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Governor's Office of Planning & Research

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STATE CLEARINGHOUSE

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**Subject: Dole Fresh Vegetables Inc. 5.4-MW Wind Energy Project (Project)
File Number PLN170257
Notice of Intent to Adopt A Mitigated Negative Declaration (MND)
SCH No. 2019129020**

Dear Mr. Sidor:

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to Adopt an MND for the Project from the County of Monterey Resource Management Agency for the above-referenced Project pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through exercise of our own regulatory authority under the Fish and Game Code. CDFW acknowledges that our comments are arriving past the comment period deadline. CDFW respectfully requests that our comments be reviewed and incorporated into the final MND as appropriate prior to the Project being heard for approval.

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 our trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological

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.

expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

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

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

PROJECT DESCRIPTION SUMMARY

Proponent: Foundation Windpower LLC

Objective: Approve a Use Permit to allow the installation and operation of two (2), 27-megawatt (MW) commercial wind energy conversion systems (wind turbines) to supply a total of 5.4 MWs of renewable energy to power the on-site agricultural processing facility. Each of the proposed wind turbines would consist of a three-bladed turbine on a tubular steel tower with a hub height of approximately 291 feet above ground. The diameter of the proposed turbine blades would be approximately 416 for a total height of 499 feet (153 meters) from ground level to the blade tip. The foundations would consist of a 15-foot diameter by 30-foot deep pier-type concrete foundation each comprising approximately 1,000 square feet of impacted area and each wind turbine would be enclosed within a 7-foot tall fence. An underground collection system would be installed within the existing access road corridors.

Location: The proposed project site is located at 32655 Camphora Gloria Road, approximately 1 mile north of its intersection with United States Highway 101 and approximately 1.23 miles northwest of the City of Soledad in an unincorporated area of Monterey County, California; Assessor's Parcel Number 257-081-038-000. The 354.46-acre parcel on which the Project will be developed is owned by Dole Fresh Vegetables Inc. and is in agricultural development (cultivated crops and packing facility). Construction of the Project would disturb approximately 8.93 acres.

Timeframe: Unspecified.

COMMENTS AND RECOMMENDATIONS

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

CDFW is concerned that the Environmental Checklist included in the MND documentation indicates that the Project will not have a significant impact on any candidate, sensitive or other special-status wildlife species and will have no impact on movement of migratory species. Based on aerial imagery and species occurrence records, numerous special-status species, including CESA-listed species are known or have been known to occur in the vicinity of the Project (CDFW 2019). While the Project parcel is in agricultural use, agricultural activities do not preclude the use of the Project site particularly along unimproved roads and around and between crop rows at least for foraging opportunities. Additionally, the larger Project parcel contains basins of standing water and trees that can potentially be used by special-status species for breeding, nesting and resting activities, the Salinas River is located less than 2 miles south of the Project and may contribute to attracting bird and bat use and the 499-foot tall wind turbines have the potential to impact birds and bats (local and migratory) through collisions with structures and blades for their operational lifetime. There are at least three other wind turbines proposed or installed in the Project vicinity that also have the potential to impact bird and bat species throughout their operational life as well. Therefore, the Project individually and cumulatively has the potential to significantly impact special-status species. Specifically, CDFW is concerned about the potential for the Project to significantly impact the State and federally Endangered and State fully protected California condor (*Gymnogyps californianus*); the State fully protected golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*); the State threatened tricolored blackbird (*Agelaius tricolor*) and bank swallow (*Riparia riparia*); the State threatened and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*, SJKF); the State and federally threatened California tiger salamander (*Ambystoma californiense*, CTS); the State candidate for listing as endangered Crotch bumble bee (*Bombus crotchii*, CBB) and western bumble bee (*Bombus occidentalis occidentalis*, WBB); and the State species of special concern western mastiff bat (*Eumops perotis californicus*), Townsend's big-eared bat (*Corynorhinus townsendii*), burrowing owl (*Athene cunicularia*, BUOW), American badger (*Taxidea taxus*), Salinas pocket mouse (*Perognathus inornatus psammophilus*) and western spadefoot (*Spea hammondi*).

CDFW recommends that the County of Monterey require the Project applicant to conduct baseline bird use surveys to develop a baseline of species and numbers

of birds that may use or pass over the Project. CDFW recommends that these baseline surveys be conducted by qualified individuals for two years (to account for differences in climatic conditions and species use from year to year) to document how, what types of and what quantities of birds and bats use the Project during spring, summer, fall and winter. One year of baseline bird and bat use surveys may be appropriate if baseline surveys from other nearby turbine projects are available to include in the County's analysis and discussion to be included in the final MND.

According to the Initial Study document, a preliminary site assessment was conducted on the Project on April 8, 2019. The Initial Study indicated this assessment revealed no presence of wildlife. However, the Biological Memorandum, which should include the survey methodology and all observations, was not included as part of this MND and therefore, CDFW is unable to determine if the survey effort or conclusions are appropriate to determine if impacts to wildlife would be at a less than significant level without the need for mitigation requirements. CDFW recommends the County include the results of all survey efforts as attachments to the MND for public review and comment. Once CDFW has had an opportunity to review those reports, CDFW may have additional recommendations and comments.

The MND indicates that no Project-related impacts to biological resources rise to the level of significance and no mitigation measures are proposed. It appears this determination was based on monitoring that had occurred on a similar wind facility located 1.64 miles northwest of the Project. The County did not include the monitoring results as an attachment to the MND and did not supply an explanation as to what the threshold for significance is or how it was determined. Therefore, there is no way for CDFW or the public to know the level of effort undertaken during the monitoring efforts at the off-site facility or if the methodology was robust enough to even detect birds or bats that potentially could have been impacted by the nearby off-site facility. For these reasons, it is not possible for CDFW to agree with the conclusions that the Project will not significantly impact biological resources, including special-status species known to occur in the Project vicinity. Because bird and bat species are highly mobile, even if these species were not identified on the Project during the preliminary biological assessment, that does not mean that the Project will not significantly impact wildlife. For example, CDFW considers any impact to a listed (e.g., California tiger salamander or bank swallow) or fully protected species (e.g., California condor, golden eagle or white-tailed kite) to be a significant impact under CEQA. As such, CDFW would recommend the County include a discussion of the significance threshold set by the County, an assessment of potential impacts to species that are known or likely to occur in the Project's vicinity and include quantifiable and enforceable avoidance, minimization and mitigation measures to reduce those potentially significant impacts to less than significant levels in the final MND.

CDFW recommends the Project proponent consult with CDFW regarding obtaining an incidental take permit (ITP) to comply with CESA well before the anticipated start of Project construction. CDFW also recommends the Project proponent consult with the United States Fish and Wildlife Service (USFWS) who administers the federal Endangered Species Act.

I. Environmental Setting and Related Impact

Would the Project have a substantial adverse 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 USFWS?

COMMENT 1: California Condor

Issue: California condor are known to occur in the vicinity of the Project (CDFW 2019) at Pinnacles National Park and Big Sur and are known to move regularly over the valley. CDFW also notes that the Project site is located between these two core areas for the species. This information is confirmed in the MND as well. While a proportion of California condor in the area are outfitted with satellite transmitters for tracking, not all California condors are. According to the MND, Ventana Wildlife Society records indicate that seven birds flew within 1 mile of the Project between July 17, 2003 and April 30, 2019, with the lowest flight recorded at 1,736 feet above ground level. While the Ventana Wildlife Society's website states there are 100 wild California condor in the area, it does not indicate how many of those are outfitted with and tracked via satellite transmitters. Since not all condor are tracked and there is nothing to preclude any individual bird from flying at an altitude within the rotor swept area of the proposed turbine, it is not possible for CDFW to concur with the MND conclusion that less than significant impacts would occur over the Project's operational lifetime.

Specific impact: Without appropriate minimization and mitigation measures for California condor, potential significant impacts associated with the Project's operation, including collision with the turbine or interaction with the blades resulting in direct injury or mortality of individuals and indirect mortality resulting from the inability of an injured or dead individual to tend eggs or young may occur.

Evidence impact would be significant: Consistent with CEQA Guidelines, section 15380, the status of the California condor as an endangered species pursuant to the federal Endangered Species Act (16 U.S.C. § 1531 *et seq.*) and the California Endangered Species Act (Fish & G. Code, § 2050 *et seq.*) and as a Fully

Protected species (Fish & G. Code § 3511) qualifies it as an endangered, rare, or threatened species under CEQA.

California condor populations, historically widespread through the American Southwest, were reduced to a few dozen by the 1970s. The last remaining wild condors were captured in the mid-1980s and sent to zoos to take part in a captive breeding program. Populations have been slowly increasing since that time due to successful breeding and field programs. The population estimate for 2017 was 463 condors worldwide, including those in captivity (USFWS 2017). The wild population is currently about 290 individuals, with 170 in California (personal communication, Carrie Battistone, CDFW, 2019). The biggest threat to condors is lead poisoning from spent lead ammunition, which accounts for approximately 50% of the wild condor mortality (USFWS 2017). California condor is a State fully protected species, which means that no Project-related take can be authorized by CDFW and the species must be fully avoided to comply with California Fish and Game Code section 2511. Tracking data indicates California condor fly within 1 mile of the Project and the local population is likely to continue to expand; therefore, there is potential for the Project to significantly impact California condor during its operational phase. Moreover, at least four (4) additional wind turbines have been constructed or proposed for construction in the vicinity of the Project, resulting in significant cumulative impacts as well.

Recommended Potentially Feasible Mitigation Measure(s) (Regarding Environmental Setting and Related Impact)

To evaluate potential impacts to California condor associated with the Project, CDFW recommends conducting the following evaluation of the Project and including the following mitigation measures as conditions of Project approval.

Recommended Mitigation Measure 1: California Condor Mortality Monitoring

CDFW recommends that a qualified biologist(s) conduct bird and bat mortality monitoring using standardized monitoring protocols evaluate impacts of turbine operations such as those developed by the California Energy Commission and the California Department of Fish and Wildlife (formerly California Department of Fish and Game) in the *California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development* dated October 2007 (pages 16-19) or alternative methodology reviewed and pre-approved by CDFW. Mortality monitoring shall occur for at least the first two years of turbine operations at both turbine locations. Annual monitoring reports shall be submitted to CDFW and USFWS and both agencies shall be consulted with to determine if additional mortality monitoring is warranted at the end of the two-year period.

Recommended Mitigation Measure 2: California Condor Minimization

The Project operator shall contact the Ventana Wildlife Society and the Pinnacles National Park annually to obtain new tracking data to determine California condor use within 1 mile of the Project. If condor use increases, especially lower altitude flying, consultation with CDFW and the USFWS would be warranted to discuss and development curtailment or other minimization measures necessary to ensure no take of condor occurs.

Recommended Mitigation Measure 3: California Condor Reporting

If at any time during the Project a California condor is found dead or injured, the Project operator shall immediately contact CDFW and USFWS by telephone and email (at 559-243-4005, extension 151, and R4CESA@wildlife.ca.gov, respectively for CDFW) for further direction.

COMMENT 2: Golden Eagle

Issue: Golden eagle are known to occur in the vicinity of the Project (CDFW 2019). The MND did not include a discussion of potential impacts from Project operations. Golden eagle engage in direct pursuit of prey as opposed to more tentative scavenging flights of other birds which is believed to make them more susceptible to blade strikes while hunting (Hunt 2002). This means that golden eagle have an increased potential to fly into the turbine or rotor swept areas for the operational lifetime of the Project.

Specific impact: Without appropriate avoidance, minimization and compensatory measures for golden, potential significant impacts associated with the Project's operation, including collision with the turbine or blade strikes resulting in direct injury or mortality of individuals and indirect mortality resulting from the inability of an injured or dead individual to tend eggs or young may occur.

Evidence impact would be significant: Golden eagle are a State fully protected species, which means CDFW cannot authorize Project-related take of golden eagle. This means that the Project must avoid take of golden eagle throughout the entirety of the Project. CDFW considers Project-related impacts to a single individual to be a significant impact. The draft MND does not indicate the number of golden eagle known to occur in the vicinity of the Project, which may be impacted by the Project. Based on mortality monitoring at a wind turbine located approximately 2.5 miles southwest of the Project, the County determined that impacts to all raptors would be less than significant. The methodologies and results of the off-site turbine were not

included with the draft MND, so CDFW is not able to concur with a less than significant impact finding for golden eagle.

Additionally, golden eagle are protected under the federal Bald and Golden Eagle Protection Act and the Migratory Bird Species Act, which are both administered by the USFWS. Modeling has predicted that additional golden eagle mortality would lead to population declines (American Wind Wildlife Institute, 2012)

Recommended Potentially Feasible Mitigation Measure(s) (Regarding Environmental Setting and Related Impact)

To evaluate potential impacts to golden eagle associated with the Project, CDFW recommends conducting the following evaluation of the Project and including the following mitigation measures as conditions of Project approval.

Recommended Mitigation Measure 4: Golden Eagle Point Counts

CDFW recommends that qualified biologists conduct pre-Project bird use counts (BUCs) to determine if golden eagle are using the Project area and may be more greatly impacted than concluded in the draft MND without benefit any eagle specific survey results. BUCs shall be conducted for 30 minutes once per week for one year covering most daylight hours and weather conditions at both turbine locations or on the larger facility property to achieve as close to the recommended 5,200 feet spacing between count locations as possible. Record the number and species of birds observed, distance from observer, flight height above ground, environmental variables (i.e., wind speed, fog, etc.), locations and note behaviors. Submit all survey results to CDFW and USFWS upon completion for the year.

Recommended Mitigation Measure 5: Golden Eagle Mortality Monitoring

CDFW recommends that a qualified biologist(s) conduct bird and bat mortality monitoring using standardized monitoring protocols to evaluate impacts of turbine operations such as those developed by the California Energy Commission and the California Department of Fish and Game in the *California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development* dated October 2007 (pages 16-19). Mortality monitoring shall occur for at least the first two years of turbine operations at both turbine locations. The Project proponent shall submit the survey results annually. At the end of the second year of mortality monitoring, the Project proponent shall consult with CDFW and USFWS to determine if additional mortality monitoring is warranted.

Recommended Mitigation Measure 6: Golden Eagle Reporting

If at any time during the Project a golden eagle is found dead or injured, the Project operator shall immediately contact CDFW and USFWS by telephone and email (at 559-243-4005, extension 151, and R4CESA@wildlife.ca.gov, respectively for CDFW) for further direction.

Recommended Mitigation Measure 7: Golden Eagle Impact Compensation

Require protection of known golden eagle nest sites from anthropogenic disturbance by placing land containing a nest site and suitable foraging habitat under a permanent conservation easement and limiting recreational activities during the breeding season and enhancing the conserved habitat. Require full funding for in perpetuity land management actions that are developed in a long-term management plan that has been submitted to CDFW and USFWS for review and comment.

Comment 3: Bank Swallow and Tricolored Blackbird

Issue: The draft MND does not adequately analyze Project impacts to bank swallow or tricolored blackbird, though the draft MND indicates that CNDDDB (CDFW 2019) shows one occurrence of bank swallow 8 miles south of the Project and one occurrence of tricolor blackbird within 3 miles of the Project. The MND states that the Project does not contain suitable habitat for the species. Therefore, the MND concludes no impacts are expected. Because bank swallow is a migratory species and tricolored may occur year round and both species are known to occur in the vicinity of the Project, bank swallow and tricolored blackbird have the potential to be impacted by the Project turbines during the operational life of the Project. Bank swallow and tricolored blackbird are species listed as threatened under CESA; therefore, take of the species is prohibited unless authorization pursuant to CESA is obtained.

Specific impact: Without appropriate avoidance and minimization measures for bank swallow and tricolored blackbird, potentially significant impacts associated with collisions or interactions with the blades of the two turbines in the form of direct mortality or injury of individuals and indirect impacts on eggs or young if a breeding adult becomes incapacitated in violation of Fish and Game Code.

Evidence impact is potentially significant: Consistent with CEQA Guidelines section 15380, the status of the bank swallow and tricolored blackbird as threatened species under the California Endangered Species Act (Fish & G. Code, § 2050 *et seq.*) qualifies them as endangered, rare, or threatened species under CEQA.

Artificial light may attract or disorient migrating bank swallows, disrupting their navigation (Ogden 1996, Longcore and Rich 2004, 2016). It can also suppress the immune system of birds (Moore and Siopes 2000)

Recommended Potentially Feasible Mitigation Measure(s)

To evaluate potential impacts to bank swallow associated with the Project, CDFW recommends implementing the following mitigation measure as a condition of approval for the Project.

Recommended Mitigation Measure 8: Bank Swallow and Tricolored Blackbird
Prohibit the use of lights that may attract bank swallow, other birds or bats.

Recommended Mitigation Measure 9: Bank Swallow and Tricolored Blackbird
Include conditional mitigation measures should operational monitoring provide evidence that impacts to bank swallow are being impacted in numbers not contemplated by the final MND.

Comment 4: San Joaquin Kit Fox (SJKF)

Issue: The draft MND does not adequately analyze Project impacts to SJKF, though the draft MND indicates that CNDDDB (CDFW 2019) shows two occurrences of SJKF within 8 miles of the Project but that the Project does not contain suitable habitat for the species. Therefore, the MND concludes no impacts are expected. However, SJKF have larger home ranges (average of 6.13 for individuals and 7.91 for mated pairs) (Spiegel and Bradbury 1992) and will forage and may den around crops and along roads between crops.

Specific impact: Without appropriate avoidance and minimization measures for SJKF, potentially significant impacts associated with collisions with vehicles, excavation or collapse of dens, entrapment in dens or trenches resulting in injury or mortality may occur.

Evidence impact is potentially significant: Consistent with CEQA Guidelines section 15380, the status of SJKF as an endangered species pursuant to the federal Endangered Species Act (16 U.S.C. § 1531 *et seq.*) and as threatened under CESA (Fish & G. Code, § 2050 *et seq.*) qualifies it as an endangered, rare, or threatened species under CEQA.

San Joaquin kit foxes are endemic to California and were historically distributed throughout the San Joaquin Valley, adjacent foothills, and valleys in the coastal mountains of central California (CDFG 1995). Their populations have declined

considerably as a result of habitat loss from agriculture as well as rodenticide use (Zeiner et al. 1990).

Project development and use could result in kit foxes being entrapped in trenches, and other construction materials. Also, food waste from construction workers can attract kit foxes and lead to increased disease transmission and exposure to predators.

Exposure to artificial light often used at construction sites has been shown to suppress the immune response in mammals resulting in increased pathogen and parasite infections (Navara and Nelson 2007, Bedrosian et al. 2011). Additionally, artificial light may decrease the activity of rodents and other small mammals, the primary prey for kit foxes (Zeiner et al. 1990, Navara and Nelson 2007).

Based on the foregoing, Project impacts on SJKF have the potential to be significant.

Recommended Potentially Feasible Mitigation Measure(s)

To evaluate potential impacts to SJKF associated with the Project, CDFW recommends implementing the following mitigation measures as a condition of approval for the Project.

Recommended Mitigation Measure 10: SJKF Minimization

Follow the USFWS's "Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance" (2011) (Standardized Recommendations) for survey methodology prior to commencing any Project-related activities. If any active or potential dens are found on the Project during these surveys, implement the avoidance measures contained in the Standardized Recommendations, including consultation with CDFW and USFWS should a natal den be discovered.

COMMENT 5: California Tiger Salamander (CTS)

Issue: CTS are known to occur in the vicinity of the Project (CDFW 2019). Review of aerial imagery indicates the presence of several seasonally flooded stormwater features as well as agricultural catchment basins in the vicinity of the Project, which have the potential to support breeding CTS. In addition, the Project may support small mammal burrows, a requisite upland habitat feature for CTS.

Specific impact: Without appropriate avoidance and minimization measures for CTS, potential significant impacts associated with the Project's construction include

burrow collapse, inadvertent entrapment, reduced reproductive success, reduction in health and vigor of eggs, larvae and/or young, and direct mortality of individuals.

Evidence impact would be significant: Up to 75% of historic CTS habitat has been lost to development (Shaffer et al. 2013). Loss, degradation, and fragmentation of habitat are among the primary threats to CTS (CDFW 2015, USFWS 2017). The Project is within the range of CTS and is surrounded by suitable aquatic breeding habitat. As a result, there is potential for CTS to occupy or colonize the Project vicinity and for the Project to impact CTS during construction.

Recommended Potentially Feasible Mitigation Measure(s) (Regarding Environmental Setting and Related Impact)

To evaluate potential impacts to CTS associated with the Project, CDFW recommends conducting the following evaluation of the Project and including the following mitigation measures as conditions of Project approval.

Recommended Mitigation Measure 11: CTS Habitat Assessment

CDFW recommends that a qualified biologist conduct a habitat assessment well in advance of Project implementation to determine if the Project or its vicinity contains suitable upland habitat for CTS in the form of small mammal burrows.

Recommended Mitigation Measure 12: Focused CTS Surveys

If the Project vicinity does contain suitable habitat for CTS, CDFW recommends that a qualified biologist evaluate potential Project-related impacts to CTS prior to ground-disturbing activities using the USFWS's "Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander" (2003). CDFW advises that the survey include a 100-foot buffer around the Project in all areas of wetland and upland habitat that could support CTS.

Recommended Mitigation Measure 13: CTS Avoidance

CDFW advises avoidance for CTS include a minimum 50-foot no-disturbance buffer delineated around all small mammal burrows within and/or adjacent to the Project construction footprint. If burrow avoidance is not feasible, consultation with CDFW is warranted to determine if the Project can avoid take.

Recommended Mitigation Measure 14: CTS Take Authorization

If through surveys it is determined that CTS are occupying the Project and take cannot be avoided, take authorization would be warranted prior to initiating ground-disturbing activities. Take authorization would occur through issuance of an ITP by CDFW, pursuant to Fish and Game Code § 2081(b). Alternatively, in the absence of protocol surveys, the applicant can assume presence of CTS within the Project and obtain an ITP from CDFW.

COMMENT 6: Crotch Bumble Bee (CBB) and Western Bumble Bee (WBB)

Issue: On June 28, 2019, the Fish and Game Commission published findings of its decision to advance CBB and WBB to candidacy as endangered. Pursuant to Fish and Game Code section 2074.6, CDFW has initiated a status review report to inform the Commission's decision on whether listing of CBB, pursuant to CESA, is warranted. During the candidacy period, consistent with CEQA Guidelines, section 15380, the status of the CBB and WBB as endangered candidate species under CESA (Fish & G. Code, § 2050 et seq.) qualifies it as an endangered, rare, or threatened species under CEQA. It is unlawful to import into California, export out of California or take, possess, purchase, or sell within California, CBB or WBB and any part or product thereof, or attempt any of those acts, except as authorized pursuant to CESA. Under Fish and Game Code section 86, take means to hunt, pursue, catch, capture, or kill, or to attempt to hunt pursue, catch, capture, or kill. Consequently, take of CBB or WBB during the status review period is prohibited unless authorization pursuant to CESA is obtained.

CBB and WBB have been documented to occur in the vicinity of the Project (CDFW 2019). CBB are generalist foragers using a wide variety of flowering plants. Suitable CBB habitat includes areas of grasslands and upland scrub that contain requisite habitat elements, such as small mammal burrows. CBB primarily nest in late February through late October underground in abandoned small mammal burrows, but may also nest under perennial bunch grasses or thatched annual grasses, under brush piles, in old bird nests, and in dead trees or hollow logs (Williams et al. 2014; Hatfield et al. 2015). Overwintering sites utilized by CBB mated queens include soft, disturbed soil (Goulson 2010), or under leaf litter or other debris (Williams et al. 2014). Therefore, ground disturbance and vegetation removal associated with Project construction and maintenance has the potential to significantly impact local CBB populations. Additionally, the flight period for queen bees in California is from late February to late October, peaking in early April with a second pulse in July. The flight periods for workers and males in California is from late March through September, with peak abundance in early July (Thorp et al. 1983).

WBB nests are found primarily in underground cavities such as small mammal burrows in open west-southwest slopes bordered by trees although a few nests have been reported in logs among railroad ties (Plath 1922; Hobbs 1968; Thorp et al. 1983; MacFarlane et al. 1994). WBB colonies are considered large relative to other species of bumble bees containing as many as 1,685 workers and producing up to 360 new queens (MacFarlane et al. 1994). The flight period for *Bombus occidentalis* queens in California is from early February to late November, peaking in late June and late September (Thorp et al. 1983). The flight period for workers and males in California is from early April to early November; worker abundance peaks in early August, and male abundance peaks in early September (Thorp et al. 1983).

Specific impact: Without appropriate avoidance and minimization measures for CBB and WBB, potentially significant impacts associated with ground- and vegetation-disturbing activities associated with construction of the Project include loss of foraging plants, changes in foraging behavior, burrow collapse, nest abandonment, reduced nest success, reduced health and vigor of eggs, young and/or queens, in addition to direct mortality by squashing or collisions with vehicles or equipment and continued direct mortality through collisions with the blades of the two Project turbines in violation of Fish and Game Code.

Evidence impact is potentially significant: CBB was once common throughout most of the central and southern California; however, it now appears to be absent from most of it, especially in the central portion of its historic range within California's Central Valley (Hatfield et al. 2014). Analyses by the Xerces Society et al. (2018) suggest there have been sharp declines in relative abundance by 98% and persistence by 80% over the last ten years.

WBB was historically known throughout the mountains and northern coast of California, it is now largely confined to high elevation sites and a small handful of records on the northern California coast (Cameron et al. 2011a; Xerces Society 2012; Williams et al. 2014; Xerces Society et al. 2017).

Recommended Potentially Feasible Mitigation Measure(s)

To evaluate potential impacts to CBB and WBB associated with the Project, CDFW recommends implementing the following mitigation measure as a condition of approval for the Project.

Recommended Mitigation Measure 15: CBB and WBB Take Avoidance

CDFW recommends that all small mammal burrows, thatched/bunch grasses, brush piles and soil piles be avoided by a minimum of 50 feet to avoid take and potentially significant impacts during construction and ground-disturbing operations and maintenance activities. Because both CBB and WBB have been known to occur in

the vicinity of the Project, they fly to obtain nectar and pollen, and it would be extremely difficult to detect the species after one entered the rotor swept areas, CDFW recommends obtaining an incidental take permit from CDFW prior to Project operations for authorization of the take of these species that is likely to occur. CDFW recommends also obtaining take authorization during construction if nesting habitat is present and cannot be avoided by 50 feet.

COMMENT 7: Burrowing Owl (BUOW)

Issue: BUOW may occur within the Project site. BUOW inhabit open grassland and along irrigation banks, roads and edges of agricultural fields containing small mammal burrows, a requisite habitat feature used by BUOW for nesting and cover. Habitat both within and bordering the Project site, supports agricultural catchments, roads and agricultural edges which may contain small mammal burrows.

Specific impact: Potentially significant direct impacts associated with Project construction include burrow collapse, inadvertent entrapment, nest abandonment, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals. Potentially significant direct impacts associated with Project operations include BUOW collisions and strikes from the two wind turbines.

Evidence impact is potentially significant: BUOW rely on burrow habitat year-round for their survival and reproduction. Habitat loss and degradation are considered the greatest threats to BUOW in California's Central Valley (Gervais et al. 2008). The Project site contains and is bordered by some of the only remaining undeveloped land in the vicinity, which is otherwise intensively managed for agriculture or housing developments. Therefore, subsequent ground-disturbing activities associated with Project approval have the potential to significantly impact local BUOW populations. In addition, and as described in CDFW's "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), excluding and/or evicting BUOW from their burrows is considered a potentially significant impact under CEQA.

Recommended Potentially Feasible Mitigation Measure(s) (Regarding Environmental Setting and Related Impact)

To evaluate potential impacts to BUOW, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation measures into the CEQA document prepared for this Project, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 16: BUOW Surveys

CDFW recommends assessing presence/absence of BUOW by having a qualified biologist conduct surveys following the California Burrowing Owl Consortium's "Burrowing Owl Survey Protocol and Mitigation Guidelines" (CBOC 1993) and CDFW's "Staff Report on Burrowing Owl Mitigation" (CDFG 2012). Specifically, CBOC and CDFW's Staff Report suggest three or more surveillance surveys conducted during daylight with each visit occurring at least three weeks apart during the peak breeding season (April 15 to July 15), when BUOW are most detectable.

Recommended Mitigation Measure 17: BUOW Avoidance

CDFW recommends no-disturbance buffers, as outlined in the "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), be implemented prior to and during any ground-disturbing activities. Specifically, CDFW's Staff Report recommends that impacts to occupied burrows be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting sites	April 1-Aug 15	200 m*	500 m	500 m
Nesting sites	Aug 16-Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16-Mar 31	50 m	100 m	500 m

* meters (m)

Recommended Mitigation Measure 18: BUOW Passive Relocation and Mitigation

If BUOW are found within these recommended buffers and avoidance is not possible, it is important to note that according to the Staff Report (CDFG 2012), exclusion is not a take avoidance, minimization, or mitigation method and is considered a potentially significant impact under CEQA. However, if necessary, CDFW recommends that burrow exclusion be conducted by qualified biologists and only during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty through non-invasive methods, such as surveillance. CDFW recommends replacement of occupied burrows with artificial burrows at a ratio of one burrow collapsed to one artificial burrow constructed (1:1) as mitigation for the potentially significant impact of evicting BUOW. BUOW may attempt to colonize or re-colonize an area that will be impacted; thus, CDFW recommends ongoing surveillance, at a rate that is sufficient to detect BUOW if they return.

COMMENT 8: Western Spadefoot

Issue: Western spadefoot inhabit grassland habitats, breed in seasonal wetlands, and seek refuge in upland habitat where they occupy burrows outside of the breeding season (Thomson et al. 2016). Review of aerial imagery indicates that the Project contains these requisite habitat elements.

Specific impact: Without appropriate avoidance and minimization measures for western spadefoot, potentially significant impacts associated with ground disturbance include nest/den/burrow abandonment, which may result in reduced health or vigor of eggs and/or young, and direct mortality.

Evidence impact is potentially significant: Habitat loss and fragmentation resulting from agricultural and urban development is the primary threat to western spadefoot (Thomson et al. 2016). The Project area is within the range of western spadefoot and contains suitable upland habitat (i.e., grasslands interspersed with burrows) and breeding habitat (i.e., vernal pools and swales). As a result, ground-disturbing activities associated with development of the Project site have the potential to significantly impact local populations of this species.

Recommended Potentially Feasible Mitigation Measure(s)

To evaluate potential impacts to western spadefoot associated with the Project, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation measures into the CEQA document prepared for this Project, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 19: Western Spadefoot Surveys

CDFW recommends that a qualified biologist conduct focused surveys for western spadefoot and their requisite habitat features to evaluate potential impacts resulting from ground- and vegetation-disturbance.

Recommended Mitigation Measure 20: Western Spadefoot Avoidance

Avoidance whenever possible is encouraged via delineation and observance of a 50-foot no-disturbance buffer around burrows and breeding ponds.

COMMENT 9: Bats

Issue: A variety of species of bat are known to occur in the vicinity of the Project (CDFW 2019). Most bat species in California are considered by the State to be

species of special concern. Agricultural fields and irrigation catchments may increase attraction of insects and therefore bats that forage upon them. Increased bat use at the Project subjects them to increased risk of blade strikes. The MND concluded no impact to bats based on mortality monitoring at a similar facility located approximately 2.5 miles southeast of the Project. These monitoring reports, which should include details regarding the monitoring methodologies used to detect bird and bat carcasses were not included as part of the draft MND. Without these reports it is not possible for CDFW to concur with draft MND conclusions.

Specific impact: Without appropriate avoidance and minimization measures for bats, potentially significant impacts due to mortality from blade strikes for the operational life of the Project may occur.

Evidence impact is potentially significant: The Project is within the range of various bat species and is comprised of suitable foraging habitat (i.e., agricultural fields and irrigation catchments). Bats are a highly mobile aerial species and bats are known to be killed at wind turbine facilities at an estimated rate of 0-5.2 bats per MW per year (AWWIC 2018) in the Pacific Southwest. Because mortality monitoring in the Pacific Southwest occurs less frequently and at a rate longer than carcass persistence times, this rate of mortality is likely larger (AWWIC 2018). As a result, operations of the two Project wind turbines (and cumulatively) have the potential to significantly impact local and migratory populations of bat species.

Recommended Potentially Feasible Mitigation Measure(s)

To evaluate potential impacts to bats associated with the operation of the Project, CDFW recommends conducting the following evaluation of the Project and including the following mitigation measures in the final MND.

Recommended Mitigation Measure 21: Pre-Project Bat Use Monitoring

CDFW recommends that a qualified biologist conduct acoustic monitoring for a full year prior to start of Project construction. Place two (2) bat detection systems at high (as high as possible without interfering with weather monitoring equipment and low (approximately 5 feet above the ground) positions on each meteorological tower. If no meteorological towers are proposed, alternative methods shall be proposed and pre-approved by CDFW prior to installation. Monitor for bats all night and at dusk and dawn. Record total bat passes and mean passes per detector night and per detector hour (excluding nights with measurable precipitation).

CDFW recommends the County using the monitoring results to make estimates of potential bat fatalities and risks to individual species and populations to determine

the level of impact and help develop appropriate avoidance, minimization and mitigation measures to be included in the final MND.

Recommended Mitigation Measure 22: Operations Bat Mortality Monitoring

Require qualified biologists conduct operations bat mortality monitoring, which involves searching for bat carcasses under each turbine to estimate fatality rates to determine if pre-Project bat monitoring were reasonably accurate, if avoidance, minimization and compensatory measures are adequate or if additional mitigation measures are warranted, whether overall bat and bird fatality rates are low, moderate, or high relative to other projects in the vicinity.

CDFW recommends the County require the operations monitoring protocol follow that included in the California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Facilities (pages 16-19). The Project applicant may propose to CDFW an alternative protocol for our review and comment prior to implementation.

Recommended Mitigation Measure 23: Bat Minimization Measures

- a) Avoid use of lighting that attracts bats and birds;
- b) Minimize power line impacts by placing lines underground as much as possible;
- c) Prohibit the use of guy wires.

Recommended Mitigation Measure 24: Bat Compensatory Measures

If assumptions are made about the rate of bat fatalities is not greater than the known median in the pacific southwest of 0-5 bats per MW per year, then require permanent off-site conservation, protection and management and funding of essential bat habitat including roosting and hibernacula areas, associated foraging habitat, wintering areas and corridors and linkages.

If pre-construction monitoring indicates bat fatalities may exceed 0-5 bats per MW per year also require off-site conservation and habitat restoration and/or enhancement in an equal number of acres as is required to be conserved.

II. Editorial Comments and/or Suggestions

Nesting Birds: CDFW encourages Project construction occur during the bird non-nesting season (September 16 through January 31). However, if ground-disturbing activities must occur during the breeding season (February through September 15), the Project applicant is responsible for ensuring that implementation of the Project does not

result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Code sections as referenced above.

To evaluate Project-related impacts on nesting birds, CDFW recommends that a qualified wildlife biologist conduct pre-activity surveys for active nests no more than 10 days prior to the start of ground disturbance to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends that surveys cover a sufficient area around the work site to identify nests and determine their status. A sufficient area means any area potentially affected by the project. In addition to direct impacts (i.e., nest destruction), noise, vibration, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, CDFW recommends a qualified biologist conduct 24-hours of monitoring to establish a behavioral baseline of all identified nests. Once construction begins, CDFW recommends a qualified biologist continuously monitor nests to detect behavioral changes resulting from the project. If behavioral changes occur, CDFW recommends the work causing that change cease and CDFW consulted for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. Consult with CDFW if the nest of a listed species is found to determine appropriate avoidance measures or if avoidance is not possible to obtain an ITP. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the construction area would be concealed from a nest site by topography. CDFW recommends that a qualified wildlife biologist advise and support any variance from these buffers and notify CDFW in advance of implementing a variance.

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

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database that 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 (CNDDDB). The CNDDDB field survey form can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The completed form can be mailed electronically to CNDDDB at the following email address: CNDDDB@wildlife.ca.gov. The types of information reported to CNDDDB can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

FILING FEES

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

CONCLUSION

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

More information on survey and monitoring protocols for sensitive species can be found at CDFW's website (<https://www.wildlife.ca.gov/Conservation/Survey-Protocols>). Questions regarding this letter or further coordination should be directed to Lisa Gymer, Senior Environmental Scientist Specialist, at the address provided on this letterhead, by telephone at (559) 243-4014 extension 238, or by electronic email at Lisa.Gymer@wildlife.ca.gov.

Sincerely,



Julie A. Vance
Regional Manager

cc: Office of Planning and Research, State Clearinghouse, Sacramento

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