July 17, 2024

Greg Plucker
Community Development Director
Colusa County Community Development Department
1213 Market Street
Colusa, CA 95932

Subject: JANUS SOLAR AND BATTERY STORAGE

NOTICE OF PREPARATION

SCH NO. 2024061043

Dear Greg Plucker:

The California Department of Fish and Wildlife (CDFW) received and reviewed the Notice of Preparation (NOP) from Colusa County Community Development Department for the Janus Solar and Battery Storage Project (Project) in Colusa County pursuant the California Environmental Quality Act (CEQA) statute and 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, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may need to exercise 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 purposes of CEQA, CDFW provides, 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 may also act as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) The Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the

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.

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. CDFW also administers the Native Plant Protection Act, Natural Community Conservation Program, and other provisions of the Fish and Game Code that afford protection to California's fish and wildlife resources.

PROJECT DESCRIPTION SUMMARY

The Project site is located on private property in an area of Colusa County primarily used for cattle grazing. From the Project site, the nearest community is Williams, approximately 6.5 miles to the northeast. The Project site includes two parcels with Assessor's Parcel Numbers 018-050-005-000 and 018-050-006-000, which are 630.5 and 255.7 acres, respectively, totaling 886.2 acres. The Project will utilize approximately 666 acres of the approximately 886-acre Project site. The project would generate and store up to 80 megawatts of alternating current, for the purpose of delivering renewable electricity to the grid.

The solar Photovoltaic (PV) power generation facilities would include solar arrays and inverter blocks. The PV modules would be mounted together in arrays on a modular tracking system such that the angle of the panels would change throughout the day. Each tracking assembly would consist of galvanized steel posts on which frames, ranging between 6 and 10 feet above grade, depending on the topography, would be placed. An electrical collection system would be installed underground in branch circuits to connect the electrical output of the energy facility to the on-site substation. The Project would include an on-site substation located on an approximately 3-acre portion of the Project site within a perimeter fence. The battery energy storage system (BESS) would be located to the east of the on-site substation within an approximately 4-acre area. The BESS would consist of lithium-ion battery technology that would be used to either control electric frequency or store energy produced by the solar PV power generation facilities. The BESS would be housed in standard shipping containers.

The Project would connect to the electrical grid at the existing PG&E Cortina Substation via a roughly 4-mile long 60 kilovolt gen-tie line partially located within existing County right of way along Walnut Drive and Spring Valley Road. The gen-tie line would be installed on existing, retrofitted, or new poles, either aboveground or underground depending on feasibility.

The Project-related supporting facilities and infrastructure would include an operations and maintenance facility, internal service roads, security fencing, gates and lighting, a construction laydown yard, and other temporary construction areas.

The Project description should include the whole action as defined in the CEQA Guidelines section 15070 and should include appropriate detailed exhibits disclosing the Project area including temporary impacted areas such as equipment staging area, spoils areas, adjacent infrastructure development, and access and haul roads if applicable.

ENVIRONMENTAL SETTING

CDFW recommends that the DEIR includes a complete environmental assessment of the existing biological conditions within the Project area including but not limited to the type, quantity and locations of the habitats, flora and fauna. Maps and information regarding any survey efforts should be included within the DEIR. Any surveys of the biological conditions and related environmental analysis should be completed by qualified personnel with sufficient experience in the work performed for the Project. CDFW recommends that the California Natural Diversity Database (CNDDB), as well as previous studies performed in the area, be consulted to assess the potential presence of sensitive species and habitats.

To identify a correct environmental baseline, the DEIR should include a complete and current analysis of endangered, threatened, candidate, and locally unique species potentially present in or near the Project area. CDFW recommends placing special emphasis on evaluating the presence and status of sensitive habitats and any biological resources that are rare or unique to the area. For this Project this includes, but is not limited to vernal pools, streambeds, riparian vegetation, oak woodlands, and open grasslands that may be present within the Project boundaries or its vicinity.

Species-specific surveys should be conducted at the appropriate time to ascertain the presence of species within the Project vicinity. Results from recent surveys conducted within the Project limits and its vicinity should be included within the DEIR. CDFW recommends using the widely accepted survey protocols. Additional information regarding survey protocols can be obtained at https://wildlife.ca.gov/Conservation/Survey-Protocols. Project site assessments for rare plants and rare natural communities follow CDFW's 2009 Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. The guidance document is available here: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline.

IMPACT ANALYSIS AND MITIGATION MEASURES

The DEIR should clearly identify and describe all short-term, long-term, permanent, or temporary impacts to biological resources under CDFW's jurisdiction, including all direct and foreseeable indirect impacts caused by the proposed Project. The DEIR should define the threshold of significance for each impact and describe the criteria used to determine each threshold (CEQA Guidelines, § 15064, subd. (f)).

CDFW is concerned based on the information provided in the DEIR that the proposed Project may result in direct, indirect and cumulative adverse impacts to biological resources within the Project area. The Project area may reduce riparian and terrestrial habitats, including habitats for sensitive species with the system and could result in the direct "take" of CESA-listed species. The lead agency should consider: (1) the Project's cumulative impacts to natural resources and determine if that contribution would result in a significant impact. (2) present, past, and probable future projects producing related impacts to resources; And (3) reducing vegetation and habitat within the area and the potential cumulative effects.

CDFW recommends that the DEIR identify habitats and provide a discussion of how the proposed Project will affect their function and value, and provide scientifically supported discussion of the significance of the project's impacts and any proposed avoidance, minimization, and/or mitigation measures to address the Project's impact upon fish and wildlife and their habitat. CDFW recommends that the DEIR identify natural habitats and provide a discussion of how the proposed Project will affect their function and value. The DEIR should incorporate mitigation performance standards that would ensure that any significant impacts are reduced as expected. Mitigation measures proposed in the DEIR should be made a condition of approval of the Project. Please note that obtaining a permit from CDFW by itself with no other mitigation proposal may constitute mitigation deferral.

Threatened, Endangered, Candidate Species

The Project area as shown in the NOP includes habitat for State and federally listed (and candidate) species such as Crotch's Bumble Bee (*Bombus crotchii*), giant garter snake (*Thamnophis gigas*), Swainson's hawk (*Buteo swainsoni*) (SWHA) and tricolored blackbird (*Agelaius tricolor*). If during the environmental analysis for the Project, it is determined that the Project may have the potential to result in "take", as defined in the Fish & G. Code, section 86, of a State-listed species, the Draft Environmental Impact Report (DEIR) shall disclose an Incidental Take Permit (ITP) or a consistency determination (Fish & G. Code, §§ 2080.1 & 2081) may be required prior to starting construction activities. The DEIR must include all avoidance and minimization to reduce the impacts to a less than significant level. If impacts to listed species are expected to occur even with the implementation of these measures, mitigation measures shall be proposed to fully mitigate the impacts to State-listed species (Cal. Code Regs., tit. 14, § 783.2, subd.(a)(8)).

CDFW encourages early coordination to determine appropriate measures to offset Project impacts and facilitate future permitting processes and to coordinate with the U.S. Fish and Wildlife Service to coordinate specific measures if federally-listed species are present within the Project limits.

Species of Special Concern

The Project area as shown in the NOP includes suitable habitat for CDFW Species of Special Concern (SSC) such as Burrowing owl (*Athene cunicularia*), American badger (*Taxidea taxus*), Northern harrier (*Circus hudsonius*), and Loggerhead shrike (*Lanius ludovicianus*).

CDFW recommends that the project mitigate potential impacts to sensitive species by conducting surveys of the project site and the surrounding vicinity. Surveys should be designed to disclose the presence of SSC and be conducted at the time of year when the species are both evident and identifiable. Field surveys should be scheduled to coincide with the appropriate breeding or other life history stage of animals. If the survey discloses that sensitive species are present on or adjacent to the project site, then the DEIR should contain mitigation proposals which reduce the project's impacts to those species to a level that is less than significant.

Lake and Streambed Alteration Program

The DEIR should identify all perennial, intermittent, and ephemeral rivers, streams, lakes, other hydrologically connected aquatic features, and any associated biological resources/habitats present within the entire Project footprint (including utilities, access and staging areas). The DEIR should analyze all potential temporary, permanent, direct, indirect and/or cumulative impacts to the above-mentioned features and associated biological resources/habitats that may occur because of the Project. If it is determined the Project will result in significant impacts to these resources the DEIR shall propose appropriate avoidance, minimization and/or mitigation measures to reduce impacts to a less-than-significant level.

Section 1602 of the Fish and Game Code requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following:

- 1. Substantially divert or obstruct the natural flow of any river, stream or lake;
- 2. Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or
- 3. Deposit debris, waste or other materials where it may pass into any river, stream or lake.

Please note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

If upon review of an entity's notification, CDFW determines that the Project activities may substantially adversely affect an existing fish or wildlife resource, a Lake and Streambed Alteration (LSA) Agreement will be issued which will include reasonable measures necessary to protect the resource. CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code 21065). To facilitate issuance of an LSA Agreement, if one is necessary, the DEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended, since modification of the Project may avoid or reduce impacts to fish and wildlife resources. All LSA Notification types must be submitted online through CDFW's Review/EPIMS Permit Information Management System (EPIMS). For more information about EPIMS, please visit https://wildlife.ca.gov/Conservation/Environmental-Review/LSA.

Please note that other agencies may use specific methods and definitions to determine impacts to areas subject to their authorities. These methods and definitions often do not include all needed information for CDFW to determine the extent of fish and wildlife resources affected by activities subject to Notification under Fish and Game Code section

1602. Therefore, CDFW does not recommend relying solely on methods developed specifically for delineating areas subject to other agencies' jurisdiction (such as United States Army Corps of Engineers) when mapping lakes, streams, wetlands, floodplains, riparian areas, etc. in preparation for submitting a Notification of an LSA.

CDFW relies on the lead agency DEIR analysis when acting as a responsible agency issuing an LSA Agreement. CDFW recommends lead agencies coordinate with us as early as possible, since potential modification of the proposed Project may avoid or reduce impacts to fish and wildlife resources and expedite the Project approval process. CDFW recommends incorporating this information into any forthcoming CEQA document(s):

- Mapping and quantification of lakes, streams, and associated fish and wildlife habitat (e.g., riparian habitat, freshwater wetlands, etc.) that will be temporarily and/or permanently impacted by the Project, including impacts from access and staging areas. Please include an estimate of impact to each habitat type.
- 2. Discussion of specific avoidance, minimization, and mitigation measures to reduce Project impacts to fish and wildlife resources to a less-than-significant level. Please refer to section 15370 of the CEQA Guidelines.
- 3. Notification of a Streambed Alteration Agreement under Fish and Game Code section 1602, since an ephemeral drainage and associated tributaries are present within the project area and maintain a hydrologic connection to Spring Creek.

Migratory Birds and Birds of Prey

Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C., §§ 703-712). CDFW implemented the MBTA by adopting the Fish & G. Code section 3513. Fish & G. Code sections 3503, 3503.5 and 3800 provide additional protection to nongame birds, birds of prey, their nests and eggs. Potential habitat for nesting birds and birds of prey is present within the Project area. The proposed Project should disclose all potential activities that may incur a direct or indirect take to nongame nesting birds within the Project footprint and its close vicinity. Appropriate avoidance, minimization, and/or mitigation measures to avoid take must be included in the DEIR. Measures to avoid the impacts should include species specific work windows, biological monitoring, installation of noise attenuation barriers, etc.

General Avian and Bat Impacts

The primary threats of solar array development to avian and bat species appear to be from collisions and electrocutions. Collisions with PV equipment can include direct collisions into guy wires or transmission lines. Other collisions are less understood such as the "lake effect", first described in Horvath et al. (2009). Utility-scale PV facilities may attract migrating waterfowl and shorebirds through the "lake effect", where birds and/or insects can mistake a reflective solar facility for a water body and collide with the structures as they attempt to land on the panels. Injuries from collisions with collectors/reflectors may

result in immediate death due to fatal blunt trauma, or stranding. Stranding can occur when an individual is injured by collision impact and is unable to take off or when they require a running start on the water's surface. The document should include evaluation of the potential impacts to migratory birds and measures to reduce the risks of avian collisions such as adding special patterns to the photovoltaic panels.

Linear features such as generator-tie lines, collector lines, and interior and perimeter fences present collision hazard to birds, and electric lines represent a potential electrocution hazard (Huso, et al. 2016). The DEIR should include measures that require all powerlines to be placed underground, if feasible. When lines cannot be placed underground, appropriate avian protection designs should be employed, such as being be fitted with bird flight diverters or visibility enhancement devices. As a minimum requirement, the collection system should conform with the most current edition of the Avian Power Line Interaction Committee guidelines to prevent electrocutions found at this link: https://www.aplic.org/Electrocutions.

The DEIR should include a requirement for avian mortality surveys to meet the following objectives:

- Estimate the total number of birds and bats killed at the Project site within a specified time period.
- Determine whether there are any spatial or temporal/seasonal patterns of total bird fatality.
- Evaluate species composition and which taxonomic groups may be at risk.
- Provide results that allow comparisons with other solar sites and to evaluate changes in fatality due to adaptive management.

The DEIR should include a requirement to develop an Avian and Bat Protection Plan or Bird and Bat Conservation Strategy (BBCS) in coordination with the U.S. Fish and Wildlife Service (USFWS) and CDFW. The purpose of the BBCS is to:

- Describe baseline conditions for bird and bat species present within the Project site, including results of site-specific surveys;
- Assess potential risk to birds and bats based on the proposed activities;
- Specify conservation measures that will be employed to avoid, minimize, and/or mitigate any potential adverse effects to these species;
- Describe the incidental monitoring and reporting techniques that will take place during construction; and provide details for post-construction monitoring; and specify the adaptive management process that will be used to address potential adverse effects on avian and bat species.

Swainson's hawk Protocol-level Surveys

The Project is located within suitable foraging and nesting habitat for SWHA (*Buteo swainsoni*), a state threatened species, also protected under Fish and Game Code section 3503, 3503.5 and the federal Migratory Bird Treaty Act (MBTA). Therefore, impacts to

SWHA may be considered potentially significant unless adequate mitigation is incorporated.

CDFW recommends the DEIR incorporate a requirement for a qualified biologist to conduct SWHA protocol-level surveys during all survey periods throughout the nesting season prior to the commencement of all construction activities, regardless of potential vegetation removal. Protocol-level surveys should be conducted within a minimum 1/2-mile radius around the project area in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee, 2000) as follows:

- January to March 20- One (1) Survey, All Day
- March 20 to April 5- Three (3) Surveys, Sunrise to 1000 / 1600 to Sunset
- April 5 to April 20- Three (3) Surveys, Sunrise to 1200 / 1630 to Sunset
- April 21 to June 10- Monitoring
- June 10 to July 30- Three (3) Surveys, Sunrise to 1200 / 1600 to Sunset

Nests found within 0.50 miles should be monitored either continuously or periodically depending on the construction or maintenance activities and level of disturbance until young have fledged, are feeding independently and are no longer dependent on the nest. Additionally, CDFW recommends on-site monitoring by a qualified biologist familiar with the species, as buffers may need to be increased based on the birds' tolerance level to the disturbance as activities change and as the birds' transition through different stages of the nesting cycle.

Loss of Swainson's hawk Foraging Habitat

To reduce impacts to SWHA to less than significant, CDFW recommends the follow measure is incorporated into the DEIR:

Compensatory Mitigation for Permanent Impacts to SWHA Foraging Habitat. RWE Solar Development, LLC (RWE) shall quantify the total acreage of Project impacts to SWHA foraging habitat. Two seasons of temporary impacts to foraging habitat shall be considered and mitigated for as permanent impacts. To reduce impacts to SWHA foraging habitat to a less than significant level, RWE will mitigate impacts by either purchasing SWHA foraging habitat credits from a CDFW-approved conservation bank OR by providing both the permanent protection and management of Habitat Management (HM) lands, including calculation and deposit of management funds as approved by CDFW.

CDFW recommends that a combination of onsite and off-site conservation should be evaluated in the DEIR.

Pollinators

The DEIR should include measures to increase use by pollinators or by designing the Project to optimize a balance between electrical generation and agricultural production

(Jossi 2018) or native plants. Solar sites can be planted with deep-rooted native flowers and grasses that capture and filter storm water, build topsoil, and provide abundant and healthy food for bees and other insects that provide critical services to our food and agricultural systems as described on the Fresh Energy website at https://fresh-energy.org/beeslovesolar/. CDFW recommends consideration of pollinator patches through the project site, particularly along fence lines and habitat edges.

Wildlife Connectivity

The DEIR should include all potential direct and indirect Project-related impacts to riparian areas, wetlands, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and/or special status species, open space, and adjacent natural habitats in the cumulative effects analysis. The DEIR should preserve, protect, and avoid impacts to natural, undisturbed habitats that provide movement corridors for sensitive wildlife species. If corridors are adversely affected, damaged habitat shall be replaced with habitat of equivalent value or enhanced to enable the continued movement of species. Particular attention shall be focused on retaining habitat areas that are contiguous with other existing natural areas and/or wildlife movement corridors.

Mass Grading and Solar Panel Site Selection

Mass grading permanently alters the landscape decreasing habitat complexity and natural landform. Some solar arrays require flat, even ground to be constructed and some developers prefer solar arrays to have a gravel or road base beneath the panels for ease of access and maintenance. The construction of solar array footings and other operation-related structures can result in degradation of habitat, habitat loss, and fragmentation. Estimates suggest that close to 90 percent or more of the vernal pool habitat in the Central Valley and in other parts of the state has been lost. Recent studies have documented continuing vernal pool habitat loss in recent decades, with over 13 percent of the remaining Central Valley vernal pool habitat (137,100 acres) being lost from baseline conditions in 1976-1995 to the conditions in 2005.

The activities associated with clearing may also disturb associated soil seed banks that sustain local plant populations. Clearing may also cause fragmentation and loss of sensitive habitats (Bauer et al. 2015) and create edge effects that permeate far beyond the solar array (Harris 1988, Murcia 1995). Removal of vegetation has also been shown to make communities vulnerable to colonization by invasive plant species and to spread pathogens (Mallery 2010). Permanent vegetation or wetland conversion may result in the loss of special-status plant or animal species and the loss of habitat that supports numerous wildlife species.

CDFW recommends avoiding mass grading activities to the maximum extent possible when developing site layout and ensuring solar panel supports are sited outside of streams, wetlands, and vernal pools.

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 California Natural Diversity Database (CNDDB). The CNNDB field survey form can be found at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://wildlife.ca.gov/Data/CNDDB/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

Pursuant to Public Resources Code §21092 and §21092.2, the Department requests written notification of proposed actions and pending decisions regarding the proposed project. Written notifications shall be directed to: California Department of Fish and Wildlife North Central Region, 1701 Nimbus Road, Rancho Cordova, CA 95670.

CDFW appreciates the opportunity to provide early comments on the Project and to assist in identifying and mitigating Project impacts on biological resources. CDFW personnel are available for consultation regarding biological resources and strategies to minimize impacts. Questions regarding this letter or further coordination should be directed to Michael Shun, Senior Environmental Scientist (Specialist) at (916) 767-8444 or michael.shun@wildlife.ca.gov.

Sincerely,

DocuSigned by:

Tanya Sluya

1ABC45303752499...

Tanya Sheya Environmental Program Manager

ec: Dylan Wood, Senior Environmental Scientist (Supervisor)
Michael Shun, Senior Environmental Scientist (Specialist)
Department of Fish and Wildlife

Office of Planning and Research, State Clearinghouse, Sacramento

REFERENCES

- Bauer, S., J. Olson, A. Cockrill, M. Van Hattem, L. Miller, M. Tauzer, and G. Leppig. 2015. Impacts of surface water diversions for marijuana cultivation on aquatic habitat in four northwestern California watersheds. PLoS ONE 10:e0120016.
- Harris, L. D. 1988. Edge effects and conservation of biotic diversity. Conservation Biology 2:330–332.
- Horvath, G., Kriska, G., Malik, P., and Roberston, B. 2009. Polarized light pollution—A new kind of ecological photopollution: Frontiers in Ecology and the Environment, v. 7, p. 317 325.
- Huso, Manuela, Dietsch, Thomas, and Nicolai, Chris, 2016, Mortality monitoring design for utility-scale solar power facilities: U.S. Geological Survey Open-File Report 2016-1087, 44 p.
- Jossi, Frank. 2008. Scientific American. Solar Farms Produce Power—and Food. Retrieved on May 21, 2020
- Mallery, M. 2010. Marijuana National Forest: Encroachment on California public lands for cannabis cultivation. Berkeley Undergraduate Journal 23:1–17.
- Murcia, C. 1995. Edge effects in fragmented forests: Implications for conservation. Trends in Ecology and Evolution 10:58–62.