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December 29, 2025

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Subject: **Buttonbush Solar Project (Project)**
Draft Environmental Impact Report (DEIR)
State Clearinghouse No. 2024041028

Dear Jack Foster:

The California Department of Fish and Wildlife (CDFW) received a DEIR from Kern County, as Lead Agency, for the Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

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 Ecological Reserves: Fish and Game Code section 1583 states “Except in accordance with the regulations of the commission it is unlawful to enter upon any ecological reserves established under the provisions of the article, or to take therein any bird or the nest or eggs thereof, or any mammal, fish, mollusks, crustaceans, amphibia, reptiles or any other form of plant or animal life.” In addition, California Code of Regulations, Title 14, Section 630 states “All ecological reserves are maintained for the primary purpose of developing a statewide program for protection of rare, threatened, or endangered native plants, wildlife, aquatic organisms, and specialized terrestrial or aquatic habitat types”, and therefore, any other activity on these lands is restricted.

Fully Protected Species: CDFW has jurisdiction over fully protected species of birds, mammals, amphibians and reptiles, and fish, pursuant to Fish and Game Code sections

¹ 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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3511, 4700, 5050, and 5515. Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except as follows:

- Take is for necessary scientific research,
- Efforts to recover a fully protected, endangered, or threatened species, live capture, and relocation of a bird species for the protection of livestock, or
- They are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (Fish & G. Code, §§ 3511, 4700, 5050, & 5515).

Additionally, specified types of infrastructure projects may be eligible for an Incidental Take Permit (ITP) for unavoidable impacts to fully protected species if certain conditions are met (see Fish & G. Code §2081.15). Project proponents should consult with CDFW early in the project planning process if an ITP may be pursued for the Project.

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, sections 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.

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 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

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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.

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

PROJECT DESCRIPTION SUMMARY

Proponent: 29SC 8me, LLC

Objective: The Project proposes to construct a photovoltaic (PV) solar facility with associated infrastructure on seven proposed Project locations (Project Sites) that would collectively generate up to 2 gigawatts (GW) of alternating current (AC) power with an up to 2 GW energy storage system. The Project would be supported by a 500-kilovolt (kV), overhead gen-tie and/or underground electrical transmission line(s) originating from one or more on-site substations and terminating at the Pacific Gas & Electric (PG&E) Midway Substation. The Project's permanent facilities would include solar panels, solar racking, inverters, service roads, a power collection system, communication cables, overhead and underground transmission lines, electrical switchyards, Project substations, energy storage system(s), and operations and maintenance (O&M) facilities.

Location: The Project is located on 128 parcels across approximately 11,983 acres of privately owned land in the valley portion of Kern County. The Project straddles Interstate 5 (I-5), is east of Buttonwillow Raceway Park, just north of Highway 58, and south of Kimberlina Road, with the majority of the site being on the northeastern side of I-5. The eastern section of the Project is approximately six miles west of the City of Shafter, while the northern section is approximately 5.5 miles southwest of the City of Wasco. The southern section of the Project has I-5 running through its northern edge and its southern edge is within the Buttonwillow Community Development Plan. The Project is within the Mount Diablo Base and Meridian (MDB&M).

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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 DEIR.

PG&E Midway Substation and Transmission Line

The DEIR included an evaluation for the PG&E Midway Substation improvements and concluded that potential impacts to biological resources would be less than significant with the implementation of PG&E's Best Management Practices (BMPs). The DEIR also stated that, "PG&E should implement the mitigation measures described above, during proposed Project construction, operation and maintenance, and decommissioning" to mitigate for potential significant impacts. CDFW is concerned that PG&E's proposed BMPs are not adequate to reduce impacts to less than significant and avoid unauthorized take for certain special-status species, particularly for the State endangered and fully protected and federally endangered blunt-nosed leopard lizard (*Gambelia sila*) and the State candidate western burrowing owl (*Athene cunicularia hypugaea*). As such, CDFW recommends that the mitigation measures outlined in the DEIR, with the comments and recommendations provided below, be incorporated for the PG&E Midway Substation improvements as well.

Project Transmission Line

The DEIR also noted that the transmission line for the Project would be constructed within an approximately 200-foot wide transmission line corridor, with portions of this work occurring directly adjacent to the Buttonwillow Ecological Reserve. Additionally, there is some ambiguity on the placement of the transmission line adjacent to the Buttonwillow Ecological Reserve as several sections of the DEIR state that, "Furthermore, several collector lines are proposed along areas of saltbush scrub and alkali sink, including the Buttonwillow Ecological Reserve along 7th Standard Road". CDFW would like to reiterate, as outlined in Fish and Game Code section 1583 and California Code of Regulations, Title 14, Section 630, that ecological reserves are maintained for the primary purpose of protecting sensitive biological resources and their associated habitats, and any other activity on these lands, such as transmission line construction, is prohibited.

Proximity of CDFW Ecological Reserves

While the majority of Project facilities have been sited in disturbed agricultural lands which reduces the potential for potential impacts to biological resources, the DEIR notes that several Project parcels, including parcels within Project Sites 3, 5, 6, and 8, are in

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close proximity to CDFW's Buttonwillow Ecological Reserve, Lokern Ecological Reserve, and Semitropic Ecological Reserve (collectively, Ecological Reserves). These Ecological Reserves, also identified as key lands for potential species recovery (USFWS 1998), provide habitat for a number of State and federal special-status species and increase the likelihood that special-status species could utilize the habitats within the Project over the life of the Project. Further, many of the Ecological Reserve parcels were acquired as threatened and endangered species mitigation lands for projects such as residential development projects under the Metro Bakersfield Habitat Conservation Plan. CDFW recommends that Project facilities within Project parcels with Ecological Reserve adjacency designed and sited to minimize indirect impacts to the Ecological Reserves to the extent feasible and that a sufficient permanent buffer be incorporated between all Project elements and the Ecological Reserve parcels. Any direct impacts to the Ecological Reserves are prohibited.

Wildlife Movement and Connectivity

The Project and vicinity supports significant biological resources and contains habitat connections and supports movement across the broader landscape, including the aforementioned Ecological Reserves, sustaining both transitory and permanent wildlife populations. It is imperative that this connectivity be maintained, particularly between the Ecological Reserves and surrounding natural habitats to allow for movement of species between blocks of land (USFWS 1998). While the seven Project Sites appear to be spaced around the Buttonwillow Ecological Reserve, and the DEIR notes that permanent perimeter fencing would be installed with a four (4) to six (6) inch gap for permeability, it does not appear that array configurations within the Project Sites (including Project Sites 3, 5, 6 and 8) are designed to facilitate wildlife movement. As the overall size of the Project and siting of Project Sites between Ecological Reserves has the potential to impact connectivity for wildlife within the Project vicinity, CDFW recommends the Project consider additional design measures to enhance and facilitate movement through the Project, such as incorporating corridors within certain Project Sites, as well as considering modifications to siting, size, or configuration of arrays.

Compensatory Mitigation and CDFW Consultation

The DEIR notes that several State listed species were documented within the Project, including the State and federally endangered Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), the State threatened Swainson's hawk (*Buteo swainsoni*), and the State candidate western burrowing owl and Crotch's bumble bee (*Bombus crotchii*), and several other State listed species have the potential to occur, including the State and federally endangered giant kangaroo rat (*Dipodomys ingens*), the State endangered and fully protected and federally endangered blunt-nosed leopard lizard, the State threatened San Joaquin [Nelson's] antelope squirrel (*Ammospermophilus nelsoni*), and the State threatened and federally endangered San Joaquin kit fox

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(*Vulpes macrotis mutica*). CDFW has had early discussions with the Project proponent about obtaining an ITP, pursuant to Fish and Game Code section 2081(b), for Project activities.

CDFW typically requires compensatory mitigation in ITPs to fully mitigate Project impacts to covered species. Due to the proposed Project-related impacts to listed species, the siting of certain Project parcels adjacent to the aforementioned Ecological Reserves, and the overall size of the Project, the Project would likely require the need for a robust mitigation strategy that incorporates the careful siting of conserved lands within areas that provide substantial uplift to covered species and covered species connectivity. Additionally, due to the complexity in acquiring suitable mitigation for endangered species such as Tipton kangaroo rat, CDFW strongly recommends the Project proponent develop and provide a detailed and specific mitigation proposal during the ITP application process, if take coverage is to be obtained. This mitigation proposal should prioritize land acquisition and conservation within suitable habitats for covered species and in areas that enhance wildlife connectivity. Examples of appropriate conservation areas include lands between the aforementioned Ecological Reserves and other conserved and natural lands, such as the Elk Hills Conservation Area, Kern Water Bank Mitigation Bank, Coles Levee Ecosystem Preserve, and Lokern Natural Area. CDFW also recommends that the Project proponent consider whether it is feasible to permanently conserve parcels within the higher quality habitats located within certain proposed Project Sites, including within Project Sites 3, 5, 6, and 8; which could be part of the overall Project mitigation strategy. Finally, CDFW recommends the Project proponent consult with CDFW early in the ITP application process to assist with the development of an adequate mitigation strategy well in advance of submittal of an ITP application.

Special-status Species

Currently, the DEIR acknowledges that the Project is within the geographic range of several special-status plant and animal species and proposes specific mitigation measures to reduce impacts for these species to a less than significant level. CDFW concurs with the proposed mitigation measures for the State threatened tricolored blackbird (*Agelaius tricolor*); the State species of special concern American badger (*Taxidea taxus*); the State species of special concern and federally endangered Buena Vista Lake ornate shrew (*Sorex ornatus relictus*); the State species of special concern San Joaquin pocket mouse (*Perognathus inornatus*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), loggerhead shrike (*Lanius ludovicianus*), northern harrier (*Circus cyaneus*), Bakersfield legless lizard (*Anniella grinnelli*), Blainville's horned lizard (*Phrynosoma blainvilli*), California glossy snake (*Arizona elegans occidentalis*), and San Joaquin coachwhip (*Masticophis flagellum*); the State species of special concern and federally proposed threatened western spadefoot toad (*Spea hammondi*); and the State special animal and federally threatened vernal pool fairy

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shrimp (*Branchinecta lynchi*). CDFW recommends the measures for these species be included within the Final Environmental Impact Report (FEIR).

CDFW has concerns about the ability of some of the proposed mitigation measures to reduce impacts to less than significant and avoid unauthorized take for giant kangaroo rat, Tipton kangaroo rat, blunt-nosed leopard lizard, San Joaquin antelope squirrel, San Joaquin kit fox, Swainson's hawk, western burrowing owl, and Crotch's bumble bee. CDFW also has concerns about the ability of some of the proposed mitigation measures to reduce impacts to less than significant and avoid unauthorized take for several special status plant species including, but not limited to, the California Rare Plant Rank 1B.1 Alkali-sink goldfields (*Lasthenia chrysantha*); the CRPR 1B.2 heartscale (*Atriplex cordulata* var. *cordulata*); the federally endangered and CRPR 1B.2 kern mallow (*Eremalche parryi* ssp. *kernensis*); and the CRPR 1B.1 lesser saltscale (*Atriplex minuscula*).

Giant Kangaroo Rat and Tipton Kangaroo Rat

Mitigation Measure (MM) 4.4-15 is included in the DEIR to mitigate for impacts to giant kangaroo rat (GKR) and Tipton kangaroo rat (TKR). As TKR was identified during trapping efforts to inform the DEIR in 2024 and GKR are known to occur within the vicinity of Project Sites 1, 2, 3, and 4 (west of I-5), CDFW recommends that the Project proponent consult with CDFW to determine whether avoidance is feasible. 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.

Blunt-nosed Leopard Lizard, San Joaquin Kit Fox, and San Joaquin Antelope Squirrel

While the DEIR notes that blunt-nosed leopard lizard (BNLL), San Joaquin kit fox (SJKF), and San Joaquin Antelope Squirrel (SJAS) were not detected during previous reconnaissance surveys to inform the DEIR, these species are known to occur within the Project and Project vicinity, including on the Ecological Reserves directly adjacent to portions of the Project. MMs 4.4-11, 4.4-15, and 4.4-16 are provided to mitigate for potentially significant impacts to these species. CDFW concurs with these measures and recommends they be included within the FEIR. However, due to the proximity of the abovementioned Ecological Reserves to the Project, and the likelihood that these species would utilize the habitats within the Project over the life of the Project, CDFW recommends that the Project proponent consult with CDFW to determine whether avoidance is feasible. 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.

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Western Burrowing Owl

The California Fish and Game Commission (FGC) approved western burrowing owl (BUOW) as a candidate for potential listing as a protected species under CESA on October 10, 2024, and published these findings in the California Regulatory Notice Register (Notice Register) on October 25, 2024. As such, BUOW is now a candidate under CESA and receives the same legal protection afforded to an endangered or threatened species (Fish & G. Code, §§ 2074.2 & 2085).

The DEIR notes that the Project and vicinity contain suitable BUOW habitat and BUOW observations were noted in Sites 2 and 5 during 2024 BUOW reconnaissance surveys. Currently the DEIR provides MM 4.4-13 and 4.4-16 to mitigate for potential significant impacts to BUOW. MM 4.4-16 and MM 4.4-13 include preconstruction surveys as well as BUOW avoidance and minimization measures, including no-disturbance buffers for active burrows, as well as passive relocation or visual buffering for inactive burrows.

CDFW concurs with the avoidance buffers included in MM 4.4-13 and MM 4.4-16 for avoidance of active BUOW burrows during the nesting season. However, CDFW does not concur that the portions of MM 4.4-13 and MM 4.4-16 describing visual buffers or passive relocation of active burrows outside of the nesting season are sufficient to reduce impacts to BUOW to a less than significant level and prevent unauthorized take. In particular, the implementation of passive relocation measures outlined in MM 4.4-13 and MM 4.4-16 would have a strong likelihood to result in the direct unauthorized take of the species absent an ITP. Due to the documented occurrence of BUOW within the Project, the proximity of the Project to the Ecological Reserves, and the presence of suitable BUOW habitat throughout the Project Sites, CDFW recommends that the Project proponent consult with CDFW to determine whether avoidance is feasible. 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.

In addition to the consultation recommendation above, CDFW also recommends MM 4.4-13 and MM 4.4-16 be modified to include the following:

Recommended Mitigation Measure 1: BUOW Preconstruction Surveys

CDFW recommends that focused surveys, following the 2012 Staff Report on Burrowing Owl Mitigation (2012 Staff Report) (CDFG 2012), be conducted the survey season immediately prior to construction. Please note that the 2012 Staff Report necessitates multiple surveys prior to the initiation of construction.

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Recommended Mitigation Measure 2: BUOW Avoidance Buffer

Should a BUOW or known BUOW burrow (active or inactive) be detected, either during preconstruction surveys or construction activities, CDFW recommends that no-disturbance buffers, as outlined in the 2012 Staff Report on Burrowing Owl Mitigation (CDFG 2012), be implemented prior to and during any ground-disturbing activities. CDFW also recommends that these buffers be implemented for both wintering and breeding BUOW.

Recommended Mitigation Measure 3: BUOW Take Authorization

If a BUOW or known BUOW burrow (active or inactive) is detected, and the no-disturbance buffers outlined in the 2012 Staff Report on Burrowing Mitigation are not feasible, consultation with CDFW is warranted 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.

Swainson's Hawk

The DEIR notes that 33 Swainson's hawk (SWHA) individuals were observed foraging during biological reconnaissance surveys conducted in 2024, although no SWHA nests were observed within the Project Sites, with the closest nest being observed approximately 3.5 miles southwest of the site. The SWHA habitat assessment, included as Appendix D to the DEIR, notes suitable SWHA nesting habitat and low to moderate quality foraging habitat is present throughout the site, with some areas of moderate to high quality foraging habitat located within the less disturbed grassland areas of the site.

Currently, MM 4.4-12 is proposed to mitigate for potentially significant impacts to SWHA and includes protocol surveys adhering to the methodology developed by the SWHA Technical Advisory Committee (SWHA TAC 2000) and avoidance buffers if any SWHA nests are found. CDFW concurs with these measures and recommends they be included in the final EIR. CDFW also recommends the following in addition to the surveys and avoidance buffers described in MM 4.4-12:

Recommended Mitigation Measure 4: SWHA Foraging Habitat Mitigation

CDFW recommends compensation for the loss of SWHA foraging habitat as described in CDFW's "Staff Report Regarding Mitigation for Impacts to Swainson's Hawks" (CDFG 1994) to reduce impacts to foraging habitat to less than significant. The Staff Report recommends that mitigation for habitat loss occur within a minimum distance of 10 miles from known nest sites. CDFW has the following recommendations based on the Staff Report:

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- For projects within 1 mile of an active nest tree, a minimum of 1 acre of habitat management (HM) land for each acre of development is advised.
- For projects within 5 miles of an active nest but greater than 1 mile, a minimum of $\frac{3}{4}$ acre of HM land for each acre of development is advised.
- For projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree, a minimum of $\frac{1}{2}$ acre of HM land for each acre of development is advised.

Crotch's Bumble Bee

MM 4.4-8 states that a preconstruction survey for Crotch's bumble bee (CBB) would be conducted during the primary flight period for workers and males. MM 4.4-8 also notes that if a nest is found during surveys, "If nest resources occupied by Crotch's bumble bee are detected within the project areas, no ground disturbing activities shall occur within 100 feet of the occupied nest resources, or as determined by a qualified biologist through evaluation of topographic features or distribution of floral resources. The nest resources shall be avoided for the duration of the Crotch's bumble bee nesting period (February 1 through October 31). Outside of the nesting season, it is assumed that no live individuals would be present within the nest, because the daughter queens (gynes) usually leave by September, and all other individuals (original queen, workers, males) die. The gynes are highly mobile and can independently disperse to outside the project footprint to the proposed open space or other suitable areas beyond that have suitable hibernaculum resources. Because construction will have occurred in the area outside the occupied nesting resources, no suitable habitat will be present in the impact area, and it is assumed that new queens will disperse to habitat outside the project areas." CDFW does not concur that MM 4.4-8, which only requires a single preconstruction survey prior to construction, is sufficient to mitigate for potential significant impacts to CBB and prevent unauthorized take. It is also important to note that the removal of suitable habitat around an active avoided nest, without careful consideration of the floral resources necessary to sustain an actively nesting colony, has a strong likelihood of resulting in the unauthorized take of CBB absent an ITP. As such, CDFW recommends MM 4.4-8 be modified to include the following:

Recommended Mitigation Measure 5: CBB Surveys

CDFW recommends that a qualified biologist conduct focused surveys for CBB, and their requisite habitat features following the methodology outlined in the Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023).

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Recommended Mitigation Measure 6: CBB Avoidance

If CBB is detected, CDFW recommends that all small mammal burrows and thatched/bunch grasses be avoided by a minimum of 50 feet to avoid take and potentially significant impacts. If ground-disturbing activities will occur during the overwintering period (October through February), consultation with CDFW is warranted to discuss how to implement Project activities and avoid take. ***Any detection of CBB prior to or during Project implementation warrants consultation with CDFW to discuss how to avoid take.***

Recommended Mitigation Measure 7: CBB Take Authorization

If take cannot be avoided, CDFW recommends acquiring an ITP pursuant to Fish and Game Code Section 2081(b), prior to initiating ground-disturbing activities.

Special-status Plants

MM 4.4-4 is provided to mitigate for potential significant impacts to special-status plants and requires preconstruction surveys during the appropriate bloom period and implementation of a 50-foot no-disturbance buffer. CDFW concurs with these portions of MM 4.4-4. MM 4.4-4 also states that, "Pursuant to Section 1913(c) of the California Fish and Game Code, if project activities cannot avoid direct impacts to special-status plants, CDFW shall be notified and provided the opportunity to salvage any of these plants that would be affected. The CDFW may enter into agreement with the project proponent to retain a qualified entity for the relocation of sensitive plants to an approved location. Any salvage would be undertaken in accordance with a salvage plan to be developed in consultation with CDFW. The plan would include methods for transplanting and watering (if appropriate), success criteria for salvaged plants, monitoring the health and survivorship of salvaged plants during at least 5 years following salvage, and contingency measures if plant survivorship requirements are not satisfied." CDFW does not concur that this portion of MM 4.4-4 is sufficient to mitigate for potential significant impacts and would like to note that Fish and Game Code Section 1913 is specifically applicable to certain types of projects (e.g., agricultural operations) and rare and endangered plant species listed under the Native Plant Protection Act. As the special-status plant species identified within the Project Sites are not identified in the NPPA, and it is likely that Project activities would not be applicable under Fish and Game Code Section 1913, CDFW recommends MM 4.4-4 be modified to include the following:

Recommended Mitigation Measure 8: Special-status Plant Avoidance Buffers

If special-status plants are detected, CDFW recommends special-status plant species be avoided whenever possible by delineating and observing a no disturbance buffer of at least 50 feet from the outer edge of the plant population(s) or

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specific habitat type(s) required by special-status plant species. If buffers cannot be maintained, then consultation with CDFW is warranted to determine appropriate minimization and mitigation measures for impacts to special-status plant species.

Recommended Mitigation Measure 9: Special-Status Plant Consultation and Take Authorization

If State endangered, threatened, or rare plants are identified during special status plant surveys, consultation with CDFW is recommended. If take cannot be avoided, then to ensure compliance with CESA and the Native Plant Protection Act (NPPA), CDFW recommends consultation with CDFW for acquisition of an ITP, pursuant to Fish and Game Code section 2081, subdivision (b) and/or California Code of Regulations, Title 14, section 786.9, subdivision (b).

Editorial Comments and/or Suggestions

Lake and Streambed Alteration: Currently MM 4.4-23 and 4.4-24 are provided to mitigate for potential significant impacts to streams and include consultation with CDFW concerning potential impacts to jurisdictional features. CDFW concurs with these measures and recommends they be included within the FEIR.

Project activities that substantially change the bed, bank, and channel of any river, stream, or lake are subject to CDFW's regulatory authority pursuant 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 or intermittent as well as those that are perennial and may include those that are highly modified such as canals and retention basins.

CDFW Ecological Reserve: Several of the Project parcels surround the Buttonwillow Ecological Reserve, which provides habitat for federal, and State listed species as well as many special status species.

In addition to consultation with CDFW's Regional Renewable Energy staff, CDFW recommends consultation with CDFW's Regional Ecological Reserve Management Unit staff well in advance of Project initiation to demonstrate accurate delineation of property boundaries to prevent inadvertent encroachment on CDFW-owned lands. Consultation is also recommended to discuss planned ingress and egress to the Project for the purposes of avoiding impacts on CDFW-owned lands, which is prohibited by Title 14 California Code of Regulations § 630. Please contact Reagan O'Leary, Regional

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Ecological Reserve Management Unit Supervisor, at the address on the letterhead above or via email at Reagan.OLeary@wildlife.ca.gov.

Battery Energy Storage System Evaluation: CDFW is familiar with the Moss Landing battery plant fire, which was a battery energy storage system (BESS) which had densely stacked batteries within a single warehouse building and which used lithium-ion batteries with Nickel Manganese Cobalt (NMC) chemistry, which are more prone to overheating and thermal runaway. Fires at NMC BESSs cannot be extinguished with water and thus an alternative onsite fire suppression system is critical.

As such, the BESS systems proposed as part of the Project warrant a careful evaluation for potential fire-related impacts to biological resources within and surrounding the Project. While newer BESS technologies have been made more readily available since construction of the Moss Landing BESS, current battery technologies can still have the potential for impacts to biological resources if overheating and thermal runaway were to occur. For example, Lithium-ion BESS fires can release an array of toxic chemicals into the air (Mylenbusch et al. 2023). In addition to potential human health concerns, these emissions may also impact air quality for nearby wildlife, and harmful particulate matter may settle into soils or waterways, possibly affecting soil-dwelling organisms, burrowing mammals, and aquatic life.

The proposed Project includes installation of an approximately 2 GW BESS on the Project. Based on information in the DEIR, it appears the BESS configuration for the Project is likely to be constructed of self-contained energy storage modules (i.e., individual battery containers), which lessen the risk of widespread fire, although the DEIR does note that BESS equipment may still be housed in dedicated buildings (i.e., warehouses). The DEIR also notes that battery technology would be comprised of lithium-ion or non-lithium ion technologies. As such, CDFW strongly recommends that BESS configuration utilize the self-contained energy storage module design. In addition, CDFW recommends considering alternative battery technologies to the NMC chemistry, such as Lithium Iron Phosphate (LFP) which uses more benign constituents, is more stable over long life cycles, and has better thermal stability and is less prone to overheating (Evro 2024).

Given the above, CDFW recommends a thorough analysis of the BESS component of the Project to evaluate the potential impacts of a large and small BESS fires on biological resources within and surrounding the Project. CDFW recommends the evaluation not only assess the risk to biological resources, but also detail the Project-specific measures that would be implemented to reduce the risk of fire, and to carefully consider BESS siting, battery/container spacing, battery chemistry, battery life and degradation, and the most appropriate fire protection/suppression system.

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CNDDDB: Please note that the California Natural Diversity Database (CNDDDB) is populated by records through voluntary submissions of species detections. As a result, species may be present in locations not depicted in the CNDDDB but where there is suitable habitat features capable of supporting species. A lack of an occurrence record in the CNDDDB does not mean a species is not present. To adequately assess any potential Project-related impacts to biological resources, surveys conducted by a qualified biologist during the appropriate survey period(s) using the appropriate protocol survey methodology are warranted to determine whether any special-status species are present at or near the Project.

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:

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).

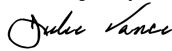
CONCLUSION

CDFW appreciates the opportunity to comment on the DEIR to assist Kern County in identifying and mitigating Project impacts on biological resources. Please see the enclosed Mitigation Monitoring and Reporting Program (MMRP) table (Attachment 1) which corresponds with the recommended mitigation measures in this comment letter.

Jack Foster
Kern County Planning and Natural Resources Department
December 29, 2025
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If you have any questions, please contact Ren Cotter, Environmental Scientist, at the address provided on this letterhead, by telephone at (559) 767-0956 or by electronic mail at Ren.Cotter@wildlife.ca.gov.

Sincerely,

DocuSigned by:


FA83F09FE08945A...
Julie A. Vance
Regional Manager

ATTACHMENT 1 (MMRP)

ec: **State Clearinghouse**
Land Use and Climate Innovation
State.Clearinghouse@lci.ca.gov

U.S. Fish and Wildlife Service
Justin_Sloan@fws.gov

Jack Foster
Kern County Planning and Natural Resources Department
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REFERENCES

California Department of Fish and Game. 1994. Staff report regarding mitigation for impacts to Swainson's hawks (*Buteo Swainsoni*) in the Central Valley of California. Sacramento, California, USA.

California Department of Fish and Game. 2012. Staff report on burrowing owl mitigation. Sacramento, California, USA.

California Department of Fish and Wildlife. 2023. Survey considerations for California Endangered Species Act candidate bumble bee species. Sacramento, California, USA.

Evro, S., A. Ajumobi, D. Mayon, and T. Tomomewo. Navigating battery choices: A comparative study of lithium iron phosphate and nickel manganese cobalt battery technologies. Future Batteries, Vol. 4, 100007.

Mylenbusch, I., K. Claffey, and B. Chu. Hazards of lithium-ion battery energy storage systems (BESS), mitigation strategies, minimum requirements, and best practices. Process Safety Progress, 2023:1–10.

Swainson's Hawk Technical Advisory Committee. 2000. Recommended timing and methodology for Swainson's hawk nesting surveys in California's Central Valley. Swainson's Hawk Technical Advisory Committee.

U.S. Fish and Wildlife Service. 1998. Recovery plan for upland species of the San Joaquin Valley, California. Region 1, Portland, OR. 319pp.

Attachment 1

Attachment 1

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

PROJECT: Buttonbush Solar Project by 29SC 8me, LLC

SCH No.: 2024041028

RECOMMENDED MITIGATION MEASURE	STATUS/DATE/INITIALS
<i>Before Disturbing Soil or Vegetation</i>	
BUOW	
Recommended Mitigation Measure 1: BUOW Preconstruction Surveys	
Recommended Mitigation Measure 3: BUOW Take Authorization	
SWHA	
Recommended Mitigation Measure 4: SWHA Foraging Habitat Mitigation	
CBB	
Recommended Mitigation Measure 5: CBB Surveys	
Recommended Mitigation Measure 7: CBB Take Authorization	
Special-status Plants	
Recommended Mitigation Measure 9: Special-status Plants Consultation and Take Authorization	
<i>During Construction</i>	
CBB	
Recommended Mitigation Measure 2: BUOW Avoidance Buffers	
Recommended Mitigation Measure 6: CBB Avoidance Buffers	
Special-status Plants	
Recommended Mitigation Measure 9: Special-status Plant Avoidance Buffers	