condition # 9	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
<b>DURING CONSTRUCTION</b>					
65	Construction Monitoring Documentation. The Designated Biologist(s) and Biological Monitor(s) shall maintain construction-monitoring documentation on-site in either hard copy or digital format throughout the construction period, which shall include a copy of this ITP with attachments and a list of signatures of all personnel who have successfully completed the education program. Permittee shall ensure a copy of the construction-monitoring documentation is available for review at the Project site upon request by CDFW.	ITP Condition # 5.5	Entire Project	Permittee	
66	Project Access. Project-related personnel shall access the Project Area using all routes described in the Project Description, including existing routes, and shall not cross Covered Species' habitat outside of or en route to the Project Area, including habitat within a Project phase that has not commenced with construction (e.g., during Project Phases 1 or 2, personnel shall not cross habitat within Phase 3 before the commencement of Phase 3 construction activities). Permittee shall restrict Project-related vehicle traffic to established roads, staging, and parking areas. Permittee shall ensure that vehicle speeds do not exceed 15 miles per hour to avoid Covered Species on or traversing the roads. If Permittee determines construction of routes for travel are necessary outside of the Project Area, the Designated Representative shall contact CDFW for written approval before carrying out such an activity. CDFW may require an amendment to this ITP, among other reasons, if additional take of Covered Species will occur as a result of the Project modification.	ITP Condition # 5.10	Entire Project	Permittee	
67	Hazardous Waste. Permittee shall immediately stop and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so. Permittee shall exclude the storage and handling of hazardous materials from the Project Area and shall properly contain and dispose of any unused or leftover hazardous products off-site.	ITP Condition # 5.12	Entire Project	Permittee	
68	CDFW Access. Permittee shall provide CDFW staff with reasonable access to the Project 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 # 5.13	Entire Project	Permittee	
69	Firearms and Dogs. Permittee shall prohibit firearms and domestic dogs from the Project Area and Project site access routes during Covered Activities, except those that are in the possession of authorized security personnel or local, State, or federal law enforcement officials.	ITP Condition # 5.15	Entire Project	Permittee	
70	Wildfire Prevention. Permittee shall keep basic fire suppression supplies on site at all times. Hand removal of vegetation, mowing, weed-whacking, and/or grazing by livestock are the authorized methods that shall be used to reduce fuel loads. The Designated Biologist or Biological Monitor shall inspect for Covered Species all non-living or living vegetation marked for removal by hand, mowing or weed-whacking prior to removal and the Designated Biologist or Biological Monitor shall be on-site to monitor these fuels reduction activities.	ITP Condition # 5.16	Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
71	<p>Compliance Monitoring. The Designated Biologist shall be on-site daily when Covered Activities occur. The Designated Biologist shall conduct compliance inspections a minimum of one day per week during periods of inactivity and after clearing, grubbing, and grading are completed. The Designated Biologist shall conduct compliance inspections to:</p> <p>(1) minimize incidental take of the Covered Species;</p> <p>(2) prevent unlawful take of species;</p> <p>(3) check for compliance with all measures of this ITP;</p> <p>(4) check all exclusion zones; and</p> <p>(5) ensure that signs, stakes, and fencing are intact, and that Covered Activities are only occurring in the Project Area.</p> <p>The Designated Representative or Designated Biologist shall prepare daily written observation and inspection records summarizing oversight activities and compliance inspections, observations of Covered Species and their sign, survey results, and monitoring activities required by this ITP.</p>	ITP Condition # 6.3	Entire Project	Permittee	
72	<p>Monthly Compliance Report. During Project construction, the Designated Representative or Designated Biologist shall compile the observation and inspection records identified in Condition of Approval 6.3 into a Monthly Compliance Report and submit it to CDFW along with a copy of the MMRP table with notes showing the current implementation status of each mitigation measure. Monthly Compliance Reports shall be submitted to the CDFW offices listed in the Notices section of this ITP and via e-mail to CDFW's Regional Representative and Headquarters CESA Program. At the time of this ITP's approval, the CDFW Regional Representative is Mia Bianchi at Mia.Bianchi@wildlife.ca.gov and Headquarters CESA Program email is CESA@wildlife.ca.gov. CDFW may at any time increase the timing and number of compliance inspections and reports required under this provision depending upon the results of previous compliance inspections. If CDFW determines the reporting schedule must be changed, CDFW will notify Permittee in writing of the new reporting schedule.</p>	ITP Condition # 6.4	Entire Project	Permittee	
73	<p>Annual Status Report. Permittee shall provide CDFW with an Annual Status Report (ASR) no later than January 31 of every year beginning with issuance of this ITP and continuing until CDFW accepts the Final Mitigation Report identified below. Each ASR shall include, at a minimum: (1) a summary of all Monthly Compliance Reports for that year identified in Condition of Approval 6.4; (2) a general description of the status of the Project Area and Covered Activities, including actual or projected completion dates, if known; (3) a copy of the table in the MMRP with notes showing the current implementation status of each mitigation measure; (4) an assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing and mitigating Project impacts; (5) all available information about Project-related incidental take of the Covered Species; (6) an accounting of the number of acres subject to permanent disturbance, both for the prior calendar year, and a total since ITP issuance; and (7) information about other Project impacts on the Covered Species.</p>	ITP Condition # 6.5	Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
74	CNDDDB Observations. The Designated Biologist shall submit all observations of Covered Species to CDFW's California Natural Diversity Database (CNDDDB) within 60 calendar days of the observation and the Designated Biologist shall include copies of the submitted forms with the next Monthly Compliance Report or ASR, whichever is submitted first relative to the observation.	ITP Condition # 6.7	Entire Project	Permittee	
75	Tracking Impacts. Permittee shall track permanent impacts and notify CDFW if take authorization is likely to be exceeded. Permittee shall submit an appropriately revised Project Phase schedule (Condition of Approval 6.6.1) within 15 days of starting each Phase. If Permittee or CDFW determines that this ITP's take authorization is likely to be exceeded, then the Permittee shall obtain an amendment to this ITP as provided by California Code of Regulations, Title 14, section 783.6, subdivision (c), and other applicable law, unless otherwise authorized by CDFW under Condition of Approval 8 of this ITP.	ITP Condition # 6.9	Entire Project	Permittee	
76	Notification of Take/Injury. Permittee shall immediately notify the Designated Biologist if a Covered Species is taken (including relocation) 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 the CDFW Regional Representative via email at Mia.Bianchi@wildlife.ca.gov, with a cc to R3CESA@wildlife.ca.gov, and by calling the direct line to the CDFW Representative at (707) 815-8722 by the end of the business day. The initial notification to CDFW shall include information regarding the location, species, and number of animals taken or injured and the ITP Number. Following initial notification, Permittee shall send CDFW a written report within two calendar days. The report shall include the date and time of the finding or incident, GPS location (including GPS error estimated in feet and datum) of the Covered Species, photographs of the location and the Covered Species, explanation as to cause of take or injury, and any other pertinent information.	ITP Condition # 6.10	Entire Project	Permittee	
77	Daily Work Window Restriction. All Covered Activities shall terminate 30 minutes before sunset and shall not resume until 30 minutes after sunrise unless otherwise approved by the Designated Biologist. Permittee shall use sunrise and sunset times established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area ( <a href="http://aa.usno.navy.mil/data/docs/RS_OneYear.php">http://aa.usno.navy.mil/data/docs/RS_OneYear.php</a> ).	ITP Condition # 7.2	Entire Project	Permittee	



	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
78	<p>Seasonal Work Window Extensions. Permittee shall adhere to the seasonal work window required in Condition of Approval 7.1 unless an expanded work window is approved by CDFW. Permittee shall submit any requests for extensions in writing at least 14 days prior to the desired date of construction or 14 days prior to the expiration of the seasonal work window. If work is approved the following conditions shall apply:</p> <p>All construction vehicles and heavy equipment travel shall be limited to daylight hours from 30 minutes after sunrise until 30 minutes before sunset, to the maximum extent feasible, unless otherwise approved by the Designated Biologist.</p> <p>Wet Season Work Restriction: If CDFW has approved a seasonal work window extension per Condition of Approval 7.3, then, during the wet season between October 15 through April 30, Covered Activities shall cease 24 hours prior to a 30 percent or greater forecast of rain. Construction may continue 24 hours after the rain ceases and there is less than a 30 percent chance of precipitation in the 24-hour forecast. CDFW may approve work when there is a 30 percent or more chance of precipitation in the 24-hour forecast subject to full implementation of Condition of Approval 7.3 and the following condition:</p> <p>If work is approved when a greater than 30 percent chance of rain is forecast, the Designated Biologist(s) shall survey the Project Area where Covered Activities are planned before they begin each day rain is forecast. If rain exceeds 0.50 inches during a 24-hour period, work shall cease until there is a less than 30 percent chance of precipitation in the 24-hour forecast. All night-time work and construction-related traffic shall be suspended during rain events.</p>	ITP Condition # 7.3	Entire Project	Permittee	
79	<p>Covered Species Relocation. If a California tiger salamander is encountered during site inspections (including fence inspections), and is in danger of being harmed, the Designated Biologist shall temporarily stop all activities that threaten harm, remove the animal from the area, and relocate it to the pre-approved relocation location as described in Attachment 6. California tiger salamanders that will be relocated and released by the Designated Biologist outside the construction area, preferably within 300 feet of where it was found, in protected suitable habitat in the Conservation Easement Area. Under no circumstances will a California tiger salamander be released on a site other than the Conservation Easement Area unless the written permission of the landowner has been obtained prior to the start of construction of each phase.</p>	ITP Condition # 7.12	Entire Project	Permittee	
80	<p>Pesticides. No rodenticides or herbicides shall be used within the Project Area until Covered Activities have been completed or in the Conservation Easement Area unless specifically approved in the final management plan required in Condition of Approval 8.2.6 (Habitat Acquisition and Protection) or in writing by CDFW.</p>	ITP Condition # 7.14	Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
81	Development Area Lighting. All lighting shall be designed so that exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated, with little to no horizontal spread, as low to the ground as feasible and so that backscatter to the nighttime sky is minimized. The design of the lighting will be such that the luminescence or light sources are shielded to prevent light trespass outside the Development Area boundary and neither the lamp nor the reflector interior surface would be visible from outside the footprint of the Development Area except for public roadways. Only narrow spectrum bulbs shall be used to limit the range of species affected by lighting. All lighting will be of minimum necessary brightness consistent for worker safety. No lighting shall be permitted within CTS breeding habitat. The number of lighting fixtures on buildings and roadways shall be limited to the minimum required by the City of Antioch.	ITP Condition # 7.15	Entire Project	Permittee	
82	Covered Species Checks. During ground disturbing activities, before the start of work each morning, the Designated Biologist shall check for California tiger salamander individuals under all vehicles, equipment, materials, or otherwise suitable locations for a California tiger salamander to hide. Workers shall inspect under vehicles and equipment for California tiger salamanders before the vehicles and equipment are moved. If a California tiger salamander is present, the worker shall notify the Designated Biologist. All ruts and holes near root structures, foundations, abutments, etc., shall be inspected for California tiger salamanders prior to and during excavation or removal. If a California tiger salamander is discovered, the Designated Biologist shall relocate individuals as required by Conditions of Approval 7.12.	ITP Condition # 7.16	Entire Project	Permittee	
83	Notification of Non-Native Tiger Salamanders or Hybrids. The Designated Biologist shall immediately notify CDFW if a non-native tiger salamander (tiger salamander, <i>Ambystoma tigrinum</i> ; barred tiger salamander, <i>A. mavortium</i> ; or plateau tiger salamander, <i>A. velasci</i> ) or California tiger salamander hybrid is found or suspected within the Project Area within 24 hours by calling CDFW's Regional Representative. The Designated Biologist shall not release any non-native or hybrid salamanders back to the wild until directed to do so by CDFW. The Designated Biologist shall follow the Covered Species Handling and Injury measures outlined in this ITP (see Condition of Approval 6.10) from or otherwise vacated the partially destroyed den.	ITP Condition # 7.19	Entire Project	Permittee	
<b>POST-CONSTRUCTION</b>					
84	Refuse Removal. Upon completion of Covered Activities, Permittee shall remove from the Project Area and properly dispose of all temporary fill and construction refuse, including, but not limited to, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, and boxes.	ITP Condition # 5.14	Post-construction	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
85	Final Mitigation Report. No later than 45 days after completion of all mitigation required by this ITP, Permittee shall provide CDFW with a Final Mitigation Report. The Designated Biologist shall prepare the Final Mitigation Report which shall include, at a minimum: (1) a summary of all Monthly Compliance Reports and all ASRs; (2) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species; (4) information about other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an assessment of the effectiveness of this ITP's Conditions of Approval in minimizing and fully mitigating Project impacts of the taking on Covered Species; (7) recommendations on how mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future projects on the Covered Species; and (8) any other pertinent information.	ITP Condition # 6.8	Post-construction and after completion of mitigation	Permittee	



Project Name: [Click or tap here to enter text.](#)

LSA Agreement/ITP Number(s): [Click or tap here to enter text.](#)

## COVER SHEET

SUBMIT EACH RESUME AS A SEPARATE DOCUMENT

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

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.**

<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.



Project Name: Click or tap here to enter text.

LSA Agreement/ITP Number(s): Click or tap here to enter text.

**SECTION I. NAME AND CONTACT INFORMATION**

Name:

Title:

Company Name &amp; Address:

Phone:

Email:

**SECTION II. EDUCATION**

College/University &amp; Degree Type Related to Natural Resource Science:

Other Relevant Workshops &amp; 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 V.*

Species or Resource	Number of Field Seasons & Hours, Life Stages Observed Provide project details in Section 5	Life History Knowledge Describe formal workshops & training with dates, or informal training details	CDFW SCP, MOU, & USFWS 10a1a Authorization Number & Authorized Activities This form does not fulfill SCP, MOU, & USFWS 10a1a reporting requirements	
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.



Project Name: Click or tap here to enter text.

LSA Agreement/ITP Number(s): Click or tap here to enter text.

**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 IV. If more space is needed, attach additional pages in the same table format (i.e., copy/paste format).*

**SPECIES OR RESOURCE 1:****Project 1 Name & Location:****Project Start Date:****Project End Date:****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****CNDDB<sup>7</sup> (Y/N):****Company Name, Professional Reference Name, Phone, Email:****If not reported to CNDDB, why:****CDFW and Other Agency Email:****Project 2 Name & Location:****Project Start Date:****Project End Date:****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****CNDDB (Y/N):****Company Name, Professional Reference Name, Phone, Email:**

<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> CNDDB is the abbreviation for California Natural Diversity Database.

**BIOLOGIST RESUME**Project Name: [Click or tap here to enter text.](#)LSA Agreement/ITP Number(s): [Click or tap here to enter text.](#)

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

Project Name: [Click or tap here to enter text.](#)LSA Agreement/ITP Number(s): [Click or tap here to enter text.](#)

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



Project Name: [Click or tap here to enter text.](#)LSA Agreement/ITP Number(s): [Click or tap here to enter text.](#)

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



**BIOLOGIST RESUME**

Project Name: [Click or tap here to enter text.](#)

LSA Agreement/ITP Number(s): [Click or tap here to enter text.](#)

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

**[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  
960 Riverside Parkway, Suite 90  
West Sacramento, CA 95605  
Attn: HCPB Mitigation Funds

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 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 upon receipt by us of Certificate of Cancellation, which: (i) shall be in the form of Attachment B, which is attached hereto, and (ii) shall be completed and signed by an Authorized Representative of 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 Manager 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, 960 Riverside Parkway, Suite 90, West

Sacramento, CA 95605, Attn: HCPB Mitigation Funds; 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 laws 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 in 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** "Branch Manager, Habitat Conservation Planning Branch"]

ATTACHMENT B

CERTIFICATE FOR CANCELLATION

**[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 provided CDFW with an equivalent security approved by CDFW to replace the Credit."]
2. CDFW therefore requests the cancellation of the Credit.

Therefore, CDFW has executed and delivered this Certificate for Cancellation 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** "Branch Manager, Habitat Conservation Planning Branch"]

## CHECKLIST OF DOCUMENTS FOR PERMITTEE RESPONSIBLE HABITAT MITIGATION LAND PROPERTY ANALYSIS AND PROTECTION

The California Department of Fish and Wildlife (CDFW) requests documents to help evaluate property proposed by Permittees as Habitat Mitigation Land Acquisition (HMLA) to comply with CDFW permits and approvals (e.g., incidental take permits, lake or streambed alteration agreements, advance mitigation, etc.). CDFW regional staff, who are the primary point of contact for all HMLA projects, as well as the CDFW Mitigation Property Document Analysis (MPDA) Team, typically consisting of a right of way (ROW) agent and a senior land surveyor, will analyze the documents provided before the property is protected by the conveyance of either fee title or a conservation easement over the property. ***Early consultation with CDFW is encouraged for any clarification necessary with this checklist.***

In Stage 1 (Property Eligibility Review), the CDFW regional staff conducts a site visit of the proposed mitigation property to determine biological suitability to meet compensatory obligation permit requirements and concurrently, the CDFW MPDA Team conducts an analysis of property related documents. If the CDFW regional staff, with support from the MPDA Team, determines the property is eligible, the CDFW regional staff will notify the Permittee that they may proceed to Stage 2.

Stage 2 (Property Acceptance Review) begins after the CDFW regional staff has provided the Permittee with written notice or an email that the property is eligible to move forward. The Stage 2 process is intended to confirm and ultimately protect the acreage stated in the permit as required mitigation. Updates and additional documents will be requested at this time to evaluate the full HMLA package. CDFW's MPDA Team analyzes the real property documents and provides recommendations to the regional staff who will accept or reject the property as mitigation based on a thorough analysis of property information. If the property is accepted, the regional staff will notify the Permittee they may proceed with Stage 3.

Stage 3 (Property Protection and Closing Documentation) takes place after the property has been accepted as mitigation by CDFW. During this stage, the property will be protected by recording documents transferring fee title or a conservation easement and closing the real estate transaction. This stage ensures that CDFW is provided a copy of all closing documentation for permit compliance.

Submit all documents electronically, with file names following the document names in this checklist and using the [Mitigation Land Package Document File Naming Convention](#), to the [CDFW regional office](#) that serves the project area. As applicable, within the documents, consistently reference the project name and CDFW permit number. Use of an FTP site is encouraged for efficient electronic transfer of files. See [Folder structure instructions](#) for how to sort the documents in an FTP site.



## DOCUMENT AND STAGE PROCESS SUMMARY

Items below may not be applicable in all cases. Subsequent pages provide details for each item.

### STAGE 1: Property Eligibility Review

1. **Biological Report**
2. **Habitat Mitigation Land Title Information**
3. **Preliminary Title Report Including Plottable Easement Maps**
4. **Keyhole Markup Zip compressed (KMZ) Placement File of Assessor's Parcel(s)**
5. **Phase I Environmental Site Assessment Report**
6. **Mineral Risk Assessment Report (if mineral rights have been severed)**
7. **Grantor Business Verification Documentation**
8. **Items Completed by CDFW**

### STAGE 2: Property Acceptance Review

9. **Land Survey Products**
10. **Draft Legal Access Easement or Documented Evidence of Existing Legal Access**
11. **UPDATED Phase I Environmental Site Assessment Report, if applicable**
12. **(A) DRAFT Grant Deed with HCPB Surveyor approved Exhibit(s)**  
*OR*  
**(B) DRAFT Conservation Easement Deed with HCPB Surveyor approved Exhibit(s)**
13. **Checklist for Entities being Considered to Hold Conservation Easements or Manage and Steward Mitigation Land (Due Diligence)**
14. **Draft Subordination Agreement(s) or Other Draft Agreements**
15. **Draft Management Plan(s) (e.g., Interim & Long-Term Management Plan)**
16. **Updated Preliminary Title Report, if applicable**
17. **Grantor's Authority and Signatory Authorization to convey the property rights**
18. **Grantee's Authority and Signatory Authorization to accept the property rights**
19. **Pro Forma Title Insurance Policy**
20. **Draft Escrow Instructions**

### STAGE 3: Property Protection and Closing Documentation

21. **Digital Closing Package**
22. **Final Long-Term Management Plan and Endowment Agreement**

## DOCUMENT PROCESS DETAILS

### STAGE 1: Property Eligibility Review

1. **Biological Report:** Describe the baseline conditions of biological resources on the proposed property, such as historical and current land use, vegetation communities, invasive plant or animal species, soil types, presence of water features such as streams or wetlands, habitats of special status and common species, observations of special status species, any species survey results, and any development on the property or other threats to biological resources. Specifically provide details regarding baseline conditions of the habitat and population of the target species (e.g., Covered Species in the incidental take permit) or other target resource (e.g., riparian habitat) and how the property would benefit the conservation of the target species or other resource.
2. **Habitat Mitigation Land Title Information:** Complete the [form provided](#) by CDFW. Return the information to the CDFW regional office that serves the project area. Include a copy of all unrecorded documents and/or interests affecting title (e.g., contract, lease, license, prescriptive easement, etc.).
3. **Preliminary Title Report (PTR) Including Plottable Easement Maps:** Dated within 90 days of submission. All encumbrance documents affecting title as described in the PTR (Exceptions) must have an active hyperlink, including a link to the assessor's parcel map, vesting deed, and all supporting documents embedded in the legal description(s) of the entire property. Each document affecting title must be provided in a separate PDF document and labeled by the recording number (i.e., Instrument or Document # [number] or Book [number] Page [number]). Work with CDFW regional staff to submit files electronically using a file transfer protocol (FTP) or similar site to download each file for transfer to regional staff. Also, request from the title provider an plottable easement maps on title.
4. **Keyhole Markup Zip compressed (KMZ) Placement File of Assessor's Parcel(s):** Data associated with the spatial features should include assessor parcel number(s) (APN) and project name. Identify layer as either property boundary/parcel or, if a portion of the property, the easement area.
5. **Phase I Environmental Site Assessment Report:** Refer to the CDFW [Phase I Reference](#) for important information on expired and stale reports.
6. **Mineral Risk Assessment Report (if mineral rights have been severed):** If any of the mineral rights associated with the property have been granted, transferred, abandoned, reserved, or relinquished, a Mineral Risk Assessment Report, prepared by a California licensed geologist (stamped and signed), that includes a "mineral remoteness opinion" is requested to assess the minerals present on or under the property and to determine the probability, or potential for future development.
7. **Grantor Business Verification Documentation:** Entities that wish to conduct business in California must be validly formed, registered to do business, and in good standing with the California Secretary of State's Office. Please provide a copy of the [California Certificate of Good](#)

[Standing from the Secretary of State.](#)

**8. Items Completed by CDFW:**

- a) Site Visit. CDFW regional staff will conduct a site visit to evaluate property eligibility, including acreage and biological suitability. Items 1-6 are used to inform the site visit. CDFW regional staff will submit documentation of the site visit to the ROW agent.
- b) Appendix D. Completed with input from the Mineral Risk Assessment Report, if applicable.

**If CDFW determines the property is eligible, regional staff will notify the Permittee in writing that it may proceed to Stage 2.**

## STAGE 2: Property Acceptance Review

9. **Land Survey Products:** See the [Land Survey Reference Guide](#) for list, descriptions, and details.
10. **Draft Legal Access Easement or Documented Evidence of Existing Legal Access:** Provide information describing legal access to the HM Land in the form of a narrative and simple map. If no legal access has been given, provide a draft Access Agreement and explanation and map of the route that will be taken once legal access is recorded. Please submit with the Land Survey Products described in Item 9. *Note: A Draft Access Agreement will be reviewed by CDFW legal counsel.*
11. **UPDATED Phase I Environmental Site Assessment Report:** Refer to the CDFW [Phase I Reference](#) for important information on expired and stale reports. If requested by CDFW, provide either a new or updated Phase 1 Environmental Site Assessment Report.
12. **(A) DRAFT Grant Deed with Exhibit(s):** Applies when fee title will be granted to CDFW/the State. Contact CDFW for grant deed sample (MS Word). See the [Land Survey Reference Guide](#) regarding the exhibits.
  - Exhibit A – Legal Description and Plat Map of Subject Property: See the Land Survey Reference Guide for list, descriptions, and details.

OR

- (B) DRAFT Conservation Easement Deed with Exhibit(s):** Applies when a conservation easement will be granted. Contact CDFW for conservation easement sample; use Microsoft Word track changes (redline) to show any changes to the sample. If the DRAFT conservation easement deviates from the sample, CDFW legal counsel will need to review it. Provide CDFW digital copies of all documents referenced in the draft conservation easement deed (e.g., Long-Term Management Plan). See the [Land Survey Reference Guide](#) regarding the exhibits.
  - Exhibits A and A-1 – Legal Description and Plat Map of Entire Property: See the [Land Survey Reference Guide](#) for list, descriptions, and details (approved by HCPB Surveyor).
  - Exhibits B and B-1 – Legal Description(s) and Plat Map(s) of Conservation Easement Area (only applicable if a portion of the entire property): See the [Land Survey Reference Guide](#) for list, descriptions, and details approved by HCPB Surveyor.
13. **Checklist for Entities being Considered to Hold Conservation Easements or Manage and Steward Mitigation Land (Due Diligence):** Government Code section 65967, subdivision (c) requires a state or local agency to exercise due diligence when approving governmental entities, special districts, and non-profit organizations proposed to hold conservation easements or

Permittee Checklist: Habitat Mitigation Land Property Analysis and Protection

Last Update: July 2025

manage and steward mitigation lands. CDFW regional staff will review the qualifications of the entity(ies) proposed on a project-by-project basis. Because this determination is made on a project-by-project basis, CDFW may provide a checklist to entities proposed to hold conservation easements or manage and steward mitigation lands requesting a list of documents to review the entity's qualifications. Document requests are based on (among other things) the entity type, previous submittals, and property specific information. For more information, see CDFW's [Endowments and Mitigation Land Management website](#).

- 14. Draft Subordination Agreement(s):** May be applicable when there is a lien, mortgage, encumbrance, or other interest affecting title that may conflict or otherwise be inconsistent with the conservation easement. *Note: Draft subordination agreements must be reviewed by CDFW legal counsel.*
- 15. Draft Management Plan (e.g., Interim & Long-Term Management Plan):** Include applicable restoration, interim, and long-term management plans required by the permit that follow example(s) or other guidance provided by CDFW. Interim and long-term management plans must include monitoring and management actions of the target species and its habitat or other resources to ensure continued existence on the property in perpetuity. CDFW has a [Habitat Mitigation Land Management Plan Template](#) which permittees are encouraged to use. The long-term management plan must include an endowment assessment (similar to a Property Analysis Record (PAR)) to calculate the funding necessary to ensure the long-term management of the lands. When CDFW assumes the role of the grantee of a conservation easement, the Permittee must also provide a monitoring endowment assessment calculating the funding necessary to ensure in-perpetuity monitoring of the conservation easement.
- 16. Updated Preliminary Title Report:** If the latest preliminary title report is older than 12 months, CDFW may request updates throughout Stage 2 analysis.
- 17. Grantor's Authority and Signatory Authorization to transfer the property rights:** Written documentation (e.g., written consent or board resolution) verifying the grantor's authority to convey the property interest and designating the authorized signatory for all project documents. If the grantor is an individual person or family trust, authorization will be verified by the title or escrow company/provider (see Item 2 above).
- 18. Grantee's Authority and Signatory Authorization to accept the property rights.** Written documentation (e.g., board resolution from the land trust) verifying the grantee's authority to accept the property interest and designating the authorized signatory for all real estate documents.
- 19. Pro Forma Title Insurance Policy:** Pro forma (draft) title insurance policy with legal description(s) of the property interest to be insured and the name(s) of the grantee to be the insured. Legal descriptions in the pro forma should be consistent with the CDFW senior land surveyor-approved exhibit(s).
- 20. Draft Escrow Instructions:** To be reviewed by CDFW ROW agent before the close of escrow. Instructions should include instructions to the title or escrow officer to record all negotiated documents, e.g., conservation easement or grant deed, and any other ancillary documents (subordination agreement, access agreement, etc., transfer any monies, obtain title insurance

Permittee Checklist: Habitat Mitigation Land Property Analysis and Protection

Last Update: July 2025

and to email a digital closing package, including digital copies of all recorded documents, closing statement, and a copy of the title policy (when available) to the CDFW regional staff and CDFW ROW agent. When CDFW is grantee, contact CDFW ROW agent regarding escrow instructions.

After the analysis of all the above-described Stage 2 documents has been completed, the ROW agent will provide regional staff with an internal recommendation for recording. The regional staff will conduct other internal approvals, and when completed, if they determine the property is accepted, regional staff will provide the Permittee a formal approval to move forward with the recording of all necessary documents, e.g., Conservation Easement, and any other necessary documents (Access Agreement, Subordination Agreement, etc.), purchase title insurance, and/or transfer endowments in escrow. In some cases, wherein no monies will transfer, a Title Company officer may conduct the recording.

### STAGE 3: Closing Property Protection Documentation

- 21. Digital Closing Package:** Once the real estate transaction has been recorded, the title or escrow provider will provide regional staff and the ROW agent a Digital Closing Package that includes digital copies of all recorded documents, settlement/closing statement, and when available, a copy of the title insurance policy via email to regional project manager and MPDA ROW agent
- 22. Final Long-Term Management Plan and Endowment Agreement:** Submit electronically to CDFW regional office. Please note that the Final Long-Term Management Plan should be approved before recording the conservation easement.

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	

<b>4. AGREEMENT/ACCOUNT INFORMATION:</b> (check the applicable type)  <input type="checkbox"/> 2081 Permit <input type="checkbox"/> Conservation Bank <input type="checkbox"/> 2835 NCCP <input type="checkbox"/> 1802 Agreement <input type="checkbox"/> 1600 Agreement <input type="checkbox"/> 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)

## Attachment 6

[http://www.nwhc.usgs.gov/publications/amphibian\\_research\\_procedures/handling\\_and\\_restraint.jsp](http://www.nwhc.usgs.gov/publications/amphibian_research_procedures/handling_and_restraint.jsp)

### Restraint and Handling of Live Amphibians

#### STANDARD OPERATING PROCEDURE

ARMI SOP No. 100

Revised, 16 February 2001

- I. PURPOSE: Provide guidelines for humane handling of amphibians so that injury and distress to the amphibian are minimized.
- II. SCOPE: These guidelines apply to larvae and tadpoles, as well as adult frogs, toads, salamanders and neotenes. Because of their anatomically different and very delicate skin, tadpoles and larvae must be handled differently than post-metamorphic amphibians.
- III. EQUIPMENT and SUPPLIES.
  - A. Standard capture equipment (seine nets, dip nets, minnow traps)
  - B. Clear plastic bags (half liter or full liter size)
- IV. BACKGROUND: There are three main hazards associated with handling live amphibians: two to the amphibian and one to the handler. To amphibians, the main dangers of being handled are skin damage that could result in secondary skin infections, and bone and muscle injuries caused by struggling when being held. For the handler, the main danger comes from toxic skin secretions produced by some amphibians (in the USA, this is mostly newts and the introduced giant/marine toad). Tadpoles and larvae have thin delicate skin that is very easily damaged by the slightest handling. The skin of larvae lacks keratin and has fewer cell layers than adult amphibian skin. Therefore, direct contact handling of tadpoles and larvae is to be avoided; instead, these amphibian stages are examined through clear flexible plastic bags containing water. Although the skin of adult (post-metamorphic) amphibians has keratin and is less delicate than larval skin, their skin is still much more delicate than the skin of reptiles, birds and mammals. Rough handling of adult amphibians can easily result in skin abrasions, small tears, punctures, erosions and ulcers; normally, minor skin wounds heal quickly, but if contaminants, sewage or high levels of microorganisms are present in the pond or other environment, then wound infections are possible.  
Frogs and Toads. All amphibians can be expected to struggle following capture. For anurans, there is a danger that vigorous kicking with the hindlimbs can cause joint dislocations or a broken (fractured) back; broken backs are a well-documented and major problem in another species that moves by hopping---rabbits. Therefore, proper

restraint of anurans, first and foremost involves inhibiting their ability to kick. Salamanders. For salamanders, there are three major dangers associated with handling: 1) loss (automizing) of the tail, 2) damage to the very delicate external gills (in neotenes), and 3) back injury during whip-like thrashing movements.

#### V. METHODS OF PHYSICAL RESTRAINT:

- A. Anurans. Medium and large size frogs and toads (those about 5 grams and larger) should be grasped around the waist with the hindlimbs fully extended. The animal should not be allowed to bend (flex) its hip and knee joints, since this would allow it to kick.
- B. Caudates. Medium and large size salamanders (those about 5 grams and larger) should be grasped in the middle of the body between the forelimbs and hindlimbs. Larval and neotenic salamanders should never be grasped around the head or neck, because the gills can be easily damaged. Under no circumstances should salamanders be grasped by the tail or picked up by the tail.
- C. Larvae. All larvae (including tadpoles) should be handled with nets or scoops. For examinations, the larvae should be placed in a clear plastic bag with a mild amount of water. Alternatively, larvae may be sedated with an anesthetic and examined in a dish or bowl of water. As much as possible, larvae should be examined only while they are in water. Larvae should not be grasped with bare hands.

#### VI. MISHAPS.

- A. Skin wounds: If an amphibian suffers a skin wound during handling, it is recommended that the wound be sprayed with the over-the-counter product, Bactine® (See the SOP on Toe Clipping of Frogs and Toads, NWHC ACUC Protocol 2001-004). All other topical antiseptics and disinfectants (sprays and ointments) are CONTRAINDICATED in amphibians. If possible, the animal should then be released on land rather than into water, since the antiseptic spray would be quickly washed off in water.
- B. Broken back: If a frog or toads suffers a broken back during capture or handling, it should be promptly euthanized. It would be inhumane to release such a crippled animal. An animal with a broken back will have serious damage to the spinal cord and should show almost immediate paralysis of the hindlimbs and tail. Recommended methods of humane euthanasia include (see NWHC ACUC Protocol 1999-009, Methods of Euthanasia):
  - 1. Pithing
  - 2. Overdosing in anesthetic solutions of MS222 or benzocaine



3. Application of a benzocaine-based topical ointment (as used by humans to relieve tooth-aches) to the top of the head and dorsum of the body.
- 
- C. Broken leg: If a major bone of a limb is broken during capture or handling, the animal should be euthanized or taken to a wildlife rehabilitation center or veterinarian for treatment. A broken leg bone typically is recognized as an abnormal bend in the leg where there is no joint; other signs of a broken leg bone are protrusion of a bone fragment through the skin, inability of the animal to move a limb or position a leg in its normal resting posture. After treatment, amphibians with broken bones might be given to a zoo or placed in a captive breeding program. Only if the injured amphibian is kept isolated from all other fish, amphibians and reptiles (eg, in a separate cage) during treatment, can it later be considered for release at the point of capture. Injuries to digits (toes and fingers) generally are not life-threatening; if the skin of the injured toe also is wounded, then treatment with Bactine® prior to immediate release is acceptable. If a toe bone is broken and protruding through the skin, the affected toe may be amputated just proximal to the site of the fracture, the stump should be sprayed with Bactine®, and the animal may be released.
  - D. Automized tail: If a salamander automizes (detaches) its tail during capture or handling, the stump should be treated (sprayed) with Bactine®; the salamander can then be promptly released.
  - E. Crushing injuries to head and body. Amphibians that have serious injuries to skin, muscles and bones should be promptly euthanized. Crushing injuries that are limited to a limb or tail will require treatment at a wildlife rehabilitation center or a veterinary clinic; alternatively, the animal may be euthanized, but it would be inhumane to release a seriously injured amphibian.
  - F. Snout abrasions. Amphibians that are held in glass or clear plastic containers may jump head-first into the glass, or may rub their snout against the container in attempts to burrow out. If amphibians are held for more than an hour in a clear container (bottle, aquarium, etc), they should be examined for evidence of skin injury at the tip of the snout and elsewhere around the head prior to release. If abrasions are detected, they should be sprayed with Bactine® prior to release.
  - G. Toxic skin secretions. All amphibians have glands in their skin that secrete a vast number of chemicals; some of which are merely noxious and repellent-like, while others may cause skin or eye irritation, and some may actually kill. The poison-dart frogs of Central America are an example of a frog with toxic secretions that can kill a human. Among the native amphibians of the United

States, the two amphibians of greatest concern are giant toads (also called cane toads, marine toads, aka toads; *Bufo marinus*) and western newts of the genus, *Taricha*.

Giant toads secrete a potent white mucoid substance from their parotid glands (large warts just behind the eyes) that affects the heart, but it is not absorbed through the intact human skin; however, the toxin is readily absorbed through the eyes and mouth. Hence, the best way to prevent poisoning is to carefully avoid rubbing the eyes or putting fingers in the mouth after handling a giant toad. If skin secretions of giant toads contact the eye or mouth, then flush promptly with generous amounts of clean fresh water or contact lens wetting solution, and then seek emergency care at a clinic or hospital if stinging or numbness of the eye or mouth develops.

Newts of the genus, *Taricha*, also secrete toxins from their skin; it is presumed that the entire body of these newts secretes toxins (newts and other salamanders do not have parotid glands). Their skin secretions are very irritating to the eyes and mouth. Temporary blindness (lasting about 24 hrs) has been reported by field biologists that handled newts and then rubbed their eyes. If sensations of blurred vision, or burning or stinging of the eyes occur after handling any genus or species of newt, wash the eyes with copious amounts of fresh clean water (or contact lens wetting solutions) and promptly seek medical care. Persons with newt skin secretions in their eyes are advised not to drive a vehicle or operate other dangerous or heavy equipment.

Finally, it is possible that other amphibian species in the USA besides giant toads and newts, could produce skin secretions that are irritants to the eyes. Furthermore, amphibians may carry some bacteria in their intestines and feces that are human pathogens, such as the bacteria, *Salmonella* and *Leptospira*. Hence, it is always best to practice good personal hygiene after handling any amphibian (namely, thoroughly wash your hands with soap and water).

#### VII. CITED LITERATURE:

1. MARTIN, D., and H. HONG. 1991. The use of Bactine® in the treatment of open wounds and other lesions in captive anurans. *Herpetol Rev* 22: 21.