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June 14, 2019

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Governor's Office of Planning & Research

JUNE 14 2019

STATE CLEARINGHOUSE

Subject: Comments on the Draft Supplement Environmental Impact Report for the Proposed Strauss Wind Energy Project (SCH#2018071002; 16CUP-00000-00031; 18CDP-00000-00001; 18VAR-00000-00002; 18EIR-00000-00001), County of Santa Barbara

Dear Ms. Pfeifer:

The California Department of Fish and Wildlife (CDFW) received a Draft Supplement Environmental Impact Report (SEIR) from the County of Santa Barbara (County) as lead agency for the Proposed Strauss Wind Energy Project (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹ CDFW also provided a comment letter on August 18, 2018, for the Notice of Preparation of this SEIR.

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

CDFW's 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 & Game Code, §§ 711.7, subdivision (a) & 1802; Public Resources Code, § 21070; CEQA Guidelines, § 15386, subdivision (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 directed to provide biological expertise (as available) during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect state fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Public Resources Code, § 21069; CEQA Guidelines, § 15381). Permit applications (1600-2018-0314-R5 and 2081-2018-0065-05) have been submitted for the Project, and CDFW will need to exercise

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.

regulatory authority as provided by the Fish and Game Code, including (but not limited to) lake and streambed alteration (Fish & Game Code, § 1600 *et seq.*) and the California Endangered Species Act (CESA) (Fish & Game Code, § 2050 *et seq.*).

Project Description and Summary

Objective: Strauss Wind, LLC, an affiliate of BayWa r.e. Wind, LLC, proposes to construct and operate a 102 megawatt (MW) wind energy facility south of the City of Lompoc. The Project's Wind Site is located on 2,970 acres, consisting of 11 properties, and the Project's transmission line corridor would be located on 11 properties, starting at the Wind Site and running east and northeast to the City of Lompoc. The major components of the project include:

Major components of the Project include:

- Construction and operation of up to 30 Wind Turbine Generators (WTGs) up to 492 feet tall;
- Development of 14.3 miles of new access roads;
- Construction of an approximate 1.4-acre switchyard;
- Widening of 16.1 miles of existing non-County roads at the wind farm site and along the transmission line;
- Modifications to San Miguelito Road;
- Construction of communication system and meteorological towers;
- Construction and maintenance of on-site electrical lines, an approximate 1-acre substation, and an approximate 0.4-acre operations and maintenance building;
- Construction of a new 7.3-mile, 115-kilovolt (kV) transmission line to interconnect with the Pacific Gas and Electric (PG&E) electric grid;
- Installation of 8.6 miles of 115-kilovolt (kV) transmission line from the on-site substation to Pacific Gas & Electric (PG&E) Cabrillo Substation in Lompoc and upgrades to the PG&E substation for interconnection;
- Reconductor (replacing wires and possibly poles) for 0.6 miles along PG&E's existing Manville 115-kV power line from the proposed switchyard to PG&E's Cabrillo substation in the City of Lompoc; and,
- Upgrades to the Cabrillo substation.

Strauss Wind, LLC has long-term lease agreements with the property owners of the 2,988 acres. The Project would have an aggregate electrical generating capacity of 102 megawatts MW, which would supply approximately 44,700 homes with electricity per year.

Location: The Project is located on approximately 2,988 acres of rural land accessed via San Miguelito Road. The Project site is currently zoned for agriculture and situated on coastal ridges approximately 3 to 5 miles southwest of the City of Lompoc, Santa Barbara County. The proposed Project is located within the Santa Ynez Mountains along the coast between Jalama Beach and Point Arguello. The southern Project boundary is situated within the coastal zone. The Project area is bounded by Vandenberg Air Force Base (VAFB) to the south and west and private property to the north and east. Surrounding land uses include rangelands to the north, west, and south and a diatomite mine to the east.

Habitat types on-site with the potential to be impacted by the Project include coastal scrub, freshwater marsh, riparian scrub, eucalyptus woodland, live oak woodland, native and annual

grassland, native perennial grassland, and ruderal. Project impacts include an estimated permanent removal of 42.9 acres of habitats and temporary removal of 126.6 acres of habitats (for WTG and power pole installation and construction staging and underground lines).

Wildlife with the potential to be impacted by the Project from construction and/or operational activities include: the federal and state endangered and state fully protected unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*); the federal endangered El Segundo blue butterfly (*Euphilotes battoides allyni*); the federal threatened and state Special Species of Concern (SSC) California redlegged frog (*Rana aurora draytonii*); the federal and state endangered Gaviota tarplant (*Deinandra increscens* ssp. *villosa*); the California SSC San Diego desert woodrat (*Neotoma lepida intermedia*), coast horned lizard (*Phrynosoma coronatum frontale*), and silvery legless lizard (*Anniella pulchra pulchra*); and, the California Native Plant Society List 1B mesa horkelia (*Horkelia cuneata puberula*), black-flowered figwort (*Scrophularia atrata*), and Kellogg's horkelia (*Horkelia cuneata sericea*).

Wildlife with the potential to be impacted by the Project from construction and/or operational activities including WTG and power line strikes include: the state endangered and fully protected American peregrine falcon (*Falco peregrinus anatum*); the state fully protected and SSC golden eagle (*Aquila chrysaetos*); the state fully protected white-tailed kite (*Elanus caeruleus*); and 11 additional bird species and 5 bat species that are SSC.

Comments and Recommendations

CDFW is in the process of issuing the Incidental Take Permit (ITP) under CESA for this Project. In processing the ITP, we have had regular and ongoing meetings with Strauss Wind, LLC (Applicant) to resolve data gaps and complete the appropriate analysis for the Gaviota tarplant. While that process is ongoing, the ITP cannot be finalized until the SEIR is certified. CDFW appreciates the efforts taken to date by the Applicant to address our data needs and expect that many of the following comments regarding Gaviota tarplant will be addressed during the CESA process.

CDFW offers the comments and recommendations below to assist the County in adequately identifying, avoiding 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 document.

For impacts demonstrated to be unavoidable in the SEIR, CDFW recommends the measures or revisions below be included in a science-based monitoring program (with adaptive management strategies) as part of the Project's mitigation, monitoring, and reporting program (Public Resources Code, § 21081.6).

Comments Requesting Clarification

- 1) Leach Lines: Section 4.12 of the SEIR states that two 100-foot-long leach lines will be located "just north of the O&M facility in native soil." The Hydrology and Water Quality section of the SEIR, Table 4.12-1 states, "Groundwater. The Project would not substantially deplete groundwater supplies or interfere with groundwater recharge. Effluent from facility drains would be disposed of through a proposed leach line system." However, the Project Description in the Biological Resources section does not mention a

leach line as being a component of the Project or analyze potential biological effects.

The location of the leach lines is proximal to known populations of listed Gaviota tarplant and could potentially be impacted by leachate generated from the Project. Increased surface or shallow subsurface moisture would have an effect, either directly or indirectly, by facilitating invasive ant establishment, allowing competing plants/perennial plant to crowd out the annual Gaviota tarplant, and changing existing shallow, soil hydrology. CDFW recommends the SEIR identify and evaluate alternative locations and technologies to the proposed leach lines that would avoid or minimize potential impacts to Gaviota tarplant.

- 2) Vegetation Classification – Survey Season: The SEIR states “[t]he following minimum vegetation mapping units applied during vegetation mapping: 0.5–1.0 acre for inaccessible areas of the site due to steep terrain and poison oak (*Toxicodendron diversilobum*). Appendix C2. If vegetation observed did not meet the membership rules of the vegetation communities in these sources, a new name was recorded based on the dominant species observed, consistent with the MCV2 Veg mapping for the 100-foot wide Transmission line corridor, 60-foot wide vehicle access corridor was conducted on May 16, 29, 30, 31, 2018, and June 6, and 7, 2018.”

The dates indicated in the SEIR are late in the plant survey season. This could explain why the Manual of California Vegetation alliances could not be determined in some cases, resulting in many missed or misidentified herbaceous annuals. We recommend that these areas be re-mapped with the results included in the final SEIR.

- 3) Mapping Effort: Appendix C3, Page 123 states “[i]t is highly likely that precise plant community mapping efforts would yield a greater number of more specific plant communities.” The SEIR should clarify if the mapping effort used in the analysis is adequate to make a complete assessment of impacts to sensitive vegetation communities. CDFW is concerned if additional mapping prior to impacting habitat is needed to accurately determine project impacts and mitigation.
- 4) Gap Areas – December Surveys: Appendix C5 (Gap Area Survey Report) indicates that surveys, including vegetation mapping, for the Gap Areas (that were not included in previous biological surveys) were conducted in December of 2018. Annual plant species that could dominate many vegetation communities are typically dormant and easily misidentified during December. Therefore, CDFW is concerned that the December surveys result in less accurate mapping than if surveyed during the optimal time for detection.
- 5) Gap Areas – Native Stands: California’s grasslands and flower fields vegetation types are among the most difficult to analyze and study. The greatest challenge comes from the variation in species composition and abundance from early to late season and between years. Researchers and consultants have tended to underestimate the significance of native herbaceous plants because they are frequently at their highest cover either very early or very late in the season and may have very low cover during the spring and summer, when non-native grasses dominate and when field work is often performed. Additionally, in some years, a given area may be characterized by an abundance of non-native forbs and grasses, while in other years native herbs may

dominate. Given this inter-seasonal and inter-annual variance of cover between the diagnostic species and the less diagnostic species, identification of herbaceous vegetation should be more broadly inclusive for nativity. Specifically, relative cover as low as 10 percent natives could be considered as a native stand (CDFW, 2019).

Accurate mapping of vegetation communities during the optimal time of year is important for full disclosure. This allows the Project to adequately assess impacts and determine appropriate avoidance, minimization, and mitigation for sensitive vegetation communities. CDFW believes the 10 percent relative cover threshold would be more appropriate to determine native vegetation due to the timing of the gap surveys and the inter-seasonal and inter-annual variance of cover vegetation at the Project site.

- 6) Transmission Line Corridor: Plant communities in the proposed transmission line corridor appear to have not been mapped (SEIR Page 89). However, Appendix C states the transmission line corridor has been mapped. Please clarify this inconsistency. The omission of mapping and accurate determination of impacts in these areas may significantly underestimate the proposed impact to sensitive vegetation communities in the SEIR.
- 7) White Lights: To minimize impacts to avian species, CDFW recommends (consistent with Federal Aviation Administration [FAA] requirements) that the minimum number pilot warning "white" lights be utilized for the Project. The white lights should use the longest permissible duration between flashes or strobes. White strobe lights have been shown to be comparatively less disruptive to night-migrating birds than red or non-strobe lighting (USFWS, 2007).

Project Description

Comment #1: Gaviota Tarplant Analysis

Issue: There are seven identified populations of Gaviota tarplant: Lion's Head (near Point Sal), Point Arguello, Tranquillion Mountain/Sudden Peak, Point Conception, Hollister Ranch, Santa Ynez Mountains, and Gaviota (USFWS, 2011). The Project proposes impacts to the Tranquillion Mountain/Sudden Peak population of Gaviota tarplant. This population contains a substantially larger number of individuals – more than all of the other six recorded populations combined (Table 1).

Table 1. Gaviota Tarplant Populations

Population	Maximum Number of Recorded Individual Plants*
Lion's Head (near Point Sal)	611
Point Arguello	750
Tranquillion Mountain/Sudden Peak	5,008,360
Point Conception	10,230
Hollister Ranch	1,101
Santa Ynez Mountains	700
Gaviota	1,200

*Data from CNDDDB, corrected to only include *Dienandra increscens villosa*

As shown in the above table using data from the California Natural Diversity Database (CNDDDB), the Project proposes to impact the entire Tranquillon Mountain/Sudden Peak population of Gaviota tarplant, except for approximately 12 acres and 202 plants outside of the Project footprint (Occurrences 24, 29, and 30; Table 2). The Tranquillon Mountain/Sudden Peak is a major core population for this species. To assess species impacts, CDFW evaluates both direct and indirect impacts to Gaviota tarplant that could affect the quality, health, and long-term outlook (viability) of an occurrence/population.

Table 2. Occurrences that Comprise the Tranquillon Mountain/Sudden Peak Population
(Grey Shading Denotes Project Impacts to Population)

Occurrence	Acreage	Number of Individuals	Project Impacts Acres / Percent		Project Impact Individual Tarplants	
18	149.2	3,729,112	24	16%	616,120	17%
24	10	~200				
25	9	1				
26	24.3	10,391	1	4%	2,067	20%
27	7.6	230,975	1.7	22%	56,597	25%
28	9.5	492,660	0.4	4%	54,079	11%
"Estimated"	14.1	545,019	14.4	100%	545,019	100%
29	1	1				
30	1	1				
Total	232	5,008,360	41.4	18%	1,273,882	26%
* CNDDDB maps Occurrence 25 on the Project site near turbine N-9, this occurrence is not included in the SEIR maps or data submitted to CDFW						
Data in Table is from CDFW and USFWS records						

Specific Impact:

- 1) The SEIR appears to limit the impact analysis for Gaviota tarplant to the acreage being directly graded. However, this approach can substantially underestimate the total impact to this species. Other potential impacts to Gaviota tarplant include altered surface hydrology, shading, vibration, reduced patch size, genetic viability as affected by small (or biologically isolated/fragmented) population size, loss of reproductive vigor in small populations or patch sizes, stochastic (random) extirpation/extinction events due to the small size and isolation of the species, increased fire risk, effects from invasive ants and plant species, effect on pollinators including from tower vibration, changes in wind speed from turbines, and night lighting.

Isolation/Fragmentation – Turbines, roads, and other Project disturbances have the potential to impact every occurrence of Gaviota tarplant on the Project directly, overtime (indirectly), and cumulatively. One of CDFW's major concerns is that the Project has been designed to often bisect an occurrence, fragmenting it, and creating small islands of isolated individuals. Based on review of the SEIR (Section 4.5), it appears that the impact analysis and calculations only capture the soil disturbance limit. It is unclear how fragmentation, isolation, edge effects, reduced pollination and other such impacts that could occur to the remaining disturbed mosaic of Gaviota tarplant have been accounted. The many occurrences of Gaviota tarplant proposed for avoidance would be left in smaller, isolated patches surrounded by structures and edge disturbance.

Pollination – Studies indicate that if pollinator habitat within 1,000 m of host plants is eliminated, seed set of plant species may be decreased by as much as 50 percent. Additional studies suggest that the degradation of pollinator habitat is likely to adversely affect the abundance of pollinator species (Jennersten, 1988; Rathcke and Jules, 1993).

Surface Hydrology – Runoff from pads, roads, compacted edges of roads, buildings, and other facilities may significantly alter the surface hydrology that currently supports the Gaviota tarplant on the Project site. Collecting surface water from concrete pads and structures and diverting it to a basin would alter the local surface and subsurface soil moisture/hydrology in the drainage sub-basins that supports the Gaviota tarplant.

Heat Island Effect – The heat island effect from large developed concrete structures will modify the microclimate of the Gaviota tarplant occurrences.

- 2) CDFW is concerned that the Project, as designed, will directly and/or indirectly impact all but 5 percent of the Tranquillon/Sudden Peak Gaviota tarplant population. This would substantially reduce the species' resiliency to adapt and persist under climate change. Of the seven populations of Gaviota tarplant recognized (USWFS, 2011), five occur on coastal terraces, which are at risk of erosion due to predicted sea level rise from climate change. The population on the Project site is the largest one of two known populations that are not located on coastal terraces subject to sea level rise and are located at the species' higher elevations. The Project proposes to impact nearly the entire Tranquillon Mountain/Sudden Peak population, leaving the small Santa Ynez Mountains population of 700 plants as the only other high elevation population considered safe from sea level rise impacts.

Why Impact Would Occur: The Project initially appears to avoid roughly 80% of the tarplant acreage which is estimated to correlate to 74% of individual plants. However, when considering habitat fragmentation, edge effects, invasive species proliferation, and the loss of pollinator availability, the impact acreage is substantially greater than that currently disclosed in the SEIR.

Evidence Impact would be significant:

Isolation/Fragmentation – The conservation of Gaviota tarplant is dependent upon several factors that include (but are not limited to):

- The protection and management of existing populations and the habitat which supports them;
- The maintenance of areas of sufficient size and configuration to sustain natural ecosystem components, functions, and processes (e.g., full sun exposure, natural fire and hydrologic regimes, adequate biotic balance to prevent excessive herbivory);
- Protection of existing substrate continuity and structure, connectivity among groups of plants within geographic proximity to facilitate gene flow among the sites through pollinator activity and seed dispersal; and,
- Sufficient adjacent suitable habitat for vegetative reproduction and population expansion.

Since the proposed on-site open space area would be surrounded by existing and potential future development, trails, and irrigated slopes, the value of the on-site open space will be dramatically reduced for native plants and animals. Studies have demonstrated that habitat patches that are road-less and inaccessible to humans serve to better conserve many target

species than do areas with roads and accessible habitat patches (National Research Council, 1995). Additionally, studies show that habitat remnants from 24 to 247 acres do not retain their complement of native vertebrate species for longer than a few decades, leading to collapse of the ecosystem (Soule, 1992).

A smaller patch size also becomes subject to greater influences of edge effect. These include Argentine ant invasions known to occur when irrigation is introduced, as well as competition from non-native species, heat island effect, shading, noise, lighting, human disturbance, fuel modification, and not having enough land to properly respond to climate pressures and/or carry out all parts of a lifecycle, including pollinator support (Menke, 2007; Mitrovich, 2010; Lach, 2008; Tanowitz, 1982; B. Baldwin, 2001).

Large concrete slabs, paving, trails, debris basins, housing structures, v-ditches, and irrigated areas retain moisture in the soil. Invasive Argentine ants thrive in this perennially moist zone. Invasion and establishment of Argentine ant colonies may occur due to soil disturbance, introduction of hardened surfaces (paving, cement, storm drains and structures), and irrigation (Menke, 2007). Sites within 200 meters (656 feet) of urban areas are more likely to have been invaded by Argentine ants (Mitrovich, 2010). This is significant because Argentine ants negatively impact and displace native ants, altering the ecosystem. Studies show native honeybees spend 75 percent less time foraging on inflorescences with Argentine ants, reducing seed production and long-term population viability of native plants (Lach, 2008).

Pollination – Gaviota tarplant depends on the successful transfer of pollen between plants in order to produce seeds. Gaviota tarplant are self-incompatible (Tanowitz, 1982; B. Baldwin, 2001), meaning that self-fertilization is impossible, and insects are necessary for the transfer of pollen. This type of incompatibility system that tarplant species possess (sporophytic) makes their ability to reproduce particularly vulnerable to loss of genetic variation within and between populations (B. Baldwin, 2001).

Tarplant pollinators observed on the flowers of Gaviota tarplant include several species of flies, bees, skippers, and butterflies (Tanowitz, 1982; Howald, 1989; Niehaus, 1971). Studies to quantify the distance that bees will fly to pollinate their host plants are limited in number, but the few that exist show that some bees will routinely fly 100 to 500 m (328 to 984 ft) to pollinate plants. Some bees have known to fly at least 1,000 m (3,280 ft) to pollinate flowers (Steffan-Dewenter and Tschamntke 2000).

Surface Hydrology – The removal of habitat can significantly change the local soil hydrology by altering the “soil hydraulics” or redistribution of moisture in the root zone (Meinzer, 2004).

Heat Island Effect – Thermal regimes affect habitat quality and biogeochemical processes. An increase in temperature of 1.5 degrees Celsius has been shown to induce earlier flowering time (Primack, 2004). This can be significant as blooming is timed to coincide with maximum pollinator availability, and Gaviota tarplant rely on successful pollination to produce viable seed.

Recommended Potentially Feasible Mitigation Measure(s):

CDFW recommends the SEIR include an analysis of how Project impacts would affect the status of Gaviota tarplant throughout its range. This includes geographic/geologic setting, spatial distribution from the coast, elevation ranges, and potential impacts to the species from

sea level rise. To provide an adequate analysis of the magnitude and extent of the proposed impact/taking to Gaviota tarplant, we recommend:

- 1) An evaluation of the Project's impacts on the long-term persistence of Gaviota tarplant as a species. This should include how proposed impacts would affect the ability to provide stable, healthy, higher elevation populations of the species that would not be at risk from climate change, including rising sea level estimates.
- 2) An assessment of impacts that will result from Project improvements and surface water flow to Gaviota tarplant occurrences/polygons. Both the pre- and post-surface drainage flow analysis and supporting exhibits should be disclosed to demonstrate how the Project could impact subsurface flows and related water availability for Gaviota tarplant.
- 3) An analysis with supporting evidence that Project roads, turbine pads, and other facilities have been located to avoid or minimize impacts to Gaviota tarplant to the maximum extent practicable. Section 15126.6(a) of the CEQA Guidelines states that an EIR should describe "alternatives to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives of the Project but would avoid or substantially lessen any of the significant effects of the Project, and evaluate the comparative merits of the alternatives." Section 15126.6(f) of the CEQA Guidelines, the "Rule of reason", requires, "The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the Project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the Project."

CDFW believes there are feasible alternatives that would meet most of the Project objectives and significantly reduce impacts to the listed Gaviota tarplant. Such alternatives include engineering modifications to avoid bisecting/fragmenting occurrences of Gaviota tarplant (e.g., occurrences 18, 25, 26, 27 and 28), alternative wind energy technologies, alternative locations, undergrounding power lines to reduce fire risks, and Project phasing based on accuracy of tarplant surveys and mapping.

- 4) CDFW recommends conserving a buffer of 1,000 meters around any population that is proposed as mitigation or identified as "avoided" until site-specific studies on Gaviota tarplant pollinators have been conducted to demonstrate that less than 1,000 meters would be sufficient for the on-site populations.
- 5) For CESA compliance, it will be necessary to demonstrate Project design features that include measures taken to avoid and minimize the proposed taking of the species. Populations that will be impacted will need sufficient evidence to demonstrate/document impacts were minimized to the extent feasible. Areas proposed as conservation for unavoidable impacts will need to demonstrate long-term viability with adequate preserve design and buffer (i.e., large blocks of habitat with no or minimal edge effects).

Comment #2: Inconsistency and Reliability of Gaviota Tarplant Impact Acreage

Issue:

- 1) Impacts disclosed in the SEIR do not appear consistent with the Incidental Take Permit (ITP) application data provided to CDFW on February 2, 2019.

- 2) It is unclear how the impacts disclosed in the SEIR correlate to the estimated individuals associated with a numbered occurrence.
- 3) Based on the surveys completed for Gaviota tarplant, it is unclear if the correct plant (*Dienandra increscens subsp. villosa*) was reliably identified, or if *Dienandra increscens subsp. increscens* or *Deinandra paniculata* were mistakenly identified as *D. increscens villosa*.

Specific Impact: The following information was provided for impacts to Gaviota tarplant and its habitat:

- Page 4.5-38 states that construction would result in 10.3 acres (8.1% of site total) of permanent and 22.3 acres (17.4% of site total) of temporary loss or disturbance to Gaviota tarplant and its habitat (total impact of 32.6 acres). Occasional disturbance to small areas of Gaviota tarplant habitat may occur as a result of operations or maintenance activities involving clearing or vehicle operation in occupied habitat.
- Page 4.5-63 of the SEIR states: “[a] total of 27.1 acres of permanent impacts to Gaviota tarplant occupied habitat would occur from construction of the SWEP [Strauss Wind Energy Project] (14.2 percent of site total), compared with 10.3 acres under the LWEP [Lompoc Wind Energy Project].”
- The SEIR, Appendix C, states (Page 5-84) “[t]he development and operation of the turbines and access roads would result in the conversion of 6.3 acres of permanent impacts, 12.93 acres of temporary impacts for a total of 19.23 acres of suitable habitat for Gaviota tarplant, outside of critical habitat. There would be 26.32 acres of permanent impact and 71.16 acres of temporary impacts within critical habitat associated with over widened roads to accommodate construction equipment. The total 97.48 acres of temporary and permanent impacts are located in the 791-acre Sudden Bench Unit of designated critical habitat for Gaviota tarplant (Sapphos, 2018). The entire 791-acre Sudden Peak Unit of critical habitat for Gaviota tarplant is located within the Project site.”
- SEIR Page 4.5-65, BIO-5b states that impacts to Gaviota tarplant habitat during operations and maintenance would be the same as described in the LWEP EIR; however, the acreage is not provided in the SEIR.
- The information provided to CDFW by the Applicant includes an additional 14.4 acres and 545,019 individual Gaviota tarplants of “estimated impacts”. However, these numbers were not included in the SEIR analysis.
- The ITP Application submitted to CDFW states that there will be 39.5 acres of permanent impacts and 1.9 acres temporary impacts (41.4 total) to Gaviota tarplant. In addition, the maps provided to CDFW appear to have several locations depicting Gaviota tarplant impacts that are not included in the SEIR impact analysis, or the Map on Page 98 of the SEIR.

The inconsistency of the impact acreage for Gaviota tarplant results in an unreliable baseline from which Project impacts are analyzed in the SEIR. This creates a potential situation where impacts to Gaviota tarplant in certain locations may be significantly underestimated while the areas proposed to be avoided or conserved overestimated.

Why Impact Would Occur: Grading, vegetation removal, and other ground disturbances could crush and bury listed plants, including Gaviota tarplant, resulting in direct mortality. Additionally, given the expertise necessary to ensure confidence in accurately identifying Gaviota tarplant and its complex genetic relationship, CDFW is concerned that accurate identification of Gaviota tarplant may not have occurred in all instances. The accurate identification of all the species and subspecies of *Dienandra* is vital to enable CDFW to determine the extent of impacts. This allows CDFW and the Lead Agency to fully analyze avoidance, minimization, and mitigation measures proposed. Accurate distribution and abundance data for Gaviota tarplant (baseline data) is critical for the analysis in the SEIR. Avoiding areas with higher densities of Gaviota tarplant is more biologically valuable than avoiding or preserving areas that contain other *Dienandra* species or higher percentage of non-Gaviota tarplant.

Evidence Impact would be significant: The SEIR does not provide adequate disclosure of the impacts for CDFW to conclude the proposed mitigation measures fully mitigate the impacts to Gaviota tarplant, which is required under CESA (Sections MM BIO-5a and MM BIO-6). This may create a consistency/adequacy issue where CDFW is acting as a Responsible Agency with related CEQA actions. CDFW considers any Project-related development activity (both direct and indirect) that would impact the ability of Gaviota Tarplant to persist long-term as "take" under CESA.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW recommends the SEIR include an updated baseline and impact analysis with supporting mapping to clarify the acreage and extent of impacts to Gaviota tarplant, including the estimated impact areas disclosed to CDFW as part of the ITP application. This analysis should include an account of the locations, accurate occurrence/polygon sizes, and the number of plants that would be impacted. This updated baseline and analysis is needed to allow the public and decision-makers a meaningful review and the ability to weigh the avoidance and mitigation measures and alternatives with the totality of the direct and indirect impacts (CEQA Guidelines, § 15088.5[a][4]).

Mitigation Measure #2: Surveys completed for Gaviota tarplant should be conducted by botanists with expertise in *Dienandra* identification. A documentation of voucher specimens collected, including the voucher identification number, should be provided so experts can verify the correct identification was made. The proper identification/verification of Gaviota tarplant is critical to establishing an accurate baseline from which impacts from the proposed Project can be analyzed in the SEIR.

Comment #3: Gaviota Tarplant Avoidance and Minimization

Issue: The Project impacts every occurrence of Gaviota tarplant on the Project site. Since all occurrences have some level of impact, the overall quality and viability of this core population of Gaviota tarplant would still incur some cumulative level of impact.

Specific Impact: The SEIR appears to only count impacts to Gaviota tarplant from direct grading. However, the Project also indirectly impacts the rest of the occurrences through edge effect and other impacts mentioned above (see Comment #1: Gaviota Tarplant Analysis). Impacting portions of an occurrence, especially bisecting a polygon down the middle, impacts the entire polygon.

Why Impact Would Occur: Without species verification and additional survey work, the long-term viability of the areas/acreage identified in the SEIR cannot be scientifically substantiated. In addition, avoidance/preservation of Gaviota tarplant without considering a suitable buffer (see Comment #1: Gaviota Tarplant Analysis – “Evidence Impact would be significant”) also reduces the long-term viability of the “avoided” occurrences of on-site Gaviota tarplant.

Evidence Impact would be significant: Inadequate avoidance, minimization, and mitigation measures for impacts to these listed species will result in the Project continuing to have a substantial adverse direct, indirect, and cumulative effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or United States Fish and Wildlife Service (USFWS).

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: There appears to be viable alternatives for turbine placements, which would result in complete avoidance of Occurrences 27 and 28. These alternatives would also avoid undisclosed “estimated impacts” to Occurrence 27 and 28, as described in the ITP Application for the Project. CDFW recommends the County evaluate these alternatives that would meet most of the Project objectives and significantly reduce impacts to the listed Gaviota tarplant.

Mitigation Measure #2: The SEIR should include alternatives that leave wholly intact occurrences of Gaviota Tarplant, surrounded on all sides by a suitable (1,000 m) buffer. Relocating turbines that are the last of a string, or that terminate in a spur that impact Gaviota tarplant, such as W-8, W-7, N-7 and E-1, would allow whole occurrences of the species to be avoided. These turbines can potentially be added in other portions of the Project to mitigate the loss of energy production, using some of the locations included in the Lompoc Wind Project that are not located within occurrences of Gaviota tarplant. To help facilitate this analysis, Figure 2-2 (Comparison of LWEP and SWEP) of the SEIR should be updated to include accurate mapping of Gaviota tarplant with supporting calculations.

Comment #4: Incomplete Vegetation Mapping

Issue:

- 1) Parts of the Project, such as the transmission line, appear to be mapped at a larger scale or not included in vegetation mapping efforts at all.
- 2) Appendix C-3 states “[i]n addition, sawtooth golden bush scrub areas were observed during 2016–2018 field surveys, but their precise area was not mapped” and “[f]urther plant community mapping efforts are needed to quantify the acreage of this vegetation type.” CDFW considers *Hazardia squarrosa* Alliance, or sawtooth golden

bush scrub alliance, a sensitive vegetation community ranked S3.

Specific Impact: Some vegetation communities may be misidentified or unidentified, resulting in undisclosed impacts to sensitive habitats.

Why Impact Would Occur: The SEIR contains conflicting information on the completeness of vegetation mapping conducted for the Project. The Project may impact sensitive vegetation communities or wildlife species that depend on these communities due to misidentified or unidentified vegetation classification. Without appropriate disclosure, CDFW is unable to recommend appropriate avoidance, minimization, and/or mitigation measures. If a vegetation community in the Project area has not previously been described, it may be because it is a rare type in that location.

Evidence Impact would be significant: An S3 ranking indicates there are 21 to 80 occurrences of this community in existence in California, S2 has 6 to 20 occurrences, and S1 has less than 6 occurrences. CDFW considers natural communities with ranks of S1 to S3 to be sensitive natural communities that meet the CEQA definition and analyzed in during environmental review (CEQA Guidelines, §§ 15380, 15063, 15065, and § 15125[c]). Without appropriate vegetation classification, the Project may underestimate or omit impacts to sensitive vegetation and result in substantial adverse direct and cumulative effect, either directly or through habitat modifications, on any sensitive natural communities and S1 to S3 ranked species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: The SEIR should contain an accurate and complete survey assessment of vegetation using verified MCV alliance/association community scientific names and ensure the alliances found on the Project are accurately described.

Mitigation for impacts to S2 ranked vegetation communities should be commensurate with the classification of only 6 to 20 occurrences in California. An list of recognized alliance/association names can be found at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153399>.

Mitigation Measure #2: CDFW recommends any lands proposed as mitigation to offset impacts to sensitive vegetation communities be preserved and managed in perpetuity under a conservation easement and managed by a qualified entity. The proposed specific mitigation location should be identified in the SEIS to ensure that mitigation is not deferred until some future time; however, the CEQA document "may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way" [[CEQA Guidelines, § 15126.4(a)(1)(B)]].

Mitigation Measure #3: CDFW recommends the SEIR provide an analysis of how the proposed mitigation measure would reduce impacts to less than significant, including a discussion on the type of mitigation activity (e.g., creation, restoration, enhancement, preservation, monitoring), mitigation location, size of the mitigation area, management in perpetuity, mechanism for protection, and any other relevant information.

Comment #5: Mitigation Proposed for Gaviota Tarplant

Issue: The SEIR states on page 4.5-64 that “[c]ompensatory mitigation for Gaviota tarplant shall be implemented to offset take; compensation lands will be managed according to the Gaviota Tarplant Mitigation Plan prepared in support of the Incidental Take Permit and Biological Opinion. Permanent disturbance to Gaviota tarplant shall be mitigated at a minimum 3:1 ratio. Areas of temporary disturbance shall be restored to pre-disturbance conditions and compensated at a 3:1 ratio. Temporary impacts to Gaviota tarplant habitat will be mitigated as permanent impacts unless monitoring demonstrates full recovery of Gaviota tarplant occurrences (plant density and extent of occupied area) in the temporarily impacted areas. To account for annual variability, the final density and extent of the Gaviota tarplant occurrence in the restored area can be adjusted to compare to pre-disturbance levels using metrics obtained from a nearby reference population, to demonstrate full recovery has occurred”.

Specific Impact: The SEIR does not identify the methodology or location to demonstrate how over 3,821,646 (3:1 ratio) Gaviota tarplant plants would be successfully established and conserved/managed in perpetuity to offset proposed impacts. To implement an experimental approach at the scale proposed on a species that has no documented research raises concerns regarding the ability for this approach to successfully offset project impacts and achieve full mitigation required under CESA [Fish & Game Code, § 2081(b)(2)].

Transplantation for listed plant species with limited distribution and specific habitat requirements typically results in a high rate of failure. Moving or translocating plants and attempting to reconstruct the community of rare plants that naturally grow is often unsuccessful because the full assemblage and of essential elements, including critical microbial components, is almost never known or reproducible in the field. Due to a currently limited understanding of phenology, reproduction, functional roles, interaction/dependence on microbes, cryptogams, and support plants, transplants [of Gaviota tarplant] may be placed into sites with both biological and physical insufficiencies. A decrease, or loss in genetic diversity may occur if genotypes from diverse sources are mixed, as well as potential outbreeding depression. Research indicates experimentation with vegetation under controlled conditions may have little relevance to natural ecosystems (Fahselt, 2007). For these reasons, transplantation is not considered to be a reliable means of conserving sensitive/listed species or reproducing functional characteristics of natural communities.

Why impact would occur: The analysis in the SEIR relies on future surveys to determine impacts, the preparation of future management plans to avoid/minimize impacts, and mitigation requirements through obtaining permits from other agencies. Without specific performance standards, such as a conceptual restoration plan with performance/success criteria, this is considered, to some degree, as deferred mitigation under CEQA (CEQA Guidelines, § 15126.4). CDFW acknowledges that the issuance of CESA take authorization for Gaviota tarplant would ultimately be implemented through state and federal permits and is under the jurisdiction of another agency to some extent (CEQA Guidelines, § 15091 [a][2]); however, the County has specific requirements for rare plants under its CEQA implementing regulations and land use requirements that necessitates the full disclosure of the above elements in the SEIR. CEQA requires the SEIR to analyze if the Project may have a significant effect on the environment as well as review if the Project will avoid the effect or mitigate to a point where clearly no significant effects would occur (CEQA Guidelines, § 15070 and § 15071).

Considering the body of scientific literature available on the long-term success of transplanting rare plant species (Fiedler, 1991), CDFW considers this practice for Gaviota tarplant at this

scale experimental in nature and not appropriate to meet CESA requirements for full mitigation [Fish and Game Code §2081(b) (2)]. In addition, the lack of knowledge on the specific pollinator of Gaviota tarplant further demonstrates that more research and information is needed before using this approach to offset substantial impacts to the species. However, CDFW does acknowledge that transplanting can be considered as a minimization measure in some instances.

Evidence impact would be significant: CDFW is concerned that the impacts to this important and major population of Gaviota tarplant will still result in a net loss of over 1,273,882 individual tarplant and 41 acres of occupied habitat within the Tranquillon Mountain/Sudden Peak population. The SEIR requirement of 3:1 ratio for mitigation does not specify any location of the mitigation to determine availability of essential components, describe how the proposed 3:1 ratio would be achieved and over what time period, or provide any scientific evidence supporting the basic premise that over 3,821,646 individuals could be successfully created in other locations. CDFW is concerned the extent and magnitude impacts to Gaviota tarplant currently proposed by the Project are potentially unmitigable under CEQA and may not meet the permit issuance criteria under CESA.

Recommended potentially feasible mitigation measure(s):

Mitigation Measure #1: To analyze if a Project may have a significant effect on the environment, the Project-related impacts, including survey results for species that occur in the Project footprint need to be disclosed in the SEIR. This information is necessary to allow CDFW to comment on alternatives to avoid impacts, as well as to assess the significance of the specific impact relative to the species (e.g., current range, distribution, population trends, and connectivity).

Mitigation Measure #2: CDFW recommends the SEIR look at further avoidance and minimization alternatives. Avoidance should consider leaving intact occurrences with a suitable buffer of at least 1000 meters. To adequately preserve, avoid, and meet the full mitigation standard under CESA [Fish and Game Code §2081(b)(2)], the SEIR should a) ensure a viable reserve that is protected from edge effects, b) include a suitable buffer, c) eliminate or minimize risks from Argentine ants, d) preserve surface and subsurface hydrology, e) provide adequate pollinator support habitat, f) allow for appropriate management activities, and g) allow lateral and elevational migration in response to climate change.

Mitigation Measure #3: Success criteria identified in the SEIR should demonstrate that any mitigation proposed is ultimately self-sustaining (i.e., no maintenance, planting, watering, or weeding required, as this is still considered the installation period) and the population has a positive population trend, for a minimum of 15 years. This recommendation for 15 years is based on the time needed to get a clear population trend for Gaviota tarplant, an annual plant species supported by a seed bank. With annual plant species, the number of individuals present above-ground from one year to the next varies dramatically, depending on factors such as the amount of rainfall, timing of rainfall, and temperature regimes during critical stages of germination and seedling growth. For example, Rindlaub (1998) reported that in 1995 and 1997, Gaviota tarplant was not abundant at the locations it was known to occur at the time (USFWS, 2011). There are some years when patches may contain few to no individuals (Howald 1989), but a seed bank likely persists in the soil.

Comment #6: Groundwater Assessment

Issue:

- 1) The SEIR indicates that the Project is underlain by a shallow, local aquifer, with average depth to water at 7 feet below ground surface. The SEIR indicates that “[l]ow producing wells in the Project area provide ranchers with a minimal amount of water supply for domestic use and cattle grazing operations. No irrigated agriculture occurs on the SWEF [Strauss Wind Energy Facility] site.” The Project proposes to use 20 gallon per minute (GPM) of well water for operations with an estimated lowering of the water table (annual average) of 1 foot. The SEIR appear to only analyze groundwater drawdown in relation to existing 50-foot-deep well heads, without addressing how Project use of groundwater will affect habitat or how the seasonal variation may be affected during dry seasons with pumping.
- 2) The SEIR includes an alluvial well as an alternative to the proposed groundwater pumping location. This well is located in a broad drainage swale approximately 2,500 feet northeast of the San Miguelito Road and Sudden Road intersection (Figure 2 of the SEIR). The existing alluvial well is located in a channel, and the SEIR indicates there is surface water 1,000 feet upstream of the well and 500 feet downstream of the well. CDFW is concerned with the placement of a new well in a stream due to potential stream dewatering from the well’s subsurface cone of depression.
- 3) The SEIR also indicates that “[t]he upper Gaviota-Sacate sandstone does feed a few springs in the project area. One spring visited during site reconnaissance had been developed for stock water with an EC measuring 620 $\mu\text{mhos/cm}$. A second spring visited was not flowing but there was vegetative evidence of seeps. These springs emanate from an indurated and locally coarser grained sandstone bed that is above the alluvial valley floor. To tap the spring zone, a well would need to be drilled on the ridge above the valley floor at a distance of roughly 4,000 feet from the O&M site”. Based on the information presented in the SEIR, it is not clear if pipelines and/or transmission of water from wells to the Project were included in the impacts to biological resources.

Specific impacts: The presence of extremely shallow ground water at 7 feet indicates the local water table supports surface vegetation. Phreatophytes, plants with root systems that obtains water from near the water table, on the Project site could be affected by even the 1-foot average draw down predicted by operational use of well water. For example, local shrubs such as California sage (*Artemesia tridentata*) have been documented as having a maximum rooting depth of 9.84 feet and California buckwheat has been documented as having more than 4 feet (<https://groundwaterresourcehub.org/gde-tools/gde-rooting-depths-database-for-gdes/>).

Installing new wells or increasing the production (duration or volume) of pumping is known to create a subsurface cone of depression. The cone of depression is a local lowering of the water table in response to the pumping action. The land area above a cone of depression is called the area of influence. Groundwater flows towards the well into the cone of depression, which can change the natural direction of groundwater flow within the area of influence around the well. If the cones of depression for two or more wells overlap, there is said to be well interference. This interference reduces the water available to each of the wells. The cone of depression from a

well might extend to a nearby stream or lake. This lowers the water table below the stream or lake level. As a result, the stream or lake begins to lose water to the groundwater aquifer near the well. This is known as induced recharge.

Streams and wetlands can be completely dried up by induced recharge from well pumping. The Oregon Water Resources Department considers wells within 0.25 miles of a stream to have a potential effect on stream flow (Raymond, Jr., 1988). Other sources state streams within a few miles can be affected as well (Penn State University, <https://www.e-education.psu.edu/earth111/node/929>).

Why impacts would occur: Shallow groundwater directly supports plants whose roots grow to the water table depth. Higher concentrations (sub saturation) soils occur in the area above the saturation point in the vadose zone. Deeper rooted plant roots also serve as a conduit that redistributes water around the local soil (soil hydraulics) thereby increasing the general moisture content of the soil above the groundwater saturation zone, supporting shallower-rooted plants. Removing habitat or altering the groundwater levels can change the "soil hydraulics" or redistribution of moisture in the root zone (Meinzer, 2004).

As long as the stream is hydraulically connected to groundwater [whether gaining or losing], lowering of groundwater levels results in an increase in leakage from the stream (i.e., a depletion in surface flows). When a well or group of wells begins to pump, all pumped water comes from reduction of groundwater storage. As the cone of depression moves and intersects streams, lakes, and springs, the pumped water is increasingly supplied by streamflow depletion. This happens by reducing outflows from the aquifer to these surface water features and/or inducing inflows from these features to the aquifer. Near-stream pumping wells may be particularly problematic from the perspective of stream depletion management. Such wells may approach a nearly direct depletion of stream flow and may do so with relatively little drawdown. Such near stream wells require special analysis to determine what, if any, impacts habitat and stream surface and subsurface hydrology (Hall, 2018).

Evidence impacts would be significant: Pumping of groundwater wells often creates a cone of depression around the wellhead. This cone of depression can result in aquifers (that once contributed to surface waters) draining surface waters and reducing instream flows. It can also alter the "soil hydraulics" or redistribution of moisture in the root zone (Kibel, 2018; Meinzer, 2004). Groundwater diversions affecting groundwater dependent habitat not included in specially protected areas is covered by the Public Trust Doctrine (Fish & Game Code, §§ 711.7, subdivision [a] & 1802).

Project water use may result in impacts to vegetation density (e.g., reduced tree canopy, reduced understory) and plant composition (e.g., shifts in vegetation type, such as herbaceous species to shrub species) from changes in groundwater levels from Project wells. Habitat loss (e.g., downed trees) and habitat fragmentation may also be detectable and could result from Project-related changes in groundwater levels. Surface water at seeps and springs, rivers and streams, or wetlands can also decrease in surface area and extent in response to lower groundwater levels. Visually detectable declines in the health of terrestrial vegetation, such as reduced tree canopy, reduced understory, shifts in vegetation type, tree mortality, and habitat fragmentation, could also result from degraded water quality. Degraded water quality due to nutrient loading from groundwater discharge may result in visible algal blooms on surface water bodies. River or stream reaches may also become narrower or drier for longer periods due to

depletions of surface water. The ecosystem services provided by groundwater supported habitat include water purification, soil preservation, carbon sequestration, flood risk reduction, and recreational opportunities. When groundwater is unsustainably managed, ecosystems can suffer, compromising these public benefits and the economic opportunities they provide (Rohde, 2018).

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW recommends the SEIR include a detailed analysis about the direct and cumulative effect of any proposed pumping of groundwater to the existing surface habitat. This should include seasonal/monthly data. Wells that do not lower groundwater levels that support stream, wetland, riparian, phreatophytic vegetation, listed plant species, or other habitat dependent on shallow groundwater should be incorporated into the Project. All wells should have a monitoring system including to track and management water withdrawal to avoid/minimize impacts to groundwater dependent vegetation.

Comment #7: Power Lines

Issue: California Public Utilities Commission (CPUC) Fire-Threat Map Adopted by CPUC January 19, 2018, identified the Project area as being in the “elevated risk” fire category. According to the CPUC website “[s]everal of the worst wildfires were reportedly ignited by overhead utility power lines and aerial communication facilities in close proximity to power lines” (<https://www.cpuc.ca.gov/firethreatmaps/>)

Specific impact: Fires resulting from power lines typically occur during Santa Ana wind events. High wind-driven fires tend to burn at a much higher intensity than non-wind driven fires. High intensity vegetation burn areas do not display good recovery of vegetation. Occurrences of Gaviota tarplant as well as all other sensitive plants, animals, and vegetation communities located on the Project site are at risk of impact from high intensity, wind driven fires potentially started by power lines associated with the Project.

Why impact would occur: The mitigation contained in the CPUC’s analysis of recent power company started fires is to cut power delivery during high-wind events. CDFW is concerned that the Project’s priority to generate electricity through high winds would prevent the shutting off power generation at the Project site during wind events deemed a moderate to high fire threat.

Evidence impact would be significant: Southern California shrubland habitats are resilient to specific fire frequencies and intensities. More frequent fires, higher intensity fires, and/or unnaturally short fire return intervals can result in the replacement (type conversion) of native communities. In many areas, fires are occurring more frequently or at a higher intensity than they would naturally, often leading to type conversion from native habitat to a vegetation community dominated by invasive weeds.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW recommends placing all power lines underground, following existing road right of ways where possible. The SEIR should also include an alternative that undergrounds all or portions of power lines to reduce the risk of fire created by the Project.

Comment #8: Impacts to Bats

Issue: A review of CNDDDB indicates that multiple bat species that are SCC are found on the Project site, including the following: silver-haired bat (*Lasionycteris noctivagans*), western mastiff bat (*Eumops perotis californicas*), pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillii*), and hoary bat (*Larurus cinereus*). CDFW is concerned with potential impacts to both bird and bat species from utility-scale renewable energy, such as the proposed Project.

Specific impact: Utility-scale renewable energy presents a variety of potential effects to avian species such as bats including, but not limited to, direct and indirect effects of loss of foraging habitat, loss of breeding habitat, direct mortality, increased anthropogenic pressures, and navigational disruptions during migration.

Why impact would occur: The construction of towers, pad and road clearing, and staging of equipment along the Project alignment are likely to lead to loss of foraging and breeding habitat for bats, and direct mortality to bats resulting from direct strikes with WTGs.

Evidence impacts would be significant: Project impacts may result in substantial adverse effects, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS. Adverse impacts to bats may occur because the measures provided do not condition the Project to implement take avoidance surveys prior to operations, including, but not limited to, ground and vegetation disturbing activities. Take of special status bat species could require a mandatory finding of significance by the Lead Agency (CEQA Guidelines, § 15065). In addition, bats are considered non-game mammals and are afforded protection by state law from take and/or harassment (Fish and Game Code § 4150, California Code of Regulations § 251.1).

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW concurs with SEIR mitigation measures BIO-10 and MM BIO-16 requiring the development of a bird and bat conservation strategy. CDFW recommends that CDFW staff are involved early in the strategy development in order to provide comments.

Mitigation Measure #2: For any Project activities that will result in the removal of trees, buildings, or other occupied habitat for any species of bat, CDFW recommends avoidance of these areas.

Mitigation Measure #3: If bats cannot be avoided by Project activities and a bat specialist determines that roosting bats may be present at any time of year, it is preferable to push any tree down using heavy machinery rather than felling the tree with a chainsaw. In order to ensure the optimum warning for any roosting bats that may still be present, the tree should be pushed lightly two to three times, with a pause of approximately 30 seconds between each nudge to allow bats to become active. The tree should then be pushed to the ground slowly. The bat specialist should determine the optimal time to disturb occupied bat habitat to maximize bats escaping during low light levels. Downed trees should remain in place until they are inspected by a bat specialist. Trees that are known to be bat roosts should not be sawn-up or mulched immediately. A period of at least 24 hours (preferably 48 hours) should elapse prior to such operations to allow bats to escape. Bats should be allowed to escape prior to demolition of

buildings. This may be accomplished by placing one-way exclusionary devices into areas where bats are entering a building that allow bats to exit but not enter the building.

Mitigation Measure #4: CDFW recommends that the Project include measures to ensure that bat habitat remains available for evicted bats or loss of bat habitat resulting from the Project, including information on the availability of other potential roosts that could be used by bats within protected open space on or near the project site.

Comment #9: Impacts to Tricolored Blackbird (*Agelaius tricolor*)

Issue: Based on an April 17, 2018 field meeting, the presence of wetlands and suitable habitat on the Project site indicates the need to conduct surveys for tricolored blackbirds (*Agelaius tricolor*), a state listed threatened species. As recommended in our August 18, 2018 NOP comment letter, CDFW recommended conducting focused surveys for tricolored blackbirds and incorporating the results into the SEIR. It appears that no current survey information for this species has been provided.

Specific impacts: Ground-disturbing activities from grading and filling, water diversions and dewatering would physically remove or otherwise alter existing streams or their function and associated riparian habitat on the Project site. Downstream areas and associated biological resources beyond the Project development footprint may also be impacted by Project-related releases of sediment and altered watershed effects resulting from Project activities. The Project will remove habitat and likely result in the loss of foraging and nesting habitat for sensitive bird species, including tricolored blackbirds. The placement of towers, access roads, and associated machinery could also lead to diminished habitat in both quantity and quality for tricolored blackbirds.

Why impact would occur: Impacts to tricolored blackbird could result from vegetation clearing and other ground disturbing activities. Project disturbance activities could result in mortality or injury to nestlings, as well temporary or long-term loss of suitable nesting and foraging habitats. Construction during the breeding season of nesting birds could result in the incidental loss of breeding success or otherwise lead to nest abandonment.

Evidence impact would be significant: Project impacts may result in substantial adverse effects, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS. Adverse impacts to tricolored blackbird may occur because the measures provided do not condition the Project to implement take avoidance surveys prior to operations, including, but not limited to, ground and vegetation disturbing activities.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW again recommends conducting focused surveys for tricolored blackbirds and incorporating the results into the SEIR. The omission of current survey information on tricolored blackbird may significantly underestimate the proposed impact to listed species in the SEIR and create a consistency/adequacy issue where CDFW is acting as a Responsible Agency with related CEQA actions. Prior to initiation of construction within or adjacent to suitable nesting habitat, a CDFW-approved biologist with experience surveying for and observing tricolored blackbird shall conduct preconstruction surveys in accordance with

established protocols to establish use of nesting habitat by tricolored blackbird colonies. Surveys will be conducted within and adjacent to suitable habitat, where access allows, during the nesting season (generally March 15 to July 31). If a nesting colony is found, no activity shall occur within a 500-foot buffer of the colony until a qualified biologist determines and CDFW confirms that all chicks have fledged and are no longer reliant on the nest site.

Mitigation Measure #2: If take of tricolored blackbird would occur from Project construction or operation, state incidental take authorization under CESA would be required for the Project. CDFW may consider the Lead Agency's CEQA documentation for its CESA-related actions if it adequately analyzes/discloses impacts and mitigation to state-listed species. Additional documentation may be required as part of an ITP application for the Project in order for CDFW to adequately develop an accurate take analysis and identify measures that would fully mitigate for take of state-listed species.

Comment #10: Impacts to El Segundo Blue Butterfly (*Euphilotes battoides allyni*)

Issue: The El Segundo blue butterfly (ESBB), a federally endangered species, was observed near the proposed Project site in 2005 (LWEP FEIR) around Tranquillon Peak and an adjacent ridge. The proposed Project has potential to impact this species through loss of habitat and/or direct mortality.

Specific Impacts: The host plant for El Segundo blue butterfly is sea cliff buckwheat (*Eriogonum parvifolium*), which is found in the middle of the south end of the Project site. According to the LWEP FEIR, there are an estimated 30.9 acres of habitat on the Project site containing the ESBB host plant. Grading for the access roads and construction of WTGs could lead to a loss of sea cliff buckwheat and other El Segundo blue associated habitat and/or direct impacts to the species.

Why impacts would occur: Impacts to El Segundo blue butterfly could result from vegetation clearing and other ground disturbing activities. Project disturbance activities could result in mortality or injury to larvae and adults, as well temporary or long-term loss of suitable nesting and foraging habitats.

Evidence impacts would be significant: Project impacts may result in substantial adverse effects, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS. Adverse impacts to El Segundo blue butterfly may occur because the measures provided in the SEIR (MM BIO-13) do not condition the Project to implement take avoidance surveys prior to operations, including, but not limited to, ground and vegetation disturbing activities.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: Prior to initiation of construction within or adjacent to suitable habitat, a CDFW-approved entomologist should conduct directed protocol surveys for the El Segundo blue butterfly during the flight season (approximately mid-June to August) within all areas of coast buckwheat known on the Project site, including areas that would be affected by construction, operation, or maintenance of the project. The surveys should include a description of methodology, description and maps of the surveyed areas, and identification of locations of

any el Segundo Blue butterflies observed within the proposed Project area (including maps and GPS coordinates). The sites where El Segundo blue butterflies are located should be described by the entomologist, including vegetation, soils, exposure, and other factors that may influence the occurrence of species at that site. If El Segundo blue butterfly is detected, occupied areas should be designated an ecologically sensitive area and protected (while occupied) by a minimum 500-foot radius during Project construction with USFWS and CDFW contacted immediately for further direction.

Mitigation Measure #2: All suitable habitat for the El Segundo blue butterfly that will be permanently or temporarily impacted by the Project should be replaced/restored in consultation with USFW and CDFW. Revegetation and restoration of suitable habitat should include the use of coast buckwheat that is salvaged from the site or native to the local area. All revegetation/restoration areas that will serve as mitigation should include preparation of a restoration plan, to be approved by USFWS and CDFW, prior to any ground disturbance. The restoration plan should include restoration and monitoring methods; annual success criteria; contingency actions should success criteria not be met; long-term management and maintenance goals; and, a funding mechanism to assure for in perpetuity management and reporting. Areas proposed as mitigation should have a recorded conservation easement and be dedicated to an entity which has been approved to hold/manage lands pursuant to Assembly Bill (AB) 1094 (2012), which amended Government Code sections 65965-65968.

Comment #11: Impacts to Raptors

Issue: Based on the location and habitats of the Project site, several raptors species are likely to occur on-site, including the state fully protected white-tailed kite. The Project site and surrounding areas are known habitat of the federally and state listed endangered and state fully protected California condor as well as the state fully protected golden eagle and American peregrine falcon. Also, State species of special concern burrowing owl has been observed using the Project site.

Specific impacts: The Project will likely result in the loss of foraging habitat for sensitive avian species. There is also high potential for bird mortality resulting from collisions with WTGs.

Why impacts would occur: Direct impacts include the loss of individual animals during construction and facility operation primarily as a result of (1) collisions by birds and bats with power line poles, lines, WTGs, and WTG blades and (2) vehicle strikes. The construction of towers, pad and road clearing, and staging of equipment along the Project alignment are likely to lead to loss of foraging and breeding habitat for raptors. Additionally, some tree trimming may be required in the vicinity of power lines. Indirect impacts during the operation and maintenance would be similar to those occurring during construction.

Evidence impacts would be significant: Project impacts may result in substantial adverse effects, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS. Adverse impacts to raptors may occur because the measures provided do not condition the Project to implement take avoidance surveys prior to operations, including, but not limited to, ground and vegetation disturbing activities.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW concurs with SEIR mitigation measure BIO-10 and MM BIO-16 for the need to prepare a bird and bat conservation strategy. CDFW recommends that CDFW staff are involved early in the strategy development in order to provide comments.

There may be some areas where raptors are more concentrated, particularly during migration. However, migratory flyways are not well understood. The following USFWS website provides guidelines to reduce risks to raptors and other birds that may be applicable to wind turbine projects: <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/communication-towers.php>.

Mitigation Measure #2: CDFW cannot authorize the take of any fully protected species as defined by state law. State fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for its take except for collecting those species for necessary scientific research and relocation of the bird species for protection of livestock (Fish & G. Code, §§ 3511, 4700, 5050, 5515). CDFW has advised the Permittee that take of any species designated as fully protected under the Fish and Game Code is prohibited.

Mitigation Measure #3: CDFW concurs with SEIR mitigation measure MM BIO-12, which requires surveys for burrowing owls, a State species of special concern, within all suitable habitat in the Project area. The measure includes a buffer of 300 feet of all Project facilities. CDFW recommends the buffer be changed to 500 feet of all Project facilities. CDFW also recommends following the protocol surveys outlined in CDFW's March 7, 2012, *Staff Report on Burrowing Owl Mitigation* (CDFW, 2012).

Comment #12: Impacts to Golden Eagle (*Aquila Chrysaetos*)

Issue: Based on Project location and habitat, the state fully protected golden eagle is highly likely to occur on the Project site. According to the LWEP FEIR, golden eagles are expected to be present on the site regularly. Nesting golden eagles have been reported in recent years in the vicinity of the Project, likely on Vandenberg Air Force Base. In addition, based on a December 20, 2018 field meeting, CDFW observed golden eagle within the Project site.

Specific impacts: The Project will likely result in the loss of foraging habitat for sensitive avian species. There is also high potential for bird mortality resulting from collisions with WTGs.

Why impacts would occur: Direct impacts include the loss of individual animals during construction and facility operation primarily as a result of (1) collisions by birds with power line poles, lines, WTGs, and WTG blades and (2) vehicle strikes. The construction of towers, pad and road clearing, and staging of equipment along the Project alignment are likely to lead to loss of foraging and breeding habitat for raptors. Additionally, some tree trimming may be required in the vicinity of power lines. Indirect impacts during the operation and maintenance would be similar to those occurring during construction.

Evidence impacts would be significant: Project impacts may result in substantial adverse effects, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS. Adverse impacts to golden eagle may occur because the measures provided do not condition the Project to implement take avoidance surveys prior to operations, including, but not limited to, ground and vegetation disturbing activities. CDFW cannot authorize the take

of any fully protected species as defined by state law. State fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for its take except for collecting those species for necessary scientific research and relocation of the bird species for protection of livestock (Fish & Game Code, §§ 3511, 4700, 5050, 5515).

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: The SEIR should demonstrate how impacts to golden eagle and other fully protected species would be avoided by the Project.

Mitigation Measure #2: CDFW recommends the County conduct individual eagle point count and 10-mile helicopter nest surveys for all areas known to support eagles (https://www.fws.gov/southwest/es/oklahoma/documents/te_species/wind%20power/usfws_interim_goea_monitoring_protocol_10march2010.pdf). CDFW further recommends a minimum one-mile buffer be established from each nest known to be active within the last five years to further minimize the potential for impacts and avoid take of the species. In addition, it is important the eagle nest data be comprehensive to the County and should be updated regularly to maximize avoidance to golden eagles.

Mitigation Measure #3: CDFW has advised the Permittee that take of any species designated as fully protected under the Fish and Game Code is prohibited.

Comment #13: Impacts to Passerine Birds

Issue: The *Biological Resources Report for the Antelope Expansion 1B Solar Project, Los Angeles County, California (SWCA, 2018)* indicates that loggerhead shrike (*Lanius ludovicianus*), a state SSC, was reported on site.

Specific impacts: Construction during the breeding season of nesting birds could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment.

Why impacts would occur: Impacts to passerine birds could result from vegetation clearing and other ground-disturbing activities. Project disturbance activities could result in mortality or injury to nestlings, as well temporary or long-term loss of suitable nesting and foraging habitats. Construction during the breeding season of nesting birds could result in the incidental loss of breeding success or otherwise lead to nest abandonment.

Evidence impact would be significant: The loss of occupied habitat or reductions in the number of rare species, either directly or indirectly through nest abandonment or reproductive suppression, would constitute a significant impact absent appropriate mitigation. Furthermore, nests of all native bird species are protected under both federal and State laws and regulations, including the Migratory Bird Treaty Act and California Fish and Game Code sections 3503 and 3503.5, respectively.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: The SEIR includes mitigation measure BIO-8 and MM BIO-12 to reduce impacts to nesting birds. CDFW concurs with these measures and recommends consultation with CDFW staff if the 500 foot buffer is recommended to be reduced.

Conclusion

We appreciate the opportunity to comment on the Strauss Wind Energy Project to assist the County of Santa Barbara in adequately analyzing and minimizing/mitigating impacts to biological resources. CDFW requests an opportunity to review and comment on any response that the County has to our comments and to receive notification of any forthcoming hearing date(s) for the Project (CEQA Guidelines, §15073[e]). If you have any questions or comments regarding this letter, please contact Dan Blankenship, Senior Environmental Scientist (Specialist), at (661) 259-3750 or Daniel.Blankenship@wildlife.ca.gov.

Sincerely,



Erinn Wilson
Environmental Program Manager

cc: CDFW

Randy Rodriguez – Los Alamitos
Victoria Tang – Los Alamitos
Dan Blankenship – Santa Barbara
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State Clearinghouse
Scott Morgan

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Comment #14: Impacts to Unarmored Threespine Stickleback (*Gasterosteus aculeatus williamsoni*)

Issue: As indicated in the Hydrology/Water Quality section of the SEIR, the Water Resources section of the LWEP EIR determined that the Project would result in significant impacts regarding flood hazards, water quality, groundwater, drainage, and stormwater runoff. Table G-6 (*Summary of Road Crossings and Culvert Sizes*) of the *Strauss Wind Energy Project Conditional Use Application Tab G: Project Description* (Sapphos Env. Inc., April 2018) provides a summary of 8 road crossings over drainage channels. CDFW is concerned that some of these crossings could damage the habitat and water quality found along Cañada Honda Creek, on the west end of the property. According to CNDDDB, there are numerous historical records of unarmored threespine stickleback, a state fully protected species, in the Cañada Honda Creek. Except as provided in the Fish and Game Code (e.g., for necessary scientific research), take of any fully protected species is prohibited and cannot be authorized by the Department (Fish & Game Code, § 5515 and § 3511).

Specific impacts: The Project may result in the loss of streams, associated watershed function, and biological diversity that could directly or indirectly impact the local population of unarmored threespine stickleback.

Why impacts would occur: Ground-disturbing activities from grading and filling, water diversions and dewatering would physically remove or otherwise alter existing streams or their function and associated riparian habitat on the Project site. Downstream areas and associated biological resources beyond the Project development footprint may also be impacted by Project related releases of sediment and altered watershed effects resulting from Project activities.

Evidence impacts would be significant: The Project may substantially adversely affect the existing stream pattern of the Project site through the alteration or diversion of a stream. Which absent specific mitigation, could result in substantial erosion or siltation on-site or off-site of the Project. CDFW cannot authorize the take of any fully protected species as defined by state law. State fully protected species may not be taken or possessed at any time, and no licenses or permits may be issued for its take except for collecting those species for necessary scientific research and relocation of the bird species for protection of livestock (Fish & G. Code, §§ 3511, 4700, 5050, 5515).

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW has advised the Applicant that take of any species designated as fully protected under the Fish and Game Code is prohibited.

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 & Game Code, § 711.4; Public Resources Code, § 21089).

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