



State of California – Natural Resources Agency

DEPARTMENT OF FISH AND WILDLIFE

Bay Delta Region

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[www.wildlife.ca.gov](http://www.wildlife.ca.gov)**GAVIN NEWSOM, Governor****CHARLTON H. BONHAM, Director**

October 30, 2020

Mr. Andrew Young, Planner

Alameda County Community Development Department

224 West Winton, Room 111

Hayward, CA 94544

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Subject: Aramis Solar Energy Generation and Storage Project, Draft Environmental Impact Report, SCH No. 2020059008, Alameda County

Dear Mr. Young:

The California Department of Fish and Wildlife (CDFW) has reviewed the draft Environmental Impact Report (EIR) for Aramis Solar Energy Generation and Storage Project (Project). The Project is an application for a Conditional Use Permit (CUP) to allow construction of a solar energy production (up to 100 megawatts, or MW) facility with associated battery storage using photovoltaic panels over a mostly contiguous 533-acre site (of which 350 acres would be developed as part of the Project). The purpose of the draft EIR will be to evaluate the specific environmental effects of the Project as proposed by IP Aramis, LLC, a subsidiary of Intersect Power, LLC (Aramis).

CDFW previously submitted comments, in a letter dated May 27, 2020, on the Notice of Preparation (NOP) to inform Alameda County (County), as the Lead Agency, of our concerns regarding potentially significant impacts to sensitive resources associated with the proposed Project. CDFW is providing these additional comments and recommendations on the draft EIR regarding those activities involved in the Project that are within CDFW's area of expertise and relevant to its statutory responsibilities (Fish and Game Code, § 1802), and/or which are required to be approved by CDFW (California Environmental Quality Act (CEQA) Guidelines, §§ 15086, 15096 and 15204).

### **CDFW ROLE**

CDFW is a Trustee Agency with responsibility under CEQA (Pub. Resources Code, § 21000 et seq.) pursuant to CEQA Guidelines section 15386 for commenting on projects that could impact fish, plant, and wildlife resources. CDFW is also considered a Responsible Agency if a project would require discretionary approval, such as a California Endangered Species Act (CESA) Permit, a Lake and Streambed Alteration (LSA) Agreement, or other provisions of the Fish and Game Code that afford protection to the state's fish and wildlife trust resources.

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## **REGULATORY REQUIREMENTS**

### **California Endangered Species Act**

Please be advised that a CESA Permit must be obtained if the Project has the potential to result in “take” of plants or animals listed under CESA, either during construction or over the life of the Project. Issuance of a CESA Permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially restrict the range or reduce the population of a threatened or endangered species. (Pub. Resources Code, §§ 21001, subd. (c), 21083; CEQA Guidelines, §§ 15380, 15064, and 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency’s FOC does not eliminate the Project proponent’s obligation to comply with Fish and Game Code section 2080.

### **Lake and Streambed Alteration**

CDFW requires an LSA Notification, pursuant to Fish and Game Code section 1600 et. seq., for Project activities affecting lakes or streams. Notification is required for any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank; or deposit or dispose of material where it may pass into a river, lake or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. CDFW will consider the CEQA document for the Project and may issue a LSA Agreement. CDFW may not execute the final LSA Agreement (or Incidental Take Permit) until it has complied with CEQA as a Responsible Agency.

## **PROJECT DESCRIPTION SUMMARY**

**Proponent:** IP Aramis, LLC, a subsidiary of Intersect Power, LLC.

**Description and Location:** The Project includes construction and operation of a mixed-use renewable energy project using photovoltaic (PV) panels capable of generating, storing, and dispatching clean energy on up to 410 acres located in unincorporated Alameda County in the North Livermore area, approximately 2.25 miles north of the Livermore city limits and Interstate 580. The site is composed of large portions of four privately-owned parcels.

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According to the draft EIR, Aramis has designed the facility such that all structures are proposed to be placed outside of the 100-year floodplain of Cayetano Creek as determined through hydrologic modeling, outside areas designated Water Management in the East County Area Plan, and no closer than 50 feet from the banks of Cayetano Creek or its tributaries as determined by a qualified biologist.

The draft EIR also states that Aramis proposes, as a part of the large parcel subdivision, to offer dedication of an easement to Alameda County (or the Livermore Parks and Recreation District, which manages open space and trail development in conjunction with the East Bay Regional Parks District) for use as a public hiking trail along Cayetano Creek outside of the Project's development footprint.

The draft EIR states the individual PV modules would be arranged in rows onto a single-axis tracker racking system, which would in turn be affixed to steel piles. Each row (or array) would track the sun during the day, from east to west, to optimize power generation of the facility. The arrays would be connected by low-voltage underground or above-ground electrical wiring to a central inverter station or to string inverters located throughout the facility.

## **COMMENTS AND RECOMMENDATIONS**

CDFW offers the below comments and recommendations to assist the County in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources.

### **Project Description**

The draft EIR, section 3.4, describes Project components which include access roads, parking lots, staging areas, detention basins, fencing, water storage tanks, and building structure foundations that would exist for the life of the Project (approximately 50 years). Section 3.5 briefly describes Project construction including site preparation, installation of interconnection facilities and battery storage system, cable installation, pile and skid installation, tracker and module installation, and lastly, site cleanup. Project construction also includes excavation activities, trenching, and boring.

CDFW considers impacts resulting from the Project facility components as permanent because they are direct impacts that permanently affect the land cover for more than one year. Temporary impacts, such as initial site grading, are associated with activities that allow for restoration of the site to pre-Project conditions or better within the same year. The EIR should therefore describe both permanent and temporary impacts to habitat used by special-status species such as the federally threatened and State Species of Special Concern California red-legged frog (*Rana draytonii*), the federally and State threatened California tiger salamander (*Ambystoma californiense*); grassland birds such as State Species of Special Concern western burrowing owl (*Athene*

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*cunicularia*), State Species of Special Concern northern harrier (*Circus cyaneus*), western meadowlark (*Sturnella neglecta*), and horned lark (*Eremophila alpestris praticola*); and mammals such as the federally endangered and State threatened San Joaquin kit fox (*Vulpes macrotis mutica*), and the State Species of Special Concern American badger (*Taxidea taxus*).

Section 3.9, *Required Permits and Approvals*, should include a requirement for the Project proponent to obtain state and federal incidental take permits prior to the start of construction.

As discussed in the CDFW comment letter for the NOP, the Project site is located within the Conservation Zone 4 of the Eastern Alameda Conservation Strategy (EACCS). The EACCS mitigation guidance sections (Chapter 3) for grassland, California tiger salamander, western burrowing owl, California red-legged frog, San Joaquin kit fox, and American badger all include mitigation in the form of habitat conservation for the loss of species habitat when it cannot be avoided. To be consistent with the EACCS and to offset permanent habitat loss or conversion, the EIR should include permanent habitat conservation as an enforceable mitigation measure. The draft EIR acknowledges that the site provides upland habitat for both California red-legged frog and California tiger salamander but does not analyze the permanent and temporary impacts associated with the Project and concludes, incorrectly, on p. 4.4-50 and throughout the document, that because grassland would be “preserved” on site under the panels that no compensatory mitigation is necessary. Since the draft EIR does not provide sufficient details on the distance between PV panels, it is very difficult for CDFW to determine whether the gaps between panels could provide any wildlife habitat value.

The draft EIR also states no compensatory mitigation is required for loss of foraging habitat for birds due to the abundance of more suitable and higher quality foraging habitat in the region and continued availability of foraging habitat at the site between the solar panels. As stated above, the draft EIR does not provide any details on the distance between PV panels and does not provide sufficient information to assess the quantity or quality of foraging habitat for birds and other wildlife that would remain as a result of implementation of the Project.

CDFW, therefore, recommends that the EIR include an accurate and thorough description of the solar facility’s infrastructure, including the distance between PV panels and other pertinent information in order to accurately assess the potential impacts of the Project on special-status species and their habitats. Please be advised that even if fairly large gaps existed between panels, any wildlife habitat remaining post-Project construction would be severely compromised and likely of marginal value to special-status species and other species expected or known to occupy or forage within the Project area (DeVault, et.al. 2014). Therefore, the EIR should fully and accurately evaluate the Project’s permanent or temporary impacts to foraging habitat for birds and

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other wildlife and include sufficient compensatory mitigation to offset all impacts that cannot be completely avoided.

#### **Section 4.4 Biological Resources**

The draft EIR, p. 4.4-1, acknowledges that the Project involves substantial changes to the site conditions that would adversely affect its habitat characteristics and, therefore, a broad range of environmental and species and habitat protection laws, policies, programs and regulations apply to the Project, yet the draft EIR provides very little, if any, compensatory mitigation. CDFW provides more specific comments below:

##### *Native Pollinators*

As noted in our CDFW NOP comment letter, the California Fish and Game Commission accepted a petition to list the western bumble bee (*Bombus occidentalis occidentalis*) as endangered under CESA, determining the listing “may be warranted” and advancing the species to the candidacy stage of the CESA listing process. Due to the scale of the proposed Project and the environmental setting, CDFW believes that the Project has potential to substantially reduce and adversely modify habitat for the western bumble bee, reduce and potentially seriously impair the viability of populations of the western bumble bee, and reduce the number and range of the species. Implementation of the Project will also likely result in impacts to the bumblebee and other special-status species found on adjacent and nearby natural lands that rely upon the habitat that occurs on the proposed Project site.

CDFW recommends that, due to suitable habitat present within the Project area, within one year prior to vegetation removal and/or grading, a qualified entomologist familiar with the species behavior and life history should conduct surveys to determine the presence/absence of the western bumble bee. Surveys should be conducted during the flying season when the species is most likely to be detected above ground which is between February 1 to November 30 (Thorp *et al.* 1983). Survey results including negative findings should be submitted to CDFW prior to initiation of Project activities. If “take” or adverse impacts to western bumble bee cannot be completely avoided either during Project activities or over the life of the Project, the Project proponent must consult with CDFW to determine if a CESA Incidental Take Permit is required (pursuant to Fish and Game Code, § 2080 et seq.).

##### *Permanent Fencing*

Please be advised that the proposed permanent fencing described as 7 feet high with wood posts and 4-square-inch wire mesh (note: the plans in Appendix C show 6-foot high wire mesh with one-foot high barbed-wire above the wire mesh) will exclude mammals such as the federally endangered and State threatened San Joaquin kit fox, and the State Species of Special Concern American badger unless the fencing plan

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includes raised areas or gaps as described on page 4.4-65. In addition, fences can have negative long-term impacts on a variety of other wildlife. For example, a fence can obstruct the natural migration and daily movements of wildlife such as deer and the consequences of disrupting these movements should be considered in fencing design (VerCauteren *et al.* 2006). In addition, deer occasionally become entangled in fences or collide with them when attempting to pass over, through, or under (Goddard *et al.* 2001). Some fences, especially wire mesh, can be a complete barrier to fawns, even if adults can still jump over. This can lead to fawns becoming separated from their mothers and the herd resulting in the fawns killed by predators, vehicle collisions, or starvation (Hanophy 2009).

Birds can also collide with fences, breaking wings and tangling in wires. Large, low-flying birds such as ducks, geese, hawks, and owls are especially vulnerable to collisions with fencing. For example, the American kestrel (*Falco sparverius*) and low-flying hawks and owls may collide with fences when swooping in on prey (Bryant *et al.* 1993). Fencing can be made more visible to birds by attaching reflective or colorful weather-resistant flagging materials (e.g., aluminum or plastic strips) to the wire.

The EIR should analyze the potential impacts to birds and mammals caused by the proposed fencing and describe alternative wildlife-friendly designs that will be implemented. The EIR should also include effective minimization and mitigation measures to offset any impacts of fencing to wildlife species that cannot feasibly be completely avoided.

#### *Bio-retention basins*

The draft EIR on p. 3-5 states the proposed Project includes the construction of two stormwater detention basins to prevent the discharge of off-site stormwater runoff and to protect downstream properties. A narrow, linear stormwater detention basin totaling approximately 0.4-acre in size is proposed in the southeastern corner of the central section of the Project site along Hartman Road and terminating at North Livermore Avenue. An additional approximately 0.5-acre stormwater detention basin is proposed along the southern boundary of the southwestern section of the Project site.

Please be advised that artificial water bodies such as lakes, reservoirs, ornamental ponds, and bioretention basins can create an attractive nuisance for both California tiger salamanders and California red-legged frogs. California tiger salamanders and California red-legged frogs have been documented to breed, or attempt to breed, in these aquatic features. This can result in amphibians becoming trapped or cause desiccation of eggs, larvae or adults and can be considered a form of "take." The EIR should analyze the potential impacts to amphibians caused by the proposed bio-retention basins and describe and implement bio-retention designs that avoid amphibian entrapment. The EIR should also include effective minimization and mitigation

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measures to offset any impacts of any newly constructed hydrological features to amphibian species that cannot feasibly be completely avoided.

### *Plants*

Botanical surveys described on p. 4.4-13 were conducted in compliance with the *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities*, dated May 8, 2000. These guidelines have been superseded twice since 2000. The current protocol, *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities* (March 2018), replaces both the May 8, 2000 guidelines and *the Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (November 24, 2009). While use of the protocols is not mandated under code or regulation, the purpose of the protocols is to facilitate a consistent and systematic approach to botanical field surveys and assessments of special-status plants and sensitive natural communities so that reliable information is produced and the potential for locating special-status plants and sensitive natural communities is maximized; therefore, CDFW highly recommends using the most recent version.

### **Mitigation Measures**

#### *BIO-2 California tiger salamander*

The draft EIR BIO-2a requires pre-construction surveys for California tiger salamander and California red-legged frog “if construction commences during the wet season and active dispersal period for these species (between approximately October 16 and May 14, depending on the precipitation year).” The pre-construction surveys would “cover all aquatic habitat on and immediately adjacent to the Project site” that is suitable for dispersal.

CDFW considers BIO-2a to be highly inadequate to detect California tiger salamander for several reasons. First, California tiger salamanders spend much of their lives in underground retreats, often in burrowing mammal (ground squirrel, pocket gopher, and other burrowing mammal) burrows (U.S. Fish and Wildlife Service (USFWS) 2004). California tiger salamanders are only known to be active on the surface of the terrestrial habitat 1) during juvenile dispersal into the uplands and adult breeding during fall and winter rain events and 2) when metamorphs emerge from the pond in the spring and summer (Searcy and Shaffer 2011). Salamanders migrate and disperse over land (there is no evidence that they rely on aquatic habitat for dispersal) to and from breeding habitat. This is not a mass “one night” migration event but occurs over several months during both movement periods described above. Based on their life history, it is highly unlikely any salamanders would be found during this type of pre-construction surveys unless the surveys included actions such as, burrow excavation, pitfall traps and drift

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fencing over multiple seasons, as authorized under CESA. Further, immature salamanders may not migrate to a breeding pond and instead remain in the upland until they are sexually mature, which could be between 3-5 years, so they would be undetected in a pre-construction survey. Searcy and Shaffer 2011 used 15,212 capture events to estimate that 95% of California tiger salamanders are within 1867 meters (6125 feet) of their breeding pond. The Project site is within 1867 meters from at least six known or potential breeding ponds, so it is highly likely that California tiger salamanders are dispersed throughout the entire Project site. The EIR should therefore assume presence of California tiger salamander over the entire Project site and should require that the Project proponent obtain both federal and state take permits and provide compensatory mitigation for impacts to this species.

BIO-2b requires that CDFW and USFWS be notified within 48 hours if any life stages of California red-legged frog or California tiger salamander are found during surveys or construction monitoring. Biologists are required to monitor the amphibians to make sure they leave the site on their own. CDFW does not consider BIO-2b to be feasible. The Project site encompasses 410 acres over which a majority, if not all, is considered suitable habitat for these species. It is not likely a California tiger salamander or California red-legged frog would leave the site on its own unless they are migrating to a breeding site. Eggs and tadpoles would remain within breeding habitat for several months. BIO-2b, and other measures, note that handling of a listed species without a take permit pursuant to the federal ESA is not allowed, but fail to acknowledge that take, including moving out of harm's way, of a state-listed species, such as California tiger salamander, is also prohibited without a take permit pursuant to CESA.

BIO 2c limits construction and decommissioning within 200 feet of the stream channels to between May 15 and October 15. CDFW does not consider allowing work within 200 feet of a stream channel during the "dry season" as an adequate minimization or avoidance measure for either California tiger salamander or California red-legged frog since both species are known to disperse beyond 200 feet of aquatic habitat. As stated above, the EIR should assume presence of California tiger salamander (and California red-legged frog) over the entire Project site and should require, as a condition of approval in the EIR, that the Project proponent obtain federal and state take permits and provide compensatory mitigation for impacts to special-status species.

BIO-2d requires work within 200 feet of a stream channel to be limited to daylight hours to avoid impacts to California tiger salamander or California red-legged frog. California tiger salamander habitat is not limited to within 200 feet of a stream channel. California tiger salamanders have been documented breeding in slow-moving streams on rare occasions, but more commonly breed in vernal pools and stock ponds such as those found on adjacent sites. Since California tiger salamanders are known to be able to travel 1.3 miles from upland habitat to breeding ponds (and as described in our NOP

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comment letter), a more appropriate measure to minimize impacts would be limiting work within 1.3 miles of a potential breeding pond to daylight hours.

BIO-2f requires temporary exclusion fencing to be installed prior to October 15 to prevent any California tiger salamander or California red-legged frog from entering the Project site. Please be advised that installing fencing around the Project site could be a form of "take" if California tiger salamanders are present on-site. Improperly designed or installed exclusion fencing can result in tiger salamanders or red-legged frogs becoming trapped along the either side of the fence-line causing desiccation or predation. Any action that could cause take of California tiger salamander (such as trapping within an exclusion fence) must be authorized under appropriate federal and state permits. Any similar action that could cause take of California red-legged frogs must be authorized under appropriate federal permits.

BIO-2g requires a qualified biologist as defined by USFWS to survey the Project site prior to installation of temporary exclusion fencing and prior to construction. BIO-2g is inadequate as explained in BIO-2a and BIO-2b above.

BIO-2h requires a biologist to be on-site daily; however, daily monitoring can be reduced to weekly inspections at the discretion of the biological monitor once site grading has been completed "and no habitat/refugia is present for CRLF or CTS on the site." This measure implies the entire 410 acres of potential habitat will be removed during construction, which should be considered a significant impact and compensatory mitigation should be required. BIO-2h also requires scoping of burrows, which can be considered a form of "take" and should only be conducted under authorization from the proper permits. The last bullet under BIO-2h requires that, "[A] permitted biologist...be contracted to trap and move CRLF and CTS to nearby suitable habitat if they are found inside the project area and do not leave the project site of their own accord." CDFW is very concerned with such statements in the draft EIR especially given overall guidance on CESA was provided in the NOP letter for this Project. CDFW is also available to provide in-depth guidance on the CESA process on a pre-consultation basis. Moving state and federally listed species out of harm's way is considered a form of "take" and can only be authorized by an Incidental Take Permit. An Incidental Take Permit issued by CDFW allows an exception to the take prohibition in CESA if a permittee implements certain conditions of approval specified by CDFW that meet the standards for issuance. A "permitted biologist" can only use their state and federal permits for take as part of activities intended to foster the recovery of listed species (i.e., scientific research).

BIO-2j and BIO-2o require use of erosion control such as hay bales. Hay bales should not be used because hay can introduce non-indigenous seeds. Straw, made up of grassy stems, is usually the second cutting after the seed heads have been harvested for hay. Straw bales should be used in conjunction with other erosion control material.

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BIO-2q requires steep walled holes or trenches more than one foot deep to be covered at the close of each working day to prevent entrapment of animals. It is unlikely that California tiger salamanders can climb a steep wall more than 8 inches deep. Salamanders trapped in holes or trenches are susceptible to predation, desiccation, exposure, exhaustion, and death. Escape ramps alone should not be relied upon to prevent take of listed species because they may not have the energy or ability to use the ramp. Incidental Take Permits, issued by CDFW and USFWS, typically require the on-site biologist to immediately relocate any listed species covered under the Incidental Take Permits out of harm's way.

### *BIO-3 Burrowing Owl*

BIO-3a recommends maintaining the construction area in a manner that is inhospitable to burrowing owl such as keeping the site free of vegetation, ground squirrel control in a manner that would not harm San Joaquin kit fox, and maintaining regular site disturbance by construction equipment and personnel. Since ground squirrels and burrowing owls are attracted to sites with little or no vegetation, this is not an effective measure. Planting non-viable barley or other high growing grassy plants would discourage ground squirrels from establishing burrows; therefore, this measure should be revised to be more effective.

BIO-3b through 3e recommend pre-construction surveys, passive relocation, and compensatory mitigation of six acres per breeding pair. Since burrowing owls are dependent on burrows at all times of the year for survival and/or reproduction, evicting them from nesting, roosting, and satellite burrows may lead to indirect impacts or take. Depending on the proximity and availability of alternate habitat, loss of access to burrows will likely result in varying levels of increased stress on burrowing owls and could depress reproduction, increase predation, increase energetic costs, and introduce risks posed by having to find and compete for available burrows (CDFG 2012).

The Project may therefore adversely impact burrowing owl by resulting in nest abandonment, loss of young and reduced health and vigor of chicks (resulting in reduced survival rates), permanent and/or temporary loss of nesting and foraging habitat, and breeding and foraging disturbance through Project activities. To ensure impacts to burrowing owl are mitigated to less-than-significant levels, CDFW recommends inclusion of compensatory mitigation at a minimum of a 3:1 mitigation ratio (conservation to loss) for permanent impacts to habitat, and a 1:1 ratio for temporary impacts to burrowing owl habitats. Conservation lands should be placed under a conservation easement, an endowment should be funded for managing the lands for the benefit of the conserved species in perpetuity, and a long-term management plan should be prepared and implemented by a land manager. The Grantee of the conservation easement should be an entity that has gone through the due diligence process for approval by CDFW to hold or manage conservation lands.

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*BIO-5 San Joaquin kit fox*

BIO-5 measures require consultation with and notification for USFWS. San Joaquin kit fox are state listed as well, so CDFW must also be contacted.

BIO-5c(b) and (c) require inspection of trenches, holes or pipes for trapped animals prior and notification to USFWS and CDFW if a San Joaquin kit fox is trapped or injured. Trapping or injuring a state and federal listed species could be considered a form of take and can only be authorized by Incidental Take Permits. An Incidental Take Permit issued by CDFW allows an exception to the take prohibition in CESA if a permittee implements certain conditions of approval specified by CDFW that meet the standards for issuance. BIO-5b(b) refers to measure (l) but should be measure (j). As stated elsewhere in this letter, CDFW strongly recommends that the Project proponent obtain take coverage for CESA-listed species.

BIO-5c(g) restricts the use of rodenticides, herbicides, poison baits or other substances potentially harmful to San Joaquin kit fox but later recommends the use of zinc phosphide due to a “proven” lower risk to kit fox. Neither the measure nor the Biological Resources Technical Report (Appendix E) provide a reference for this assertion. Measure BIO-7b states rodenticides shall not be used on the Project site and only raptors and non-chemical control will be used. According to [University of California, Pest Notes, Publication 74106](#), zinc phosphide is considered a rodenticide. CDFW recommends revising BIO 5c(g) to prohibit the use of rodenticides and using non-chemical control to encourage the use of raptors or non-chemical control if necessary.

BIO-5c(j) provides phone numbers for CDFW and USFWS. The CDFW contact information should be for the CDFW Bay Delta Region staff from the Regional Office located in Fairfield, California.

BIO-5d requires food-related trash to be disposed of in closed containers and removed from the site weekly. BIO-7c requires trash, including “micro-trash” to be removed “regularly” during operations. CDFW recommends revising BIO-5d and BIO-7c to include daily collection of all plastic trash, including water bottles and plastic bags.

BIO-5k requires USFWS and CDFW to be notified within three working days of a San Joaquin kit fox being killed or injured as a result of Project-related activities. USFWS and CDFW should be notified immediately if a San Joaquin kit fox is found dead or injured on the Project site or as a result of Project related activities. Specific notification requirements would also be included in Incidental Take Permits.

*BIO-7 Avian*

BIO-7f requires an Avian Monitoring Plan (AMP) to assess and monitor the potential for avian collisions with solar panels on the site. The AMP would include methods to install

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visual deterrents or cues to encourage bird avoidance of the Project site. The associated monitoring is only required for 12 consecutive weeks for three consecutive years. CDFW recommends reviewing AMPs or Bird and Bat Conservation Strategies from similar PV solar projects to develop an AMP with the best available information. For example, Walston 2016, *et.al.* recommend the following be considered when developing standardized inventory and monitoring protocols at utility-scale solar energy facilities:

- Distribution of habitat, species, and resources on the site and in adjacent areas
- Importance of
- Project area relative to local, landscape, and region
- Resident and migrant use of site and surroundings
- Seasonal patterns of use
- Daytime versus nighttime effects
- Effects of Project on resident and migratory species
- Direct, indirect, and cumulative effects
- Role of predators in carcass persistence and transport (on and off the facility)
- Use of indicator species to represent different categories of species
- Focus on statistically robust data collection rather than incidental or ad hoc reporting

CDFW recommends the AMP be provided to USFWS and CDFW for review, comment, and approval.

#### *BIO-8 Streambed Alteration*

Appendix C, Sheet 7, of the draft EIR shows an underground electrical crossing at Crossing 2. Any underground crossing, including trenching or Horizontal Directional Drill will require notification under of an LSA Agreement under Fish and Game Code section 1600 et seq.

BIO-8b requires compensatory mitigation for impacts to State and CDFW jurisdictional waters that cannot be avoided. One type of compensatory mitigation suggested is purchasing mitigation credits from an approved mitigation bank at a 1:1 ratio. Please be advised that there are currently no banks with credits available for stream impacts. Furthermore, permanent impacts to a stream require compensatory in-kind mitigation closer to 3:1 ratio in most cases.

#### *Incidental Take Permit*

As stated in this letter, due to the potential presence of CESA-listed species within and surrounding the Project area and the potential for Project-related take, including but not limited to, installation of exclusion fencing, grading, trenching, construction and operation of sediment basins and use of water trucks, CDFW advises that the Project

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proponent obtain a CESA Permit (pursuant to Fish and Game Code Section 2080 et seq.) in advance of Project implementation. Issuance of a CESA Permit is subject to CEQA documentation; therefore, the EIR should specify impacts, mitigation measures, and fully describe a mitigation, monitoring and reporting program.

Early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit. More information on the CESA permitting process can be found on the CDFW website at <https://www.wildlife.ca.gov/Conservation/CESA>.

## FILING FEES

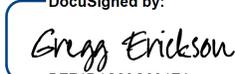
The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying Project approval to be operative, vested, and final. (Cal. Code Regs., tit. 14, § 753.5; Fish and Game Code, § 711.4; Pub. Resources Code, § 21089).

## CONCLUSION

CDFW appreciates the opportunity to comment on the draft EIR to assist the County in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Ms. Marcia Grefsrud, Environmental Scientist, at (707) 644-2812 or [Marcia.Grefsrud@wildlife.ca.gov](mailto:Marcia.Grefsrud@wildlife.ca.gov); or Ms. Brenda Blinn, Senior Environmental Scientist (Supervisory), at (707) 944-5541 or [Brenda.Blinn@wildlife.ca.gov](mailto:Brenda.Blinn@wildlife.ca.gov).

Sincerely,

DocuSigned by:  
  
BE74D4C93C604EA...  
Gregg Erickson  
Regional Manager  
Bay Delta Region

cc: Office of Planning and Research, State Clearinghouse  
Ryan Olah, U.S. Fish and Wildlife Service – [Ryan\\_Olah@fws.gov](mailto:Ryan_Olah@fws.gov)

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