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December 22, 2022

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Subject: **Bullhead Solar Project by EDF Renewables, LLC Project (Project)  
Notice of Preparation (NOP)  
State Clearinghouse No. 2022110504**

Dear Janice Mayes:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) for an Environmental Impact Report (EIR) from Kern County Planning and Natural Resources Department (Kern County), as Lead Agency, for the Bullhead Solar Project by EDF Renewables, LLC Project (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.<sup>1</sup>

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

### **CDFW ROLE**

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for

<sup>1</sup> CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

**Fully Protected Species:** CDFW has jurisdiction over fully protected species of birds, mammals, amphibians, reptiles, and fish pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. Take of any fully protected species is prohibited and CDFW cannot authorize their incidental take.

**Protected Furbearing Mammals:** CDFW has jurisdiction over furbearing mammals pursuant to Title 14, California Code of Regulations, section 460, which states "Fisher, marten, river otter, desert kit fox, and red fox may not be taken at any time". This includes all forms of take as defined in Fish and Game Code section 86. CDFW cannot authorize the take of desert kit fox.

**Nesting Birds:** CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs, and nests include 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

**Unlisted Species:** Species of plants and animals need not be officially listed as Endangered, Rare, or Threatened (E, R, or T) on any State or Federal list to be considered E, R, or T under CEQA. If a species can be shown to meet the criteria for E, R, or T, as specified in the CEQA Guidelines section 15380, CDFW recommends it be fully considered in the environmental analysis for the Project.

As a responsible agency, CDFW is responsible for providing, as available, biological expertise during public agency environmental review efforts (e.g., CEQA), focusing specifically on project activities that have the potential to adversely affect fish and

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wildlife resources. CDFW provides recommendations to identify potential impacts and possible measures to avoid or reduce those impacts.

## **PROJECT DESCRIPTION SUMMARY**

**Proponent:** EDF Renewables, LLC

**Objective:** The Project proposes to construct and operate a photovoltaic (PV) solar facility which would generate up to 270 megawatts (MW) of renewable electrical energy with a battery energy storage system (BESS) capable of storing approximately 270 MW or 1,080 megawatt-hours (MWh) of storage capacity. The proposed Project includes the installation of solar development with associated PV panels, battery storage, inverters, converters, generators, foundations, transformers, and preferred and optional generation-tie (gen-tie) routes to the Rosamond and Whirlwind Substations, only one of which would be constructed. The Project also includes laydown yards, a meteorological station, a microwave/ communication tower, and a substation.

**Location:** The proposed Project is located on approximately 1,342 acres of privately owned parcels in the southern unincorporated area of Kern County within Section 1 of Township 9 North, Range 14 West; Sections 5 and 6 of Township 9 North, Range 13 West; and Sections 31, 32, and 33 of Township 10 North, Range 13 West in the San Bernardino Base and Meridian (SBB&M). State Route (SR)-58 is approximately 12 miles southwest of the Project site and SR-138 (West Avenue D) is approximately 9 miles to the south in Los Angeles County. The Project site is located east and west of Tehachapi-Willow Springs Road, generally bounded by Favorito Avenue to the south, Champagne Avenue to the north, 105th Street West and the Big Beau Solar Project to the west, and 75th Street West to the east.

**Timeframe:** Construction would begin in the third quarter of 2024 and would extend for approximately 18 months into 2026.

## **COMMENTS AND RECOMMENDATIONS**

CDFW offers the comments and recommendations below to assist Kern County in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct, and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the Draft EIR.

Aerial imagery of the Project boundary and its surroundings show the area contains several natural habitats including creosote bush scrub, rubber rabbitbrush scrub, allscale scrub, agricultural/fallow fields, ruderal forbs, and developed/disturbed areas, all of which may have suitable habitat for special-status species. Based on a review of the Project description, a review of California Natural Diversity Database (CNDDDB) records,

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and the surrounding habitat, several special-status species could potentially be impacted by Project activities.

The Project area is within the geographic range of several special-status animal species including the State threatened Mohave ground squirrel (*Xerospermophilus mohavensis*); the State fully protected and State and federally endangered California condor (*Gymnogyps californianus*); the State fully protected golden eagle (*Aquila chrysaetos*); the State threatened Swainson's hawk (*Buteo swainsoni*); the State fully protected white-tailed kite (*Elanus leucurus*); the State and federally threatened desert tortoise (*Gopherus agassizii*); the State candidate for listing Crotch bumble bee (*Bombus crotchii*) and western Joshua tree (*Yucca brevifolia*); the State species of special concern American badger (*Taxidea taxus*); the State protected furbearing mammal desert kit fox (*Vulpes macrotis arsipus*); the State species of special concern burrowing owl (*Athene cunicularia*), pallid bat (*Antrozous pallidus*), spotted bat (*Euderma maculatum*), Tehachapi pocket mouse (*Perognathus alticola inexpectatus*), Townsend's big-eared bat (*Corynorhinus townsendii*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), western mastiff bat (*Eumops perotis californicus*), LeConte's thrasher (*Toxostoma lecontei*), loggerhead shrike (*Lanius ludovicianus*), long-eared owl (*Asio otus*), mountain plover (*Charadrius montanus*), northern harrier (*Circus hudsonius*), and California legless lizard (*Anniella pulchra*); and the Watch List species California horned lark (*Eremophila alpestris actia*) and prairie falcon (*Falco mexicanus*).

Additionally, the Project area is within the geographic range of several special status plant species including the California Rare Plant Rank (CRPR) 1B.2 alkali mariposa-lily (*Calochortus striatus*), CRPR 1B.1 Horn's milk-vetch (*Astragalus hornii* var. *hornii*), CRPR 1B.2 recurved larkspur (*Delphinium recurvatum*), CRPR 1B.1 Rosamond eriastrum (*Eriastrum rosamondense*), and CRPR 2B.2 sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*). Finally, the Project is within the geographic range of many migratory and non-migratory nesting birds.

### **Mohave Ground Squirrel (MGS)**

The Project site is near the edge of the known geographic range of MGS and historical occurrences have been documented within approximately 6.5 miles of the Project area (CDFW 2022, CDFW 2019a). Mohave ground squirrel are known to utilize open desert scrub and Joshua tree habitats for foraging, denning, and cover (CDFW 2019b). The Project site contains desert scrub habitat in a portion of the site and therefore MGS could potentially utilize these habitats if they are deemed suitable.

CDFW recommends that a qualified biologist conduct a habitat assessment as part of the biological technical studies conducted in support of the Draft EIR. If potentially suitable habitat is identified, consultation with CDFW is recommended for guidance on

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developing project specific MGS survey methodology to be conducted as part of the biological technical studies.

### **Fully Protected Raptors**

The fully protected California condor, golden eagle, and white-tailed kite have the potential to nest and/or forage in the Project vicinity (CDFW 2022). CDFW recommends that a qualified biologist conduct a habitat assessment for fully protected raptors within the Project area and a 0.5-mile buffer surrounding the Project area as part of the biological studies conducted in support of the Draft EIR. If suitable habitat is determined to be present, CDFW recommends that focused surveys be conducted for California condor and white-tailed kite, and that surveys be conducted in accordance with protocols developed by the United States Fish and Wildlife Service (USFWS 2010) for golden eagle, as part of the biological technical studies. If surveys indicate the presence or potential presence of fully protected raptors, consultation with the CDFW is recommended for guidance on the development of take avoidance measures.

### **Swainson's Hawk (SWHA)**

The Project proponent provided the Swainson's Hawk Status, Impacts, and Proposed Mitigation for the Bullhead Solar Project, Kern County, CA Letter Report (SWHA Letter Report) on August 19, 2022 detailing the results of protocol SWHA surveys conducted during the 2021 breeding season. The SWHA Letter Report identified 11 nests within five miles of the Project site that were active within the past five years. Additionally, three of these nests were identified along the northwestern boundary of the Project site and within 0.5-mile of potential Project-related impacts. The Project proponent also provided the Swainson's Hawk Telemetry Analysis, Bullhead Solar Project, Kern County, CA Letter Report (SWHA Telemetry Report) to CDFW on September 7, 2022 detailing the results of telemetry analyses conducted for a female SWHA that successfully nested in 2022 at one of the three active nests documented within the Project. The Project proponent consulted with CDFW on August 29 and December 9, 2022 to discuss SWHA and receive CDFW's input on the development of avoidance, minimization, and mitigation measures to be included as part of the proposed Project. As detailed in the SWHA Letter Report, previous conversations between the Project proponent and CDFW, and confirmed via aerial imagery, the habitat types present within and adjacent to the Project site provide suitable foraging and nesting habitat for SWHA.

In addition to the surveys that have been conducted for the SWHA Letter Report, CDFW recommends the Draft EIR include the following measures:

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**Recommended Mitigation Measure 1: SWHA Cumulative Impact Analysis**

The SWHA population within the Antelope Valley is particularly susceptible to extirpation due the small number of breeding pairs and extensive isolation from other SWHA populations (CEC and CDFW 2010). Additionally, past, present, and proposed renewable energy projects are reducing the amount of available foraging and nesting habitat for SWHA within the Antelope Valley. Three active SWHA nests were identified within the Project site and one of the nests successfully fledged chicks in 2022, thus the Project has the potential for significant cumulative impacts to SWHA. As such, CDFW recommends that the Draft EIR include a robust cumulative impacts analysis for SWHA using an appropriate methodology to analyze cumulative impacts.

**Recommended Mitigation Measure 2: SWHA Surveys Prior to Construction**

Depending on the time between the initial survey efforts conducted in support of the Draft EIR and Project construction, CDFW recommends that additional surveys, following the survey methodology developed by the California Energy Commission (CEC) and CDFW in the *Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California* (CEC and CDFW 2010) protocol be repeated the survey seasons immediately prior to construction.

**Recommended Mitigation Measure 3: SWHA Take Authorization**

CDFW recommends that a 0.5-mile no-disturbance buffer be implemented around active nests during the SWHA nesting season to avoid take (see Recommended Mitigation Measure 4 below); however, as three active nests were identified within the Project site, one nest successfully fledged chicks in 2022, take avoidance appears infeasible. CDFW recommends the Project pursue take authorization through the acquisition of an Incidental Take Permit (ITP), pursuant to Fish and Game Code section 2081 subdivision (b) in order to comply with CESA.

**Recommended Mitigation Measure 4: SWHA Avoidance Buffer**

If Project-specific activities will take place during the SWHA nesting season (i.e., March 1 through September 15), CDFW recommends a minimum ½-mile no-disturbance buffer be delineated and maintained around each active nest (including the three documented in the SWHA Letter Report), regardless of whether it was detected by surveys or observed incidentally. These buffers would remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival, to prevent nest abandonment and other take of SWHA as a result of Project activities.

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**Recommended Mitigation Measure 5: SWHA Foraging Habitat Mitigation**

Finally, CDFW recommends compensation for the loss of SWHA foraging habitat as described in the *Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California* protocol (CEC and CDFW 2010) to reduce impacts to foraging habitat to less than significant. The protocol recommends that mitigation for suitable habitat loss within a five-mile radius of an active SWHA nests occur at a minimum 2:1 ratio.

**Desert Tortoise (DT)**

The Project site is within known geographic range of DT and a recent occurrence has been documented approximately 2 miles north of the Project site (CNDDDB 2022). DT are most common in desert scrub, desert wash, and Joshua tree habitats (CDFW 2018a). Based on aerial imagery, several portions of the Project site contain desert scrub communities which may have the potential to support DT.

CDFW recommends that focused DT surveys are conducted following the protocol contained in "Preparing for any action that may occur within the range of the Mojave desert tortoise (*Gopherus agassizii*)" (USFWS 2019) as part of the biological studies conducted in support of the Draft EIR. Survey results should be submitted to both CDFW and the United States Fish and Wildlife Service (USFWS). If surveys indicate the presence or potential presence of desert tortoise, consultation with CDFW and USFWS is recommended for guidance on mitigation measures such as avoidance, minimization, and mitigation.

**Crotch bumble bee (CBB)**

CBB was re-listed as an endangered candidate species under CESA (Fish & G. Code, § 2050 et seq.) on September 30, 2022. During the candidacy period, consistent with CEQA Guidelines section 15380, the status of the CBB qualifies it as an endangered, rare, or threatened species under CEQA. It is unlawful to engage in take of listed or candidate species except as authorized pursuant to CESA. Under Fish and Game Code section 86, take means to hunt, pursue, catch, capture, or kill, or to attempt to hunt pursue, catch, capture, or kill. Consequently, take of CBB during the status review period is prohibited unless authorization pursuant to CESA (Fish & G. Code, § 2081, subd. (b)) is obtained.

The Project site is within known geographic range of CBB and there are a number of recent observations surrounding the Project area (CAS 2022, Xerces et al. 2022). CBB are known to inhabit areas of grasslands and scrub that contain requisite habitat elements for nesting, such as small mammal burrows and bunch/thatched grasses. The

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Project site contains desert scrub habitat in a portion of the site and therefore CBB could potentially utilize these habitats if they are deemed suitable.

CDFW recommends a qualified biologist conduct a habitat assessment as part of the biological technical studies conducted in support of the Draft EIR to determine if the Project area or its immediate vicinity contain habitat suitable to support CBB. Potential nesting sites, which include all small mammal burrows, perennial bunch grasses, thatched annual grasses, brush piles, old bird nests, dead trees, and hollow logs would need to be documented as part of the assessment. If potentially suitable habitat is identified, coordination with CDFW is recommended for guidance on developing focused CBB survey methodology to be conducted as part of the biological technical studies.

### **Western Joshua Tree (WJT)**

Western Joshua tree is a candidate species pursuant to CESA. During the candidacy period, consistent with CEQA Guidelines section 15380, the status of the western Joshua tree as a candidate species under CESA (Fish & G. Code, § 2050 et seq.) qualifies it as an endangered, rare, or threatened species under CEQA. The Project site is within known geographic range of WJT and based upon information provided in the NOP and available aerial photography, WJT are present within the desert scrub habitat located within the Project site.

CDFW recommends that a qualified botanist conduct focused WJT surveys to identify the number and size class (less than 1-meter in height, 1-meter or greater but less than 4-meters, and 4-meters or greater in height) of all western Joshua trees on and within 290-feet of the Project site as part of the biological technical studies conducted in support of the Draft EIR. This information is used to inform the location of no-disturbance buffers, and if necessary, the amount of habitat compensation required to reduce impacts to less than significant. In addition to the focused WJT surveys, CDFW recommends the Draft EIR include the following measures:

#### **Recommended Mitigation Measure 6: WJT Avoidance Buffer**

CDFW recommends a no-disturbance buffer for individual western Joshua trees of 290 feet. A 290-foot buffer is warranted to not only avoid impacts to individual trees, but potential impacts to the seed bank as well. Vander Wall et al. (2006) documented 290 feet as a maximum distance of seeds dispersed by rodents. If a 290-foot buffer cannot be maintained, then consultation with CDFW is warranted to determine if the Project can avoid take or if take authorization is necessary as described below.



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**Recommended Mitigation Measure 7: WJT Take Authorization**

If a 290-foot buffer around each individual WJT is not feasible, CDFW recommends that consultation with CDFW occur to discuss how to implement the Project and avoid take. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) is necessary to comply with CESA.

**American Badger (AMBA)**

The Project site is within the known geographic range of AMBA and a historical occurrence has been documented approximately 0.5 mile south of the Project site (CNDDDB 2022). AMBA occupy sparsely vegetated land cover with dry, friable soils to excavate dens, which they use for cover, and that support fossorial rodent prey populations (i.e., ground squirrels, pocket gophers, etc.) (Zeiner et. al 1990). Based on aerial imagery, the majority of the Project site potentially contains habitat suitable for AMBA.

CDFW recommends that a qualified biologist assess the presence/absence of AMBA by conducting a focused field survey in all areas of potentially suitable habitat as part of the biological studies conducted in support of the Draft EIR. If surveys indicate the presence or potential presence of AMBA, consultation with the CDFW is recommended for guidance on mitigation measures such as avoidance, minimization, and mitigation.

**Desert Kit Fox (DKF)**

The Project site is within the known geographic range of DKF. DKF are known to inhabit sparsely vegetated scrub habitats within the California desert that support small mammal populations (McGrew 1979). Based on aerial imagery, the majority of the Project site potentially contains suitable habitat for DKF denning and foraging.

CDFW recommends that a qualified biologist assess the presence/absence of DKF by conducting a focused field survey in all areas of potentially suitable habitat as part of the biological studies conducted in support of the Draft EIR. If surveys indicate the presence or potential presence of DKF, consultation with the CDFW is recommended for guidance on take avoidance measures.

**Burrowing Owl (BUOW)**

The Project site is within known geographic range of BUOW and a recent occurrence has been documented approximately 0.3 mile west of the Project site (CNDDDB 2022). BUOW inhabit open grasslands and desert scrublands containing small mammal burrows, a requisite habitat feature used by BUOW for nesting and cover. Based on

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aerial imagery, the majority of the Project site potentially contains habitat suitable for BUOW foraging and nesting.

CDFW recommends assessing presence/absence of BUOW by having a qualified biologist conduct surveys following the California Burrowing Owl Consortium's (CBOC) "Burrowing Owl Survey Protocol and Mitigation Guidelines" (CBOC 1993) and CDFW's "Staff Report on Burrowing Owl Mitigation" (CDFG 2012) as part of the biological studies conducted in support of the Draft EIR. If surveys indicate the presence or potential presence of burrowing owl, consultation with CDFW is recommended for guidance on mitigation measures such as avoidance, minimization, and mitigation.

### **Bats**

The Project site is within the known geographic range of several species of native bat, including species of special concern (SSC) pallid bat, Townsend's big-eared bat, spotted bat, and western mastiff bat. Several occurrences of Townsend's big-eared have been documented approximately 5.0 miles west and north of the Project area (CDFW 2022). Bats are known to roost in mines, caves, rocky outcrops, bridges, trees, and buildings that provide the required localized climatic conditions and surrounding foraging opportunities needed. The Project site may contain suitable habitat for roosting and likely contains suitable habitat for foraging.

To evaluate Project-related impacts on bats, CDFW recommends that a general habitat and roosting assessment for bats be conducted as part of the biological technical studies conducted in support of the Draft EIR.

### **Other State Species of Special Concern**

The Project site is within the known geographic range of SSC Tehachapi pocket mouse, Tulare grasshopper mouse, and California legless lizard and these species have been documented within the Project vicinity (CNDDDB 2022).

To evaluate Project-related impacts to these species, CDFW recommends that a general habitat assessment be conducted as part of the biological technical studies conducted in support of the Draft EIR.

### **Other Special Status Plant Species**

The Project site is within the known geographic range of several special status plant species including, Horn's milk-vetch, alkali mariposa-lily, recurved larkspur, Rosamond eriastrum, and sagebrush loeflingia and these species were documented historically within the Project vicinity (CDFW 2022). The creosote bush scrub, rubber rabbitbrush scrub, allscale scrub and ruderal forbs habitats located on the Project site may contain

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suitable habitat to support special status plant species, including the species mentioned above.

CDFW recommends that the Project site(s) be surveyed for special-status plants by a qualified botanist following the “Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities” (CDFW 2018b) as part of the biological technical studies conducted in support of the Draft EIR. This protocol, which is intended to maximize detectability, includes the identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period. If surveys indicate the presence or potential presence of special status plants, consultation with CDFW is recommended for guidance on mitigation measures such as avoidance, minimization, and mitigation.

### **Nesting Birds**

The Project site is within the known geographic range of several species of migratory and non-migratory birds, including SSC LeConte’s thrasher, loggerhead shrike, long-eared owl, mountain plover, and northern harrier, and watch list species California horned lark, and prairie falcon (CDFW 2022). The creosote bush scrub, rubber rabbitbrush scrub, allscale scrub, agricultural/fallow fields, ruderal forbs, and developed/disturbed areas located on the Project site potentially suitable habitat for an abundance of nesting migratory and non-migratory bird species, including the species mentioned above.

To evaluate Project-related impacts on nesting birds, CDFW recommends that a general habitat assessment for nesting birds be conducted as part of the biological technical studies conducted in support of the Draft EIR.

### **Editorial Comments and/or Suggestions**

**Federally Listed Species:** CDFW recommends consulting with USFWS regarding potential impacts to federally listed species including but not limited to the California condor and DT. Take under the Federal Endangered Species Act (FESA) is more broadly defined than CESA; take under FESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. Consultation with the USFWS in order to comply with FESA is advised well in advance of any Project activities.

**Lake and Streambed Alteration:** Based on aerial imagery, the Project area appears to contain features indicating multiple streams and drainages may be present, particularly within the eastern portion of the Project site. The NOP states a determination of potential federal and State jurisdiction features will be conducted as

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part of the EIR. If streams, swales, or drainages occur on the Project site, Project activities may be subject to CDFW's regulatory authority pursuant to Fish and Game Code section 1600 et seq. Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake (including the removal of riparian vegetation); (c) deposit debris, waste or other materials that could pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral, intermittent, or episodic as well as those that are perennial.

CDFW is required to comply with CEQA in the issuance of a Lake or Streambed Alteration Agreement; therefore, if the Draft EIR approved for the Project does not adequately describe the Project and its impacts to lakes or streams, a subsequent CEQA analysis may be necessary for LSA Agreement issuance. For information on notification requirements, please refer to CDFW's website (<https://wildlife.ca.gov/Conservation/LSA>) or contact CDFW staff in the Central Region Lake and Streambed Alteration Program at (559) 243-4593 or [RRR.R4@wildlife.ca.gov](mailto:RRR.R4@wildlife.ca.gov).

**Artificial Lighting:** Installation of outdoor artificial night lighting can disrupt the circadian rhythms of many wildlife species. Many species use photoperiod cues for communication, determining when to begin foraging, thermoregulation behavior, and migration (Longcore and Rich 2004, Miller 2006, Nightingale et al. 2006, Perry et al. 2008, Stone et al. 2009). Phototaxis, a phenomenon which results in attraction and movement towards light, can disorient, entrap, and temporarily blind wildlife species that experience it (Longcore and Rich 2004). Project activities could result in disruption of wildlife behavior, inadvertent injury, or mortality.

CDFW recommends that the Draft EIR for the Project include an analysis of artificial lighting as it relates to biological resources and incorporate enforceable mitigation measures to decrease the impacts of artificial outdoor lighting on wildlife species. Potentially feasible mitigation measures include: motion sensitive lighting; mounting light fixtures as low as possible to minimize light trespass; use of light fittings that direct and confine the spread of light downward; and use of long-wavelength light sources. In addition, CDFW recommends that lighting is not installed in ecologically sensitive areas (e.g., streams, wetlands, and habitat used by special status species, such as nesting/roosting sites and riparian corridors) and the use of the white/blue wavelengths of the light spectrum be avoided.

**Wildlife Movement and Connectivity:** The Project area supports significant biological resources and contains habitat connections and supports movement across the broader landscape, sustaining both transitory and permanent wildlife populations. CDFW recommends that on-site features that contribute to habitat connectivity should be evaluated and maintained. Aspects of the Project that could create physical barriers to

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wildlife movement, including direct or indirect Project-related activities, should be identified, and addressed in the Draft EIR.

**Project Alternatives Analysis:** CDFW recommends that the information and results obtained from the biological technical surveys, studies, and analysis conducted in support of the Project's Draft EIR be used to develop and modify the Project's alternatives to avoid and minimize impacts to biological resources to the maximum extent possible. When efforts to avoid and minimize have been exhausted, CDFW advises that remaining impacts to sensitive biological resources be mitigated to reduce impacts to a less than significant level, if feasible.

**Cumulative Impacts:** CDFW recommends that a cumulative impact analysis be conducted for all biological resources that will either be significantly or potentially significantly impacted by implementation of the Project, including those whose impacts are determined to be less than significant with mitigation incorporated or for those resources that are rare or in poor or declining health and will be impacted by the Project, even if those impacts are relatively small (i.e., less than significant). Cumulative impacts are recommended to be analyzed using an acceptable methodology to evaluate the impacts of past, present, and reasonably foreseeable future projects on resources and be focused specifically on the resource, not the Project. An appropriate resource study area should also be identified and mapped for each resource being analyzed and utilized for this analysis. In addition to the recommended SWHA cumulative impacts analysis above, CDFW recommends closely evaluating the need for a cumulative impacts analysis for the following species as part of the Draft EIR due to these species being in poor or declining health or at risk: MGS, California condor, golden eagle, white-tailed kite, DT, CBB, WJT, AMBA, DKF, BUOW, pallid bat, spotted bat, big-eared bat, Tulare grasshopper mouse, western mastiff bat, LeConte's thrasher, loggerhead shrike, long-eared owl, mountain plover, northern harrier, California legless lizard, California horned lark, prairie falcon, Horn's milk-vetch, Alkali mariposa-lily, recurved larkspur, Rosamond eriastrum, and sagebrush loeflingia. CDFW staff is available for consultation in support of cumulative impacts analyses as a trustee and responsible agency under CEQA.

## ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database, which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the CNDDDB. The CNDDDB field survey form can be found at the following link:

<https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The completed form can be mailed electronically to CNDDDB at the following email address:

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CNDDDB@wildlife.ca.gov. The types of information reported to CNDDDB can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

## **FILING FEES**

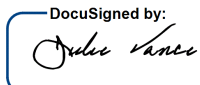
The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order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

## **CONCLUSION**

CDFW appreciates the opportunity to comment on the NOP to assist Kern County Planning and Natural Resources Department in identifying and mitigating Project impacts on biological resources.

If you have any questions, please contact Jeremy Pohlman, Senior Environmental Scientist (Specialist), at the address provided on this letterhead, by telephone at (805) 503-2375 or by electronic mail at [Jeremy.Pohlman@wildlife.ca.gov](mailto:Jeremy.Pohlman@wildlife.ca.gov).

Sincerely,

DocuSigned by:  
  
FA83F09FE08945A...  
Julie A. Vance  
Regional Manager

Janice Mayes  
Kern County Planning and Natural Resources Department  
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## REFERENCES

- California Academy of Sciences (CAS), 2022. iNaturalist website. <https://www.inaturalist.org/>. Accessed 12 December 2022.
- California Burrowing Owl Consortium (CBOC), 1993. *Burrowing owl survey protocol and mitigation guidelines*. Pages 171-177 in Lincer, J. L. and K. Steenhof (editors). 1993. The burrowing owl, its biology and management. Raptor Research Report Number 9.
- California Department of Fish and Game (CDFG), 2012. *Staff report on burrowing owl mitigation*. California Department of Fish and Game. March 7, 2012.
- California Department of Fish and Wildlife (CDFW), 2018a. *California wildlife habitat relationship system, desert tortoise*. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2659&inline=1>. Accessed 12 December 2022.
- CDFW, 2018b. *Protocols for surveying and evaluating impacts to special status native plant populations and sensitive natural communities*. California Department of Fish and Wildlife. March 20, 2018.
- CDFW, 2019a. *California wildlife habitat relationship system, Mohave ground squirrel*. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2659&inline=1>. Accessed 12 December 2022.
- CDFW, 2019b. *A conservation strategy for the Mohave ground squirrel (Xerospermophilus mohavensis)*. State of California, California Natural Resources Agency, Department of Fish and Wildlife. July 2019.
- CDFW, 2022. *Biogeographic information and Observation System (BIOS)*. <https://www.wildlife.ca.gov/Data/BIOS>. Accessed December 12, 2022.
- California Energy Commission (CEC) and CDFG, 2010. *Swainson's hawk survey protocols, impact avoidance, and minimization measures for renewable energy projects in the Antelope Valley of Los Angeles and Kern Counties, California*. California Energy Commission and Department of Fish and Game. June 2, 2010.
- Longcore, T., and C. Rich, 2004. *Ecological light pollution - Review*. *Frontiers in Ecology and the Environment* 2:191–198.
- McGrew, J.C, 1979. *Vulpes macrotis*. *Mammalian Species* 123:1-6.

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Miller, M. W., 2006. *Apparent effects of light pollution on singing behavior of American robins*. *The Condor* 108:130–139.

Nightingale, B., T. Longcore, and C. A. Simenstad, 2006. *Artificial night lighting and fishes*. Pages 257–276 in C. Rich and T. Longcore, editors. *Ecological consequences of artificial light at night*. Island Press, Washington, D.C., USA.

Perry, G., B. W. Buchanan, R. Fisher, M. Salmon, and S. Wise, 2008. *Effects of night lighting on urban reptiles and amphibians*. Chapter 16 in: *Urban Herpetology: Ecology, Conservation and Management of Amphibians and Reptiles in Urban and Suburban Environments*. J. C. Mitchell, R. E. Jung Brown and B. Bartholomew (ed.). *Herpetological Conservation* 3:211-228.

Stone, E. L., G. Jones, and S. Harris, 2009. *Street lighting disturbs commuting bats*. *Current Biology* 19:1123–1127. Elsevier Ltd.

USFWS, 2010. *Interim golden eagle inventory and monitoring protocols; and other recommendations*. United State Fish and Wildlife Service. February 2010.

USFWS, 2019. *Preparing for any action that may occur within the range of the Mojave desert tortoise (Gopherus agassizii)*. United States Fish and Wildlife Service. October 8, 2019.

Vander Wall, S.B., T. Esque, D. Haines, M. Garnett, and B. Waitman, 2006. *Joshua tree (Yucca brevifolia) seeds are dispersed by seed-caching rodents*. *Ecoscience* 13:539–543.

Xerces Society, Wildlife Preservation Canada, York University, University of Ottawa, The Montreal Insectarium, The London Natural History Museum, BeeSpotter, 2022. *Data accessed from Bumble Bee Watch, a collaborative website to track and conserve North America's bumble bees*. <https://www.bumblebeewatch.org/app/#/bees/lists>. Accessed 12 December 2022.

Zeiner, D. C., W. F. Laudenslayer, Jr, K. E. Mayer, and M. White, 1990. *California's wildlife Volume I-III*. California Department of Fish and Game, editor. Sacramento, CA, USA.



**Attachment 1**

**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE  
RECOMMENDED MITIGATION MONITORING AND REPORTING PROGRAM  
(MMRP)**

**PROJECT: Bullhead Solar Project**

**SCH No.: 2022110504**

<b>RECOMMENDED MITIGATION MEASURE</b>	<b>STATUS/DATE/INITIALS</b>
<i>Before Disturbing Soil or Vegetation</i>	
SWHA	
Recommended Mitigation Measure 1: SWHA cumulative impact analysis	
Recommended Mitigation Measure 2: SWHA surveys prior to construction	
Recommended Mitigation Measure 3: SWHA take authorization	
Recommended Mitigation Measure 5: SWHA foraging habitat mitigation	
WJT	
Recommended Mitigation Measure 7: WJT Take Authorization	
<i>During Construction</i>	
SWHA	
Recommended Mitigation Measure 4: SWHA avoidance buffer	
WJT	
Recommended Mitigation Measure 6: WJT avoidance buffer	