- As mentioned above, the IS/MND conducts virtually no actual surveys or site-relevant analyses that describe the actual, real-time environmental status of the Project. And yet the IS/MND acknowledges that the Project Survey Area "lies entirely within the boundaries of the CVMSHCP. Specifically, the 492-acre Survey Area lies within the Upper Mission Creek/Big Morongo Canyon Conservation Area."[23] As such, they cannot explain how they will maintain the integrity or consistency with the CVMSCHP without having a complete set of data for such comparisons to begin with.

- The IS/MND relies on poorly described, cursory, deferred actions as their primary mitigation for direct, indirect, and cumulative impacts to species - where such impacts are appropriately or accurately acknowledged, which is rarely, despite the many sensitive species that have a high likelihood to occur onsite, including those mentioned above. This prohibits the reviewer from assessing the validity or effectiveness of mitigation for all species discussed, and the many others not mentioned and yet part of the CVMSCHP. Meanwhile, their "consistency analysis" is almost entirely limited to a discussion of how to mitigate the erroneous and limited data point of direct disturbance to 2.59 acres.

- The CVMSCHP is not a document that provides a host of clearly defined, species-specific, Project-specific mitigation protocols as the IS/MND would have the reviewer believe. Neither does it make review of said "protocols" available to the public, as is required under CEQA. And yet it bases its conclusions of successful mitigation on the assumption that "consistency" with the CVMSCHP equates successful mitigation analyzed and described. It does not, and these conclusions are wholly unsupported. The CVMSHCP is comprised of thousands of pages of discussion regarding umbrella topics including goals of research monitoring, conservation, FAQ's, and suggestions for adaptive management for species. It does not provide specific protocols unique to specific developments with their unique array of habitats, species, and development threats. And yet the IS/MND relies on generic statements for impacts to entire taxa, such as stating, "The Project is subject to the requirements of the CVMSHCP. Based on the recommendations outlined above, the Project is consistent with the CVMSHCP...."[24] and yet do not actually spell out what these recommendations are, or how they apply. The burden is on the Applicant to provide the details they are referring to. They fail to meet this burden, instead merely pointing to the existence of the CVMSHCP, and saying in essence they will follow undescribed, indeterminate CVMSHCP "protocols" and therefore be "consistent" and

[23] *Ibid.* p 667

[24] IS/MND Exhibit S p. 15.

> therefore reduce impacts to below significant. This is completely unsatisfactory, especially when one conducts a review of the actual content of the CVMSHCP: no such specific mitigation protocols exist as the IS/MND infers, certainly not for a wind farm in this region, in this mix of habitat, with this (yet to be determined) combination, density, abundance, richness, etc. of species present.

For instance, their mitigation details for impacts to the protected Desert tortoise are comprised primarily of the statement that "During construction-related activities, contractors will comply with the mitigation and minimization measures contained in the CVMSHCP protocol." However, they do not provide any details about this protocol, nor do they discuss how indirect impacts will be mitigated, and do not acknowledge the reality of cumulative impacts onsite for the Desert tortoise, despite the fact that the CVMSHCP concludes one of the reasons for its existence is to address concerns regarding the high potential for cumulative impacts to regional sensitive species including the Desert tortoise.[25]

B. Impacts to Bats Remain Unclear and Unmitigated.

As noted above, it is widely accepted by scientists and wildlife agencies that wind facilities cause significant mortalities to bats, and do not discriminate between common, sensitive, or endangered species by design.[26,27,28] This results in the conclusion by researchers of a multi-faceted study of bat mortality at different wind facilities that, "we recommend that individual wind facilities conduct project-specific pre- and postconstruction monitoring rather than infer mortality effects based on published results from other wind facilities."[29] However, the IS/MND ignores this fact by conducting no surveys, no analysis, and thus no mitigation for bats. The IS/MND fails to assess or discuss an entire taxon of species, namely bats, in its analysis of impacts, despite the fact that the CVMSCHP and CNDDB identifies several protected bat species, including the Southern yellow bat (a primary conservation "covered species" for the CVMSCHP)[30], and the Townsend's big-eared bat (*Corynorhinus townsendii*), as occurring in the

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[25] See http://www.cvmshcp.org/Monitoring_Management.htm Retrieved 11-25-2018.

[26] Wellig, S. D., Nusslé, S., Miltner, D., Kohle, O., Glaizot, O., Braunisch, V., Obrist, M. K., Arlettaz, R. (2018). Mitigating the negative impacts of tall wind turbines on bats: Vertical activity profiles and relationships to wind speed. *PloS one*, 13(3), e0192493. doi:10.1371/journal.pone.0192493

[27] David Drake, Christopher S. Jennelle, Jian-Nan Liu, Steven M. Grodsky, Susan Schumacher, and Mike Sponsler. Regional Analysis of Wind Turbine-Caused Bat Mortality, *Acta Chiropterologica*. Jun 2015 : Vol. 17, Issue 1, pp 179- 188 https://doi.org/10.3161/15081109ACC2015.17.1.015

[28] USFWS. 2012. Land Based Wind Energy Guidelines. OMB Control No.10-18-0148 https://www.fws.gov/ecological-services/es-library/pdfs/WEG_final.pdf

[29] *Ibid.*

[30] See http://www.cvmshcp.org/Plan_Documents_old.htm Retrieved Nov 25018

region. Even the DRECP, the massive Desert Renewable Energy Conservation Plan for the desert southwest that includes the Project site region, focuses on bats as part of their conservation priority species. According to U.S. Geological Survey (USGS) biologists, "North American bats face unprecedented threats including habitat loss and fragmentation, white-nose syndrome, wind energy development, and climate change."[31] They also state that "It is difficult to evaluate impacts of these threats because there is a lack of basic information about the distribution and abundance of bats across the continent. A statistically robust and standardized bat monitoring program across North America would help managers estimate extinction risk, set conservation priorities and evaluate the effectiveness of conservation actions."[32] Indeed, if project biological consultants including LSA would embrace the scientific reality that bats are an essential component of ecosystem biodiversity and viability by conducting the necessary surveys for CEQA and similar analyses - which they could then contribute to CNDDB and elsewhere – databases would be more complete, allowing for more efficacious conservation planning as development increases and spreads throughout the desert southwest. And yet the IS/MND makes no attempt to analyze impacts to bats, not to mention to present a Bird and Bat Monitoring Program that should be part and parcel to every wind facility that proposes to mitigate injuries and deaths that are incurred during the life of a wind development, as recommended by USFWS official wind energy guidelines for wildlife monitoring and mitigation.[33]

Finally, it should be noted that although it is important for data collection that drives best management practice, a bat monitoring program does not actually reduce impacts to bats. As such a conservation plan, including compensatory mitigation, should be part of the IS/MND's analysis to reduce potential significant impacts to bird and bat species that will be incurred throughout the life of the project. However, the IS/MND completely fails to offer any such mitigation, and thus fails once again to meet the requirements for a MND.

Not only is there abundant evidence that wind turbines kill bats, research has demonstrated that artificial light and noise can increase the risk of mortality and reduce foraging success by

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[31] See https://www.usgs.gov/ecosystems/status-and-trends-program/science/bats?qt-science_center_objects=0#qt-science_center_objects Retrieved No 14, 2018.
[32] *Ibid.*
[33] USFWS. 2012. Land Based Wind Energy Guidelines. OMB Control No.10-18-0148 https://www.fws.gov/ecological-services/es-library/pdfs/WEG_final.pdf

bats in both urban and rural settings.[34,35] As such, bats could be impacted by the presence of artificial lighting by the Project, throughout the life of the Project, as well as by its other various anthropogenic disturbances in the form of noise, light, dust, barriers, negative attractants, etc.

The necessity of detailed, baseline data for bats (as well as other sensitive species mentioned above) is underscored by the fact that the definition of a substantial impact analyses under CEQA as used in the significance criteria has three principal factors: magnitude or intensity and duration of the impact; rarity and context of the affected resource; and susceptibility of the affected resource to disturbance. The evaluation of significance must also consider the interrelationship of these three factors. For example, a relatively small-magnitude impact on a state or federally listed species could be considered significant if the species is rare and highly susceptible to disturbance. This is true not only for determining significance of impact, but degree of significance in respect to what mitigation measures would be adequate. One cannot determine factors such as context and susceptibility of an entire population regarding impacts of the development of the Project if one does not know whether there may be one, ten, or one hundred or more individuals of a special status species present. It is therefore impossible to determine, without such data, if any given mitigation measure – during construction impact reduction protocol, restoration, relocation, or compensatory mitigation will reduce the Project impacts to below significant. It is especially difficult to determine the efficacy of mitigation protocols when they are not even provided, as is the case with this IS/MND. Given all of these factors, and the complete lack of any discussion regarding presence or impacts to bats, the IS/MND has completely failed to describe how and to what extent bats may likely be impacted by the Project, and as it stands any impacts to bats remain significant and unmitigated by the Project.

C. Impacts to Reptiles, including the C/ESA listed Coachella Valley fringe-toed lizard (*Uma inornata*), Remain Unmitigated.

As noted above, the IS/MND fails to analyze any impacts to lizards, and thus fails to mitigate them. This is an unacceptable oversight, especially in light of the evidence that they have high

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[34] Warner, K. A. (2016). *Investigating the effects of noise pollution from energy development on the bat community in the Piceance basin* (Order No. 10149854). Available from ProQuest Central; ProQuest Dissertations & Theses Global. (1815584239).

[35] Cravens, Z. M., Brown, V. A., Divoll, T. J., & Boyles, J. G. (2018). Illuminating prey selection in an insectivorous bat community exposed to artificial light at night. *The Journal of Applied Ecology*, 55(2), 705-713. doi:http://dx.doi.org.jerome.stjohns.edu:81/10.1111/1365-2664.13036

potential to occur in the vicinity of the Project site, according to the CVMSHCP[36], the DRECP[37], and the following:

It is common knowledge that reptiles represent a key taxon in desert habitats and are highly sensitive to anthropogenic ground disturbances.[38] Many are nocturnal, fossorial, or crepuscular, and often highly secretive; most desert reptile species do not lend themselves to daytime, incidental observations as the IS/MND infers by not providing a thorough survey for onsite species. Neither can habitat type alone be a reliable source of potential for species to occur, countless records of species occurrences demonstrate that are many species of reptiles that, while having a habitat preference, are known to occur in a variety of habitats within their known range, including in disturbed habitat in the western Mojave Desert.[39,40,41]

The USGS recently completed a detailed study of reptile species found in alluvial sand habitat, in a 500-acre area almost the same size as this Project footprint, that they characterized as "highly disturbed" due to the predominance of non-native, invasive plant species. In fact, where the Project site is only partly predominated by disturbed habitat, the USGS study site in an arid ecosystem in eastern San Diego county was almost entirely comprised of disturbed or ruderal habitat. And yet the study findings resulted in 1,208 total captures, revealing a "high species richness and diversity" and "Despite the relatively limited 12-month sampling period, a longstanding drought, and severe habitat disturbance, our study demonstrates that [alluvial

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[36] CVMSHCP. March 2012. Coachella Valley Multiple Species Habitat Conservation & Natural Community Conservation Plan Aeolian Sand Communities and Species Monitoring Protocolshttp://www.cvmshcp.org/pdf%20files/Aeolian%20Sands%20Monitoring%20Protocol%20Final.pdf

[37] DUDEK and ICF. DRECP Appendix B. March 2012. https://www.drecp.org/documents/docs/baseline_biology_report/10_Appendix_B_Species_Profiles/10a_Reptile_Amphibian/Mojave_Fringe-toed_Lizard.pdf

[38] Vandergast, A.G.; Bohonak, A.J.; Hathaway, S.A.; Boys, J.; Fisher, R.N. 2008. Are hotspots of evolutionary potential adequately protected in southern California? *Biol. Conserv.* 141:1648–1664.

[39] Vera, P., Sasa, M., Encabo, S. I., Barba, E., Belda, E. J., & Monrós, J. S. (2011). Land use and biodiversity congruences at local scale: applications to conservation strategies. *Biodiversity & Conservation*, *20*(6), 1287–1317. https://doi.org/10.1007/s10531-011-0028-x

[40] Dutcher, K. E. (2009). *Microhabitat patch use and movement patterns in Uta stansburiana populations fragmented by a 2005 wildfire in the Mojave national preserve, California* (Order No. 1466162). Available from ProQuest Dissertations & Theses Global. (305177324). Retrieved from http://jerome.stjohns.edu:81/login?url=https://search-proquest-com.jerome.stjohns.edu/docview/305177324?accountid=14068

[41] Heaton, J. S. (2002). *The LizLand model: Geomorphic landform and surface composition analysis of lizard habitat in the California Mojave desert* (Order No. 3029564). Available from ProQuest Dissertations & Theses Global. (305504439). Retrieved from http://jerome.stjohns.edu:81/login?url=https://search-proquest-com.jerome.stjohns.edu/docview/305504439?accountid=14068

and and related habitat] harbors a rich herpetofauna that includes many sensitive species."[42] When I asked one of the USGS authors about the study findings, he said that their results were "completely unexpected" and revealed an abundance and diversity "beyond what we ever would have imagined based on the habitat alone" (C. Rochester, *pers. comm.*, Dec 15, 2016). These results underscore the need for focused, scientific surveys to truly establish the necessary faunal data to create an accurate impact assessment.

Further evidence of this fact is revealed by a study by USGS herpetologists where they explored the genetic diversity of several desert species, including shovel-nosed snake (*Chionactis occipitalis*), the collared lizard (*Crotaphytus bicinctores*), the northern desert iguana (*Dipsosaurus dorsalis dorsalis*), the desert tortoise (Gopherus agassizii), rosy boa (*Lichanura trivirgata*), Gilbert's skink (*Plestiodon gilberti*), desert spiny lizard (*Sceloporus magister*), fringe-toed lizard (*Uma scoparia*), and the desert night lizard (*Xantusia vigilis*). The study identified several biodiversity "hot spots" within the Mojave and Sonoran deserts, based upon high genetic divergence and diversity of species tested, in habitats similar in type and disturbance to those found on the Project site.[43]

Even when not hibernating, the Coachella Valley fringe-toed lizard (like other similar species) are incredibly cryptic and spend a good deal of time buried under the sand for physiologic and behavioral reasons, including predator avoidance. They have been described in the species account for the BLM as having "interesting behavioral adaptations for their dune habitat. Most notable is their sand burial behavior...fringe-toed lizards tend to frequently bury themselves within 4-6 cm of the sand surface."[44] The species' morphology itself demonstrates its unique evolutionary adaptations for spending a lot of time under sand, including a countersunk lower jaw, valved nostrils, keeled supralabials, enlarged and imbricate shoulder scales, and a dorsoventrally compressed body. As fringe-toed specialists describe, "the dorsal network of dark ocelli on a yellowish ground color make these lizards extremely cryptic on the sandy substrate".[45] (See Photos 1- 3).

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[42] Richmond, J. Q., Rochester, C. J., Smith, N. W., Nordland, J. A., & Fisher, R. N. (2016). Rare Alluvial Sands Of El Monte Valley, California (San Diego County), Support High Herpetofaunal Species Richness And Diversity, Despite Severe Habitat Disturbance. *The Southwestern Naturalist,* 61(4), 294-306. Retrieved from http://jerome.stjohns.edu:81/login?url=https://search-proquest-com.jerome.stjohns.edu/docview/1894921403?accountid=14068

[43] Vandergast, A. G., Inman, R. D., Barr, K. R., Nussear, K. E., Esque, T. C., Hathaway, S. A., Fisher, R. N. (2013). Evolutionary hotspots in the Mojave Desert. *Diversity, 5*(2), 293-319. http://dx.doi.org.jerome.stjohns.edu:81/10.3390/d5020293

[44] Hollingsworth, B. and Beaman, K. 2001. Mojave fringe-toed lizard (*Uma scoparia*)." Prepared for the Western Mojave Plan. Bureau of Land Management, Moreno Valley, California.

[45] *Ibid.*

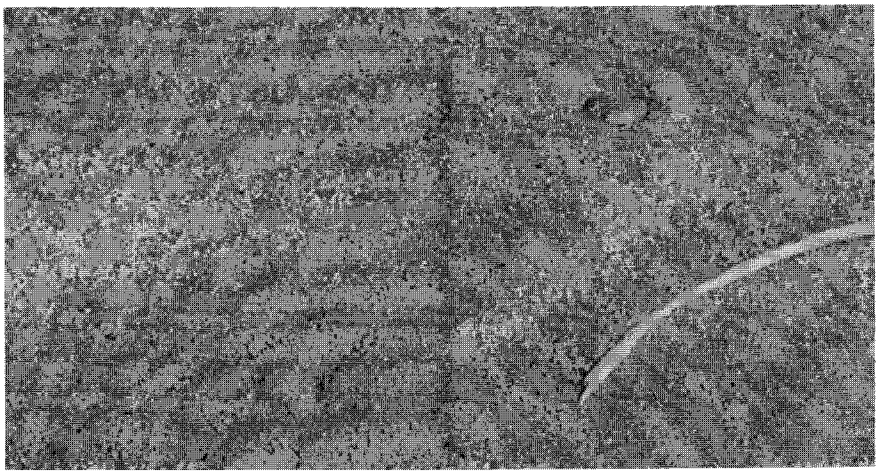

Photo 1 (USFWS)

Photo 2 (W. Ervin)

Photo 3 (R. Owens)

Due to their cryptic nature and difficulty to detect without conducting focused surveys, reptiles are historically underserved in conservation management plans, including those dependent on environmental impact analyses. As co-researcher of the world's most extensive study of the world's largest snake species, the green anaconda (*Eunectes murinus*), I discovered the difficulty of visually locating a secretive species despite the fact it can be over 17 feet long. This species had not been studied to any extent previously due primarily to the false belief that they were not in high abundance anywhere and thus difficult to observe for research. However, once I and my associate conducted focused surveys where they had been anecdotally observed, we caught over 800 anacondas within a few square kilometers, using a focused technique that involved tactile searching among other methods, not visual observations[46]. Visual searching alone resulted in missing over 90% of the individuals encountered via an alternative focused methodology.[47] This example keenly underscores how even one of the largest reptile species in the world can be very difficult to detect if one is not conducting surveys with a protocol and methodology designed for species-specific detection. Additionally, desert habitats that reptiles use typically include more than those identified as preferred habitats or optimal foraging habitats, and as a result environmental impact analyses that estimate the "potential to occur" of reptiles species based only such assertions of "preferred habitat" in the literature, and not focused field surveys, typically fall short of accurate site assessments regarding species presence and use.[48,49,50,51]

New roads and access driveways constructed in most habitats, southwestern deserts included, increase the risk of direct morality of lizards and snakes by vehicles, cause habitat fragmentation and potential barriers to gene flow, and makes previously inaccessible areas available to vehicles including off-road vehicles.[52]Habitats on existing wind facilities are often disrupted by fencing of various kinds during and post-construction, and though serve to exclude

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[46] Rivas, J. A. (1999). *The life history of the green anaconda (Eunectes murinus), with emphasis on its reproductive biology* (Order No. 9973496). Retrieved from: http://www.anacondas.org/diss/disser.pdf

[47] *Ibid.*

[48] Gerson, M. M. 2004. *Aspects of the ecology of a desert lizard, Callisaurus draconoides (blainville 1835), in Joshua Tree National Park with an emphasis on home range and diet* (Order No. 3146172).

[49] Heaton, J. S. 2002. *The LizLand model: Geomorphic landform and surface composition analysis of lizard habitat in the California Mojave Desert* (Order No. 3029564).

[50] Williams, A. K. 2004. *The influence of probability of detection when modeling species occurrence using GIS and survey data* (Order No. 3123715).

[51] Rosen, P. C. 2000. *A monitoring study of vertebrate community ecology in the northern Sonoran Desert, Arizona* (Order No. 9965915).

[52] *Ibid.*

some individual animals like the Desert tortoise, also serves to trap or funnel other small species - including reptiles seeking shade - within a construction site.

In light of these realities, it is not surprising that I and my colleagues have witnessed an important phenomenon on development project construction sites in arid regions where lizard species are abundant, including wind facility sites (i.e. Ocotillo Wind). Specifically, while working on several development projects in sandy desert habitats we observed that lizards of various species, sizes, and with differing behavioral repertoires are directly and immediately attracted to roads on and around construction sites where trucks spraying water and other erosion control liquids are used to reduce airborne dust. The IS/MND notes that such methods will be implemented for this Project at least three times a day. This practice serves to attract lizards of a variety of species to the higher moisture levels on the roads, resulting in increased lizard mortality and injury due to being hit by construction site traffic that use the roads subsequent to the water trucks passing.

Within the course of one month this phenomenon resulted in the mortality of over 20 flat-tailed horned lizards (*Phrynosoma mcallii*) (a rare species) (FTHL) on one construction site in the southern Sonoran desert during 2014, and where an additional 110 FTHL were relocated to avoid mortality from vehicle impacts during several weeks of the construction phase.[53] During the construction of the Sunrise Powerlink gen-tie line in the Sonoran Desert, from just April to November, 103 flat-tailed horned lizards were relocated and 25 mortalities were recorded.[54] It is key to note that these projects failed to anticipate significant impacts to lizards, impacts due primarily to the phenomenon described above, and as a result in one instance their facility construction had to completely stop work for at least a week mid-construction. One contractor reported his company lost over $150,000 a week due to the unexpected delay.[55] Additionally, it remains unknown how effective the poorly conducted relocation actions were, since no follow-up was conducted to analyze long term success of translocation, a process known to often fail with various species and taxa.

In summary, observations during the construction phase of an industrial site facilities in Southern California desert reveal that lizards of varying species and sizes appear to be opportunistically attracted to the added moisture on the roads from water trucks. Such

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[53] Wilton, Ben. Tenaska, pers. comm., March 19, 2015; P. Hord, pers. comm., Aug 27 207.

[54] Flat-tailed Horned Lizard Interagency Coordinating Committee. (2011). Annual Progress Report: Implementation of the Flat-tailed Horned Lizard Rangewide Management Strategy, January 1, 2010 to December 31, 2010. Report prepared by the Flat-tailed Horned Lizard Interagency Coordinating Committee.

[55] Clarke, C. March 2015. Work on Solar Project Halted to Protect Lizard. KCET. Retrieved from: http://www.kcet.org/news/redefine/rewire/solar/work-on-solar-project-halted-to-protect-lizard.html

behavior observed was not restricted to any lizard species in particular. When this phenomenon was officially noted as impacting sensitive species (i.e. the FTHL), additional on-site biologists and mitigation management practices were necessary to ensure complete coverage of all construction roadways and other areas where lizards were prone to death and injury from vehicle impacts[56]. It must be noted that mortalities from even one Project such as this could have a population level effect, considering several Distinct Population Segments have been identified in this region.[57] According to Murphy et. al., "many local populations of *U. scoparia* are quite small with some having perhaps fewer than 500 adults. Small patches of sand cannot support large populations of lizards. Thus, the species is considered rare according to geographic distribution, population size and habitat specificity." Further, fringe-toed lizard densities are negatively affected by sand depletion and surface stabilization.[58]

In order to adequately mitigate for such high potential impacts to the fringe-toed and other lizards, the County must take into consideration the risks iterated above and require mitigation measures to reduce resultant impacts include additional biologists present onsite during all hours of construction, enhanced traffic restrictions, and a reptile relocation Plan and Monitoring Strategy during the construction phase.

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[56] P. Hord, pers. comm., Sage Wildlife Biology. Aug 27, 2017.

[57] Murphy, R., Trepanier, T., Morafka, D. Conservation genetics, evolution and distinct population segments of the Mojave fringe-toed lizard, *Uma scoparia*. *Journal of Arid Environments.* Volume 67, Supplement, 2006, pp 226-247. https://doi.org/10.1016/j.jaridenv.2006.09.023

[58] Kaufmann, J. S. 1982. Patterns of habitat resource utilization in a population of *Uma scoparia*, the Mojave fringe-toed lizard. M. S. Thesis, Univ. Illinois, Chicago. 78pp.

CONCLUSION

Based on the issues described in this letter, it is my professional opinion that the IS/MND has not met the obligations of CEQA and that the Project would result in significant and unmitigated impacts to several sensitive biological resources. The IS/MND must be revised and resubmitted to disclose, adequately analyze, and mitigate the significant impacts. If the impacts cannot be reduced to less than significant, they are unavoidable. No further consideration should be given to the proposed Project until an IS/MND or Environmental Impact Report is prepared and circulated that fully complies with CEQA.

Sincerely,

Renée Owens, M.S.
Conservation Ecologist

Professional Background

I am a conservation biologist and environmental consultant with 25 years of professional experience in wildlife ecology and natural resource management. I have managed an independent environmental consultancy since 1993, contracted for work in the U.S. and Latin America. Since 1994 have maintained U.S. Fish and Wildlife (USFWS) Recovery permits for listed species under the federal Endangered Species Act (ESA), including species discussed herein. I also hold several California state and federal certifications for surveys and monitoring of protected and special status species. I have extensive experience monitoring and studying many species across several taxa, including reptiles and amphibians, passerines and raptors, and marine and terrestrial mammals. I have served as a biological resource expert on over a hundred projects involving water, urban and rural residential developments, mines, and industrial scale energy projects; on private, public, and military lands; in California, the southwest, and Latin America. I have extensive experience observing the species and habitats located within and in proximity to the Project presented in the DEIR.

The scope of work I have conducted as an independent environmental contractor, supervisor, and full time employee has included assisting clients to evaluate and achieve environmental

compliance, restoration, mitigation, and research as related to biological resources; as well as submitting written reports and comments for such work to oversight agencies. This work includes analyzing and reviewing actions pursuant to the California Environmental Quality Act, the National Environmental Policy Act, the Endangered Species Act, the Clean Water Act, the Migratory Bird Treaty Act, and other regulations, along with surveying for and preparing Biological Technical Reports and Assessments. I have been contracted as an environmental consultant by the USFWS, the USDA Forest Service, Ultrasystems, ICF, Helix Environmental, URS, AECOM, AMEC, GeomorphIS, DUDEK, ESA, Tetra Tech, Bridgenet, Bioacoustics, among others. I am a member of the National Sierra Club's Wildlife and Endangered Species Committee and Marine Advisory Committee.

My conservation and natural history research on endangered vertebrate species in Latin America have received various awards including the National Geographic Research and Exploration Award and the National Commission for Scientific and Technological Research Award. My research has been featured on National Geographic Television and Discovery Channel documentaries, and I have served as technical consultant for wildlife documentaries filmed by National Geographic Television, Discovery Channel, BBC, and Animal Planet; in 2017 I received a Special Commendation for contributions to environmental conservation from the City of San Diego.

I have a Master's degree in Ecology; my teaching experience includes college instruction since 1991. I have been an adjunct instructor in Biology, Zoology, Botany, and Environmental Science at Palomar Community College, San Diego State University, and Imperial Valley College. I taught field courses in Tropical Ecology in Ecuador and the Galapagos for Boston University, and was a Visiting Full Time Professor in Environmental Science and Botany at Imperial Valley College. At present I am completing a second MS degree in Environmental Studies from Green Mountain College, focusing on Environmental Education and Communication.

I have gained particular knowledge of the biological resource issues associated with the Project through my extensive work on numerous research and consulting projects throughout southern California. My comments are based upon first-hand observations, review of the environmental documents prepared for the Project, review of scientific literature pertaining to biological resources known to occur in and near the Project area, consultation with other biological resource experts, and the knowledge and experience I have acquired throughout my 25 years of working in the field of natural resources research and management.

EXHIBIT E

Renee Owens, M.S. - Biologist and Independent Environmental Consultant

December 14, 2018

Kyle Jones
Adams Broadwell Joseph & Cardozo
520 Capitol Mall, Suite 350
Sacramento, CA 95814

Subject: RESPONSE to Comments for the Painted Hills Wind Repowering Project Initial Study, Commercial WECS Permit No. 180001 / Variance Case No. 180003 – Intent to Adopt a Mitigated Negative Declaration – CEQ180059.

Dear Mr. Jones,

This letter contains my responses to the County/ DUDEK's replies to my comments on the biological resource impact analysis for the Painted Hills Wind Repowering Project (Project) Initial Study and Mitigated Negative Declaration (IS/MND).

The following is a response to comments in a Memorandum ("Bio Memo") written by DUDEK's Collin Ramsey, provided by the County as response to comments regarding the biological impact analysis of the Project. It is important to preface these comments by noting that for the County to rely on the opinionated response of a DUDEK employee as any part of the County's argument or justification for the approval of this Project's MND is inappropriate. As the primary environmental consultant, DUDEK is a paid contractor for the Project Applicant. As such DUDEK has a conflict of interest and cannot be relied upon for an independent or unbiased scientific response to an IS/MND that they scripted; if there is to be any such response it should come from the County staff as the lead decision-makers for the permitting process.

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1. The Bio Memo states that the assertion that the Project description is incomplete is erroneous by claiming that "no data is[*sic*] submitted that shows that shorter turbines than the maximum height with smaller rotor diameter would have a greater impact on avian species than assumed for the project." First, this claim lacks clarity in its expository goal to negate claims that were not made. Nowhere in my previous comment did I refer to "shorter turbines

than the maximum height with smaller rotor diameter"; an irrelevant statement in respect to the subject, which is the fact that regardless of the conclusions to be made about turbine size, the Project description by default is indeed incomplete because it does not establish clearly what the turbine size to be used will be. It bears repeating that without turbine specifics, adequate baseline determinations regarding the impact by the new turbines is prohibited, thus resulting in speculation in lieu of reliable scientific analysis, and an inability by the public to accurately analyze what exactly is being proposed with this repowering project.

The Bio Memo references the U.S. Fish and Wildlife Service's Shiloh IV Wind project Environmental Assessment (SWEA)[1] saying that since there were no eagle take at Shiloh IV Wind "at all since the repowering with fewer taller turbines occurred" that this somehow justifies their claim that there will no significant impact to eagles from this Project, while in the same breath claiming that my observations from Ocotillo Wind are "inapposite" because it is not a repowering Project.

a. First, my hundreds of direct observations of raptor species, including golden eagles and the California ESA Threatened Swainson's hawk, over the course of several years at the Ocotillo Wind site, pre- and post-construction, confirms that eagles are seen repeatedly flying within higher altitudes that are the altitudes relevant to the Project's new presumably taller turbines. These observations are revelatory of species behavior and are thus relevant wherever (a) the species occurs as residents or migrants, and (b) taller turbines exist that can pose a barrier / injury to the species. Behavioral proclivities are relevant regardless of eagle take data statistically analyzed from a few years from some other Project (as is the case with Shiloh IV project referenced in the Bio Memo), and whether take occurred in a repowering site or non-repowered wind farm. It is important to note that both golden eagles and Swainson's hawks have been observed in the Project area as part of studies funded by Southern California Edison to measure the activity of birds in these areas where wind farms are now distributed.[2]

b. Second, Shiloh IV Wind farm's mortality report mentioned in the SWEA, referenced in the Bio Memo, falls far short of a complete picture of (a) what degree of eagle take may have occurred on that project site since the study was completed, and (b) what can and may

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[1] USFWS. (June 2014). Final Environmental Assessment Shiloh IV Wind Project Eagle Conservation Plan. p. 33. Retrieved from: https://www.fws.gov/cno/conservation/MigratoryBirds/ShiloIV-FONSI/Attachment1-FEA-ShilohIV-June2014.pdf

[2] McKernan, R. Wagner, W., Landry, R. and McCrary, M. (1984). Utilization by Migrant and Resident Birds of the San Gorgonio Pass, Coachella Valley, and Southern Mojave Desert of California. Prepared for Research and Development Southern California Edison. 242 pp.

happen at this Project over the course of this Project's lifetime. As iterated in my original comments, the reviewer has no way of knowing what impact *this Project in this location* with taller turbines *that exists in proximity to various historical eagle nesting territories* (as per the Bittner/WRI report cited in the IS/MND) may have on nesting, since it provides no valid, or current baseline (see my original comments) information on how many eagles may occur within this given location whatsoever. As iterated with evidence in my original comments, the WRI eagle report is so outdated to be irrelevant regarding population status, the data was collected illegally, and is invalid in its determinations of eagle nesting status. However, the fact that golden eagles have a historical record of nesting in proximity to the Project site is as relevant today as it was ten and twenty years ago. What remains unknown, and un-surveyed, is how many eagles may be impacted via impacts to nesting, breeding, and foraging, by the new Project turbines.

c. Third, the inference that the Bio Memo repeatedly relies on, specifically that the term 'repowering' equates the one and only relevant outside project comparison for this Project's impacts to eagles - or other avian species - is unscientific, a logical fallacy. In fact, the SWEA states that, in respect to accuracy of impact analysis for Shiloh IV, "we believe that the number of eagle fatalities in the WRA could be higher than the currently reported from post-construction monitoring or other incidental detections in view of limited search intervals, limited search areas, and existing land use /cropping patterns."[3] USFWS eagle biologists go on to state that "The effect of turbine-related golden eagle fatalities on the local population is dependent on the age, status, and origin of the individual eagle. Direct mortality of golden eagles could adversely affect local survival and fecundity, and could thereby affect local and possibly regional populations. **The biological impact of killing an eagle within the WRA on the overall population depends on the type of eagle killed: a breeding adult, a juvenile, or a floater**.[Emphasis added.]" In other words, risk, take, and thus significant impacts from the Project could come down to a few or even one eagle. The fact is the IS/MND has provided no valid, current information on the local eagle population relevant to the Project site, its nesting or foraging status, nor on any changes that may have occurred (i.e. increased nesting activity) in recent years in proximity to the Project, therefore no valid or accurate comparison can be made regarding an unknown site baseline and impacts that may occur in the near and projected future life of the Project.

d. The inference of the Bio Memo is that a mortality report snapshot of zero eagle take at Shiloh IV - which apparently is what Mr. Ramsey is referring to when he erroneously claims

[3] McKernan, R. Wagner, W., Landry, R. and McCrary, M. (1984). Utilization by Migrant and Resident Birds of the San Gorgonio Pass, Coachella Valley, and Southern Mojave Desert of California. Prepared for Research and Development Southern California Edison. P. 32

there has been no eagle take "at all since repowering" (for which the Bio Memo provides no conclusive evidence of to present, since the data referenced in the EA does not include the past six years) - is not the entire picture represented by Shiloh IV. USFWS also states in the SWEA, "Because the Shiloh IV was largely a repowering project...the project resulted in vastly greater spacing between turbines and the removal of lattice towers that provided perches for eagles and other birds. However, the total risk area to eagles also increased because of the larger size of the turbine blades. Under all alternatives, Shiloh IV will actively discourage establishment of an increased prey base through project design and maintenance and will coordinate with landowners to encourage responsible livestock husbandry and immediate removal of livestock carcasses to avoid attracting eagles into the project area."[4]

In respect to reducing eagle take after the repowering phase, the SWEAs also says, "Four active nests and territories have been identified within 10 miles of the project area: one nest approximately 1 mile east of the project area, one approximately 5 miles northeast of the project area, and two 10 miles southwest and south of the project area (Figure 3-1). Nesting adults and juveniles from these nests are at risk from project operations. We have evaluated these risks in the context of existing foraging and operational conditions and find that the nest nearest to the project area is at greatest risk. However, due to existing farming operations and a limited prey base, foraging throughout the project area is of lower quality than in nearby grassland areas. Ongoing farming operations have been observed to reduce or eliminate prey such as ground squirrels, because they are killed or their burrows are removed during agricultural operations. Nearby unfarmed areas likely support higher prey populations because of this decreased disturbance, which allows populations to persist and reproduce more readily without periodic fatalities from farming operations."[5]

This underscores three points ignored by the IS/MND and the Bio Memo when it refers to the SWEA: (a) USFWS asserts that by design a repowering project can increase risk of impacts to eagles, (b) it is quite likely that minimization of eagle take by the repowered Shiloh IV occurred thanks to Shiloh IV following the recommendations made by USFWS for reducing take, including those mentioned above, in addition to proximity to agricultural operations, and (c) knowing the current status of nearby eagle territories is essential for accurate impact analysis. In summary, USFWS acknowledges that the repowering project can increase take despite a reduction in turbines overall, and that other variables are

[4] McKernan, R. Wagner, W., Landry, R. and McCrary, M. (1984). Utilization by Migrant and Resident Birds of the San Gorgonio Pass, Coachella Valley, and Southern Mojave Desert of California. Prepared for Research and Development Southern California Edison. p. 33

[5] *Ibid.* p. 32

equally and more relevant to reduced eagle take than reduced turbine numbers. This third point is reiterated elsewhere for other repowered wind farms as well.[6] It is important to note that while the Bio Memo is referring to the repowered Shiloh IV project as an equivalent standard for eagle take comparison, the USFWS state in the SWEA that there could be no significant adverse cumulative impacts to eagles *if* the Applicant offsets them with compensatory mitigation unlike any mentioned in the IS/MND, and "through the implementation of experimental ACPs (Advanced Conservation Practices" ("e.g. visual and auditory deterrence procedures, and monitoring flight patterns in the WRA.)"[7] No such mitigation protocols are suggested by the IS/MND to reduce significant cumulative take of eagles over the life of the Project, and the IS/MND does not provide adequate or substantial evidence that such impacts will not occur. Therefore assumptions of equivalent risk and thus impacts to eagles between Shiloh IV and this Project being very similar are erroneous.

e. The Bio Memo relies heavily on its assertion that the (ill-defined) current environmental baseline contributes to greater impacts than the Project will purely by default of the number of turbines being reduced, and yet provides no concrete evidence to support this. On the other hand, abundant evidence exists that challenges the persistence of the assumption that numbers of turbines are the only factor, or only relevant factor, impacting mortality rates:

In their year 1 report of bird and bat mortalities of the Golden Hills Wind Energy Center, a repowered region of Altamont Pass Wind Resources Area (APWRA), H.T. Harvey and Associates used dogs to aid in the detection of carcasses. Their improved search methodology resulted in findings where they concluded that, compared to the pre-repowering bird years of the APWRA-wide avian fatality monitoring study, mortality estimates were higher for golden eagles and red-tailed hawks.[8] In their two-year study of the APWRA in 2003-2004, the researchers designed the study to perform spatial analysis of raptor flight heights in order to elucidate flight patterns in response to topographic features and wind conditions. The study goal was to forecast avian mortality in the repowered APWRA under two scenarios, and included observations of bird behaviors recorded during study in the APWRA, in order to analyze the effect of attributes of the proposed new wind turbines and their spatial locations and arrangements in the repowered APWRA. Their

[6] H.T. Harvey and Associates. (2017). Golden Hills Wind Energy Center Postconstruction Fatality Monitoring Report: Year 1. Prepared for Golden Hills Wind LLC. 97 pp.
[7] USFWS. (June 2014). Final Environmental Assessment Shiloh IV Wind Project Eagle Conservation Plan. Retrieved from: https://www.fws.gov/cno/conservation/MigratoryBirds/ShiloIV-FONSI/Attachment1-FEA-ShilohIV-June2014.pdf. pp. 17, 39
[8] H.T. Harvey and Associates. (2017). Golden Hills Wind Energy Center Postconstruction Fatality Monitoring Report: Year 1. Prepared for Golden Hills Wind LLC. 97 pp.

conclusions from over a thousand observations were several, including the fact that golden eagles and other raptors (i.e. red-tailed hawks) were consistently observed flying at varying heights between 50 and 200 m (164 and 656 feet). They also found that golden eagles flew over flat terrain nearly 7 times more often than expected by chance, and otherwise favored west- and south-facing slopes, and most strongly avoided southwest and east slopes.[9] A systematic study by Loss *et. al.*[10] looked at mortality rates and risk to birds by monopole turbines (similar to those proposed for the Project) throughout the U.S., concluding that "between 140,000 and 328,000 (mean = 234,000) birds are killed annually by collisions with monopole turbines in the contiguous U.S. **We found support for an increase in mortality with increasing turbine hub height... Evaluation of risks to birds is warranted prior to continuing a widespread shift to taller wind turbines**. Regional patterns of collision risk...may inform broad-scale decisions about wind facility siting."[11] Other studies similarly conclude that, as asserted in my original comments, size of turbines matter when it comes to mortality rates of birds as well as bats.[12] Indeed, the SWEA that the Bio Memo mentions refers to differential mortalities among both birds and bats based upon differential turbine heights.[13] In Hotker's research on the impact of repowering of wind farms on birds and bats, the overriding conclusion was that, "the results of modelling show that in all cases repowering has a negative impact on birds – larger wind turbines have higher collision rates than smaller ones (see also chapter 4.2)."[14]

These findings support the reality that impacts from wind farms to raptors involve a host of variables, including size, design, height, the micro-siting of turbines, location in respect to slope, habitat, ecotones, hills, breeding territories, and migratory pathways. Therefore for the IS/MND and the Bio Memo to conclude the

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[9] Smallwood, K. S., and L. Neher.(2004). *Repowering the APWRA: Forecasting and Minimizing Avian Mortality Without Significant Loss of Power Generation.* California Energy Commission, PIER Energy-Related Environmental Research. CEC-500-2005-005. 21 pp.

[10] Loss, S. R., T. Will, and P. P. Marra. (2013). Estimates of bird collision mortality at wind facilities in the contiguous United States. *Biological Conservation* 168:201–209.

[11] *Ibid.* p. 1

[12] Smallwood, K. S. (2007). Estimating wind turbine-caused bird mortality. *Journal of Wildlife Management*
71:2781–2791.

[13] USFWS. (June 2014). Final Environmental Assessment Shiloh IV Wind Project Eagle Conservation Plan. Retrieved from: https://www.fws.gov/cno/conservation/MigratoryBirds/ShilolV-FONSI/Attachment1-FEA-ShilohIV-June2014.pdf. pp. 17, 39

[14] Hotker, H. (2006). The Impact of Repowering of Wind Farms on Birds and Bats. Nature and Biodiversity Conservation Union. p. 24. Retrieved from: https://bergenhusen.nabu.de/imperia/md/images/bergenhusen/impact_of_repowering.pdf

Project will have no significant impacts based solely on the theory that reduced number of turbines will reduce impacts is not only unproven and negated by the evidence at hand, but ignores the purpose and scope of these studies that seek to better inform repowering projects about how to truly reduce impacts with the assistance of advanced conservation best practices elucidated in their findings.

2. Despite the detailed evidence provided in my original comments,[15] the Bio Memo claims that the IS/MND's purported amount of habitat disturbance of "36.33 acres" as proposed is not underestimated. First, in making this claim Mr. Ramsey ignores the fact that in my comments I provided extensive evidence supporting how the IS/MND underestimates and mischaracterizes permanent (2.59 according to the IS/MND) vs. temporary impacts; he makes no argument to counter my evidence and thus my argument stands as presented. Neither does the Bio Memo – or the IS/MND – explain with any clarity how they came to the conclusion of what all impact disturbances will be, what habitats (or resident species) comprise the 36.33 acres of "disturbance" specifically, or exactly what the sum total of temporary and permanent impacts are in relation to types of "disturbance". For instance, the IS/MND states that "For purposes of overseeing compliance with CVMSHCP requirements and with the Implementing Agreement (IA), a Joint Project Review (JPR) process shall be instituted by the CVCC for Project impacts within the Upper Mission Creek/Big Morongo Canyon Conservation Area to address 2.59 acres of permanent disturbances within the Conservation Area."[16] The IS/MND also states that "The Project will have 0.25 acres of permanent impacts and 2.20 acres of temporary impacts to potential non-wetland USACE waters of the U.S., and 0.25 acres of permanent impacts and 2.20 acres of temporary impacts to CDFW streambed." [17] Yet no impacts are described or broken down in detail for this purported 2.59 acres of "disturbance" or wetland impacts. Without clarification of what habitat is impacted in totality of the Project site, where, and how, what species may be present on this habitat, once again it is impossible for the reviewer to make any accurate analysis of the nature of the direct, indirect, or cumulative impacts these disturbances will have in respect to significant impacts, not to mention any clarity on how they are proposed to be successfully mitigated.

Instead, the Bio Memo defends the IS/MND's disturbance values by stating, vaguely, "the surveys coincide with the disturbance area of 36.33 acres and do not underestimate impacts." It goes on to say it is a "covered project" under the CVMSCHP and the habitat "disturbance" was vetted (despite the fact that the IS/MND repeatedly refers to JPR as a process to occur in

[15] R. Owens, Letter from Renée Owens to Kyle Jones (Nov. 27, 2018) Comments for the Painted Hills Wind Repowering Project Initial Study, Commercial WECS Permit No. 180001 / Variance Case No. 180003 – Intent to Adopt a Mitigated Negative Declaration – CEQ180059

[16] LSA Biological Resources Assessment (BRA) p. 15

[17] *Ibid.* p. 14

the future). First, the JPR provided upon request by CURE – not within the IS/MND – is referred to as incomplete, and it is submitted as a "draft", thus not finalized. Second, the JPR states the there are "45 acres of proposed new disturbance". Third, the JPR characterizes impacts further as applying to the Jerusalem Cricket (5.50 acres), Desert Tortoise (43 acres), and Sand Source areas (43 acres). These impacts are not identified or clarified in the IS/MND. Fourth, simply because a Project is "covered" under a Plan, by definition of its location, does not certify that impacts have been accurately estimated, described, or mitigated by the IS/MND, indeed they have not as iterated by the evidence above and in my original comments.

3. The Bio Memo says that CURE comments find fault with survey protocols and methods. This is an inaccurate assessment, the IS/MND is devoid of current ground-truthing surveys and any other current, comprehensive protocol surveys for wildlife or rare plants; therefore it is impossible to analyze (and thus describe faults) with protocols and methods of surveys that do not - but should – exist in order to assess impacts appropriately. What CURE finds fault with is this complete lack of valid and applicable surveys to establish any coherent picture of the Project's baseline biological resources beyond generic habitat types and species that "may" occur based on databases and highly outdated surveys.

The Bio Memo asserts that no evidence is provided that sensitive avian species "must" occur on site, and as with the IS/MND claims that if sensitive species do occur impacts will be "covered" under the CVMSCHP. In actuality, my original comments stated that in order for the IS/MND to assess impacts it should show a moderate / high likelihood of species to occur based on surveys to assess risk. To ask for evidence that they "must" occur is not what is required by the reviewer nor what my comments detailed. The need for specific, thorough, current information to assess degree, type, and duration of impacts to sensitive birds (as well as other species) has already been spelled out in evidentiary detail in the original comments on biological resources; such detail on impacts as well as mitigation protocols are lacking, as already iterated extensively. DUDEK's response opinion repeatedly ignores this argument presented, so much so that one wonders if Mr. Ramsey actually read the comment letter in its entirety.

The onus is on the IS/MND to demonstrate that sensitive species do not and will not occur onsite. With zero focused, current species surveys of any kind they failed to meet this burden. Meanwhile, the existence of a Habitat Conservation Plan does not preclude the IS/MND's requirement to adequately describe exactly how (as of yet unknown) baseline conditions that include impacts to sensitive birds will be mitigated. Simply referring to the HCP does not fulfill the requirement for a clear description of what impacts will be, not just for the short-term impacts as may be addressed by pre-construction surveys for burrowing owls or other nesting

species, but also for the long term impacts due to habitat disturbances (temporary and permanent), and due to the presence of turbines of new designs and in new locations.

Saying "most sensitive bird species that may be present on site are covered under the Plan" is, as clarified in evidentiary detail in my original comments, completely unsatisfactory for CEQA. In addition to those arguments posed, "most" is not good enough. Which species are not covered? For those that are even mentioned in the CVMSHCP, how will any loss of foraging and breeding habitat, or injury and deaths from permanent direct, indirect, and cumulative disturbance to habitat actually mitigated? None of these questions are answered by the IS/MND, indeed neither are they addressed – for this Project - by the CVMSCHP either. How will turbine related deaths from purportedly taller turbines, constructed in new sites that may have greater impacts based on locations in respect to slope, hillsides, proximity to raptor nesting territories, etc. than previously in existence be mitigated?

New turbines are proposed for construction closer to the north end of the Project site in the mountain foothills where none have been in existence prior. As mentioned above, numerous studies have demonstrated that multiple variables affect bird behavior and resultant mortalities around turbines, including where turbines are located in respect to slope degree and position, proximity to other turbines, proximity to certain habitats, and proximity to nest territories. Additionally, the scientific literature is replete with data revealing that most bird species studied, including golden eagles and other raptors, have a high natal site fidelity.[18,19,20,21] As such, their evolutionary proclivities dictate that regardless of new, anthropogenic constructs that may pose impacts or otherwise create a negative disturbance, they retain a high affinity for their location of hatching, not just for breeding but also foraging, even if they are long distance

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[18] DeSorbo, C. R., D. Riordan, J. Tash, R. B. Gray and Hanson, W. (2015). Documenting Areas of Importance to Maine Subadult Bald Eagles: Insights from Satellite Telemetry. Report #2014-24 prepared for the Maine Outdoor Heritage Fund, Portland, ME, The Bailey Wildlife Foundation, Cambridge MA, and the Maine Department of Inland Fisheries & Wildlife, Bangor ME. 38 pp.

[19] Beringia South. (2013). Golden Eagle Breeding Ecology and Resource Selection in South Central Montana.
https://static1.squarespace.com/static/528f911de4b01f2a31514e96/t/56e9c5fa62cd94b74de00845/1458161149635/2013_Livingston_GOEA_AnnualReport.pdf

[20] Pagel, J.E., D.M. Whittington, and G.T. Allen 2010. Interim Golden Eagle inventory and Monitoring protocols; and other recommendations. Division of Migratory Bird Management. U.S. Fish and Wildlife Service.
https://www.fws.gov/southwest/es/oklahoma/documents/te_species/wind%20power/usfws_interim_goea_monitoring_protocol_10march2010.pdf.

[21] Driscoll, D.E. 2010. Protocol for golden eagle occupancy, reproduction, and prey population assessment. American Eagle Research Institute, Apache Jct., AZ. 55pp.
Https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83955&inline

migrants. When conducting research of banded birds that migrate thousands of miles, I have observed first year offspring return to the same branch of the same tree to construct a nest within inches of the one from the previous year where they hatched. I have observed raptors (golden eagles, re-tailed hawks, Swainson's hawks) return to the same grove, tree, or cliff face to nest where they hatched. It is also abundantly documented that birds' avoidance of human activities and constructs may have significant adverse effects on their distribution and abundance.[22] This response can have adverse influences on their breeding success, feeding success, range use, reproduction, fecundity, survival, and abundance at the population level.[23, 24,25,26,27,28,29] And yet the IS/MND and the Bio Memo make no mention of the potential for new impacts to raptors and other protected bird species by the Project based upon the siting and location variables relevant to new turbines proposed.

Golden Eagles

Despite the specious claims to the contrary in the Bio Memo, the IS/MND ignores the evidence provided in comments, and the onsite reality, that the Project poses a risk of significant impacts to various sensitive bird species. The IS/MND does infer that golden eagles will be impacted by the Project by its referral to an eagle survey by WRI. However, as my comments demonstrate in detail, that survey is completely inadequate for several reasons, not the least of which being it

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[22] Ruddock, M. and Whitfield, D. (2007). A Review of the Disturbance distances in Selected Bird Species. A Report from the Natural Research Project Ltd. To Scottish Natural Heritage. Retrieved from: https://www.nature.scot/sites/default/files/2018-05/A%20Review%20of%20Disturbance%20Distances%20in%20Selected%20Bird%20Species%20-%20Natural%20Research%20Ltd%20-%202007.pdf

[23] Burger, J. & Gochfeld, M. (1991). Human distance and birds: tolerance and response distances of resident and migrant species in India. *Environmental Conservation*, 18, 158–165.

[24] Fernández, C. & Azkona, P. (1993). Human disturbance affects parental care of marsh harriers and nutritional status of nestlings. *Journal of Wildlife Management*, 57, 602-608.

[25] Madders, M & Whitfield, D.P. (2006). Upland raptors and the assessment of wind farm impacts. *Ibis*, 148, 43–56.

[26] Walker, D., McGrady, M., McCluskie, A., Madders, M. & McLeod, D. (2005). Resident Golden eagle ranging behaviour before and after construction of a windfarm in Argyll. *Scottish Birds*, 25, 24-40.

[27] Fraser, J.D. (1983). The impact of human activities on bald eagle populations - a review. Pages 68-84 in Gerrard, J.M. and T.N. Ingram, Eds. *The bald eagle in Canada.* White Horse Plains Publishers, Headingley, Manitoba.

[28] Gill, J.A., Norris, K. & Sutherland, W. (2001). Why behavioural responses may not reflect the population consequences of human disturbance. *Biological Conservation*, 97, 265-268.

[29] Winkelman, J.E. (1992). Effects of the Sep wind farm at Oosterbierum (Fr.) on birds, 1-4, collision victims, nocturnal collision risks, flight behaviour during daylight, and disturbance. *RIN-Report* 92/2-5. Instituut voor Bos- en Natuuronderzoek (IBN-DLO), Arnhem, The Netherlands.

is far too old to represent the current baseline for the Project.[30] What the WRI survey does reveal that is relevant to the Project is that the Project site is in close proximity to several historical nesting golden eagle territories, and given the natal site fidelity mentioned above, a new survey is essential to establish the baseline conditions and assess impacts from new towers - including those to be located closer to some of the nest territories than any turbines already in existence – to local eagle individuals and the population. This necessity is underscored by the fact that both the USGS and USFWS have more recently determined that "take" by a wind farm of more than even one eagle per year to be potentially significant to the population level.[31,32,33] This reality reinforces the potential of the Project to have significant long term, cumulative impacts to eagles as new information is gathered regarding eagle mortalities at wind farms, including in the Project regions, where USFWS "estimates that on average more than 20 golden eagles are probably killed each year among the wind turbines of San Gorgonio Pass."[34]

Burrowing owls

The IS/MND acknowledges that there is a **moderate** potential for burrowing owls to be impacted by the Project. In actuality the potential for them to occur is **high** based upon (a) CNDDB accounts for the burrowing owl for this area, (b) the habitat types on and near the site are preferred by burrowing owls, and (c) the CVMSHCP (Plan) has observed them throughout almost every site noted in their species account report, including those in close proximity to the Project site, which is a primary reason why they are a species protected under the Plan for this region.[35] However, it does not come close to offering adequate mitigation since it only

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[30] USGS. (Sept 2016.) Roughly over a quarter of the golden eagles killed at the Altamont Pass Wind Resource Area in Northern California from 2012-2014 were recent immigrants to the local population. Retrieved from: https://www.usgs.gov/news/local-wind-energy-development-has-broad-consequences-golden-eagles

[31] USFWS (2018). Retrieved from: https://www.fws.gov/cno/conservation/MigratoryBirds/EaglePermits.html

[32] Pagel, J.E., D.M. Whittington, and G.T. Allen (2010). Interim Golden Eagle inventory and Monitoring protocols; and other recommendations. Division of Migratory Bird Management. U.S. Fish and Wildlife Service.

[33] Katzner, T., Nelson, D., Braham, M., Doyle, J., Fenandez, N., Duerr, A., Bloom, P., fitpatcik, M., Miller, T., Culber, R., Braswell, L., and DeWoody, J. (2016). Golden Eagle fatalities and the continental-scale consequences of local wind-energy generation. *Conservation Biology*. 31 (2): 406-415. Retrieved from: https://www.usgs.gov/news/local-wind-energy-development-has-broad-consequences-golden-eagles

[34] James, I. (July 3, 2014). Groups raise concerns about eagle deaths at California wind farms. *The Desert Sun / USA Today*. Retrieved from: https://www.desertsun.com/story/news/environment/2014/07/03/palm-springs-bald-eagles-dying-windmills/12205617/

[35] Coachella Valley Association of Governments. August 2016. Species Accounts and Conservation Measures. Final major Amendment to the CVSMHCP.

addresses the potential for impacts during the construction phase, and ignores addressing the Project baseline, scope, or mitigation of impacts to burrowing owls for cumulative, direct, and indirect impacts for the life of the Project other than those that may occur during construction.

4. The Bio Memo attempts to justify a lack of relevant, current surveys by stating that "many days" were spent for the vaguely described "jurisdictional delineations". Since the term jurisdictional delineations is used in the IS/MND to be synonymous with wetland delineations, one must assume it is intended to be the same here. To that end, it clearly does not support my comments demonstrating the lack, and necessity, of focused, protocol, or otherwise established method searches for any and all relevant vertebrate and invertebrate taxa. To state what is usually obvious, wetland delineations are very specific protocols for identifying and mapping wetlands and reporting them in a way the jurisdictional agencies have designated. They involve no aspect of methodically searching for, detecting, mapping, recording, or observing any species of animal, fungi, or plants aside from any onsite plants relevant that assist in the wetland delineation process. ESA species searches require permits, MOUs, and/or certifications; they also require special training and methodologies that necessitate very specific "focus" on the species/ taxa at hand in order to make a comprehensive and scientific search (hence the term, focused surveys) while minimizing the potential for the observing biologist (as opposed to a hydrologist) to harass protected species. It is absurd to suggest that wetland delineations can and do replace wildlife surveys of any kind. It is equally specious to infer that "many hours" spent looking at the literature can replace ground-truthing to establish baseline conditions, especially when that literature is not from the Project site and / or is several years old and thus not necessarily representative of what exists at present onsite.

The Bio Memo also points to the NREL study to conclude that risks to avian species in the San Gorgonian Pass are low. This is an erroneous conclusion for several reasons:

a) My original comments provide evidence that this has not been confirmed due to a lack of baseline evidence, as well as my referral to the long list of bird species in the CNDDB observed for the Project region.[36] And as noted above, USFWS and USGS have noted an

[36] R. Owens, Letter from Renée Owens to Kyle Jones (Nov. 27, 2018) Comments for the Painted Hills Wind Repowering Project Initial Study, Commercial WECS Permit No. 180001 / Variance Case No. 180003 – Intent to Adopt a Mitigated Negative Declaration – CEQ180059

increase in observations of eagles, including mortalities, in the San Gorgonio Pass region near the Project.[37,38]

b) Two detailed studies were prepared for, and funded by, the Southern California Edison Company to assess the use and abundance of birds in the San Gorgonio Wind Resources Study Area (WRA). This research was requested to analyze use of the area where this Project and neighboring wind farms are now located for the specific purpose of analyzing the potential for wind farm impacts to avian species.[39,40,41] The research studied both daytime and nocturnal use of the region by resident and migrant species. The studies identified the region as comprising major routes of migration for a host of species and a major route for migrating birds crossing the desert.[42] Additionally, the two-year census involved 24 observation sites – several within 1 - 2 km of the Project – that concluded the area to be a flyway with high species richness. The also state that "of the approximately 535 species of birds that have been recorded in California, 306 of these were observed during this study, with 217 species in San Gorgonio Pass, and 262 species in the Coachella Valley. A greater percentage of migrant birds vs. resident birds were recorded in all areas."[43] Protected species detected included golden eagle, burrowing owl, Swainson's hawk (CESA listed), yellow warbler, and southwestern willow flycatcher (ESA listed). These findings are significant not only because they demonstrate an abundance of bird use in the Project area, but also that migrants that may not use the habitat for breeding – **and thus not normally**

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[37] James, I. (July 3, 2014). Groups raise concerns about eagle deaths at California wind farms. *The Desert Sun / USA Today*. https://www.desertsun.com/story/news/environment/2014/07/03/palm-springs-bald-eagles-dying-windmills/12205617/

[38] Lovich, J. USGS. (2015). Golden Eagle mortality at a wind-energy facility near Palm Springs, California. Western Birds. Western Birds 46:76–80. https://www.westernfieldornithologists.org/archive/V46/46(1)-p076-p080.pdf

[39] McCrary, M., McKernan, R., Landry, R., Wagner, W., and Schreiber, R. 1983. Nocturnal Avian Migration Assessment of the San Gorgonio Wind Resource Study Area, Fall 1982. Report Prepared for Research and Development Southern California Edison Company by the L.A. County natural history Museum Foundation. 142 pp.

[40] McKernan, R., Wagner, W., Landry, R. And McCrary, M. 1984. Utilization by Migrant and Resident Birds Of the San Gorgonio Pass, Coachella Valley, and Southern Mojave Desert of California. Report Prepared for Research and Development Southern California Edison Company by the L.A. County natural history Museum Foundation. 254 pp.

[41] McCrary, M. D., R. L. McKernan, and R. W. Schreiber. 1986. San Gorgonio wind resource area: Impacts of commercial wind turbine generators on birds, 1985 data report. Prepared for Southern California Edison Company.

[42] *Ibid.*

[43] *Ibid.* p. 86

detected by breeding bird surveys, or anticipated by habitat type onsite – could be significantly impacted throughout the life of the Project.

Swainson's hawk

c) It is also important to note that the risk of the Project impacts to the Swainsons' hawk, a California ESA threatened species, is ignored by the IS/MND and the Bio Memo. However, the IS/MND's own eagle report notes sightings of the Swainson's hawk in the vicinity as does the McKernan *et. al.* census.[44] The risk of impacts by turbines to this species even when a species is a migrant (non-resident), is underscored by the fact that the mitigation protocols for the Ocotillo Wind facility in the Sonoran desert, hundreds of miles from Swainson's hawk breeding grounds, include turbine curtailment upon sighting of Swainson's hawks during standard operation throughout the life of the project.[45]

d) Upon careful review of the NREL study - touted by the Bio Memo as primary evidence to disregard project impacts to birds - it can be determined that the findings are suspect in their relevance, and worse, statistically invalid, according to experts and by the study authors' own admission: The NREL study states,

"This study was not specifically designed to provide standardized estimates of avian fatalities. The wide interval between searches (90 days) led to a high level of uncertainty in the fatality estimates. The unknown impact of scavenging on the fatality estimates could greatly impact them...The lack of random assignment of treatments to experimental units may have caused some variables to be confounded. For example, there were no lattice structures in the Phase II geographic locations, possibly confounding the effect of turbine type with geographic location. Differences in overall fatality rates or risk index between tubular towers and lattice towers may be due to differences in geographic location and not differences due to turbine type. Scavengers, predators, and other removal sources (e.g., oiled carcass sinking in water, carcasses plowed into field) may remove carcasses between the time the casualty occurs and the time the next search is conducted. Estimating scavenging rates is vital to providing good fatality rates (Erickson et al. 2000)...Due to the low fatality rates [observed], strong patterns in comparison results of fatality and the risk

[44] McCrary, M. D., R. L. McKernan, and R. W. Schreiber. 1986. San Gorgonio wind resource area: Impacts of commercial wind turbine generators on birds, 1985 data report. Prepared for Southern California Edison Company.

[45] BLM. 2012. Avian Bat and Bird Protection Plan for the Ocotillo Wind Energy Facility. http://www.ocotilloeccmp.com/Wild_1p_Avian%20and%20Bat%20Protection%20Plan.pdf

index among levels of factors such as geographic location and type of turbine were not very apparent."

The authors go on to say that, "This was a mensurative study (Hurlbert 1984, Morrison *et al.* 2001) designed to provide statistical evidence regarding differences in use, fatality rates, and the risk index among levels of multiple factors. In addition, confounding of some factors existed. For example, the *Medium* elevation area for Phase I had no large tubular towers when studied. Therefore, geographic location was confounded with turbine type, and significant differences observed may be due to geographic location or to turbine type. The basic study design was a stratified random design, with geographic location, turbine sizes, and tower types used in defining strata (p. 4)".[46]

It is ironic that the authors reference Hurlbert's article that is an excerpt from his seminal text, The Design of Experiments, with associated statistical analysis. As a graduate student of Dr. Hurlbert's, I became very familiar with the fatal flaw of pseudoreplication highlighted in his book, which by the NREL's own admission they reveal to have committed in their study. Specifically, they state that they "confounded" location with turbine type. This a fundamental flaw that amounts to pseudoreplication, a profound design error that invalidates the entire experiment's statistical conclusions based upon the fact that the design assumptions used for the statistical analyses -namely of replication of treatments, and in this case additionally the assumptions of randomness (for a stratified random design) - were not met; the authors acknowledge both lack of randomly assigned treatments, and lack of equivalent treatments. To be clear, pseudoreplication is no minor detail or experimental minutiae; when committed it invalidates conclusions about the data's relevance to the population they purport to represent (one main reason why Hurlbert devoted so much time in his expository text and research defining the problem and how to avoid it). It is further defined as the use of inferential statistics to test for treatment effects with data from experiments where either treatment is not accurately replicated or replicates are not statistically independent.[47] Put simply, it involves incorrectly defining and thus artificially inflating the number of samples or replicates. As a result, statistical tests performed on the data are rendered invalid.

In other words, pseudoreplication can be described as is the testing for treatment effects with an error term inappropriate to the hypothesis being considered. Hurlbert defines this as unwanted nondemonic intrusion quite specifically; where it results in impingement of

[46] IS/MND p. 760

[47] Hurlbert, S.J. 1984. Pseudoreplication and the design of ecological field experiments. *Ecological Monographs* 54:187-211.

chance events on an experiment in progress. As a safeguard against it – as well as preexisting gradients – appropriate assignation and interspersion of treatments is considered not to be preferential, but an obligatory feature of essential design. Comprehension of the conflict between interspersion and randomization is aided by distinguishing pre-layout (or conventional) and layout-specific alpha (probability of type I error).[48] In the case of this NREL study, by the author's own admission of lack of appropriate treatment identification and invalid randomness assignations they have committed pseudoreplication, and more. This invalidates the referential conclusions of the study since the experimental design does not match the assumptions the statistics are based upon. As such, the veracity of the report is in serious question, since this report would not be accepted to a peer review journal due to its fatally flawed statistics and lack of statistical power. Additionally, assumptions about relevance to the regional scenario and population as a whole that are theoretically represented are also invalid.

e) It is also ironic that the IS/MND has chosen as their *other* document supporting their claim of less than significant impacts to birds a summary report ("Report") by a wind project's contracted environmental consultant (CH2M Hill), to support this IS/MND's theory of minimal Project impacts to birds. Once again, the cited Report fails to contribute to the required baseline for this Project, since it is too old to be relevant for reporting the current baseline of resident and breeding species in proximity to and within the Project site, and more to the point the studies it refences are not directly related to the Project.[49] As importantly, the CH2M report is a summary of other studies, it is not a survey of the Project site as the IS/MND infers from its conclusions.

The IS/MND cites the Report as evidence that their new monopole turbines will unquestionably have reduced impact, yet (a) the summary of the findings of the Report as stated in IS/MND is incomplete and deliberately misleading; (b) the findings of the Report are not in agreement with has been determined by several studies of repowered wind farms conducted by independent researchers across the U.S. (noted in detail and citations above), and (c) the Report's singular conclusions are based upon experimental assumptions of like comparisons where these assumptions are erroneous. The Report treats various studies of differing variables and different treatments from different sites and locations as equitable when they are not; from bird studies using a wide variety of methodologies and

[48] Hurlbert, S.J. 1984. Pseudoreplication and the design of ecological field experiments. *Ecological Monographs* 54:187-211.

[49] CH2M Hill. 2011. Painted Hills IV Wind Energy Project, Avian Use. Prepared by Patti Murphy and David Phillips. May 31, 2011.

experimental rigor; some at wind sites, some at repowered wind sites, some with no structures; all studying different variables, some experimental, others observational. These studies are informative, but only so far as their discussion and conclusions accurately reflect the individual study's goals and theories being tested/observed. However, the Report cherry-picks data they choose as relevant, and pool the data into a singular summary conclusion. To do this with any statistical significance or scientific integrity, such a report should conduct a meta-analysis with appropriate statistical design and analysis. However, the Report made no attempt to do this, choosing instead to loosely describe different studies and then conveniently draw the conclusion that based, upon their "analysis", the proposed project they have been contracted to analyze will result in no significant impacts to birds.

Further, the Report makes subjective, vague, and unsupported determinations upon which the IS/MND extrapolates and relies upon for *their* impact analysis claims of low impacts to birds as well. For instance, the CH2M Report claims that "during the surveys" – though not citing exactly which study or surveys they are referring to - one area had "low" numbers of avian species. However, they do not attempt to describe or otherwise indicate what "low" means in respect to any sort of baseline, population, or comparison, or by what measure or relevant to what variable "low" is being assessed. They also assume that "low" species numbers are indicative of low mortality, confusing variables of richness with other unmentioned characteristics that may be equally important, including density, abundance, and whether or not species in question are rare, protected, etc. Elsewhere in the Report CH2M subjectively chooses studies – and more importantly, subjectively summarizes the findings from these reports - about other potentially relevant variables, such as bird flight height. For instance, based upon one study they claim that birds fly too high to be impacted significantly by *their* proposed project's turbines. One of several distinctions that they blur in drawing such a conclusion is that migratory birds may tend to fly higher than resident birds on average, since residential birds are foraging, breeding, perching, nesting, etc., whereas migrants tend to be doing just that, migrating from wintering to breeding grounds or vice-versa. However, this does not preclude the fact that different species fly at highly variable heights, and resident bird abundance, richness, density, and use of habitat for

foraging in and around turbines all play a role in the risks to resident species; risks not actually addressed in the CH2M summary.[50,51,52]

The CH2M Report also states that, "Though focused bird use counts have not been conducted for Painted Hills IV or for many of the recently proposed wind energy projects in the vicinity, some information is available based on incidental sightings recorded as part of more general wildlife survey reports. The information is presented here to further qualitatively characterize avian use in the area."[53] Incidental sightings are anecdotal by definition, and not part of scientific evidence that can be used to make quantitative and qualitative declarations that the Report sets out to do, drawing major conclusions about the Painted Hills IV site as a "low impact" project based upon these inferences and anecdotes. Additionally, the Report claims that taller turbines would not pose a "greater" risk to birds because one of McCrary's cited nocturnal surveys stated that the "majority" of nighttime migrants flew well above the height of the proposed turbines. However, they make no mention of other studies (one of which they cite elsewhere for other conclusions) conducted during the daytime that show variable flight height results, nor do they make note of how sensitive resident species including burrowing owls and American kestrels are observed to fly at lower heights.[54] CH2M authors have a penchant for using terms like "most, many, high, low, majority" without assigning definitive statistical, numerical, or contextual meaning to these terms relative to the actual studies they are being drawn from. In addition to these omissions, for the most part the Report does not disclose the specifications of the turbines they are referring to in most of the studies they cite that involved turbines, instead they pose the turbines specifications for the future project they have been assigned to discuss, with the erroneous assumption that they can make comparisons across any repowering wind farm studies as relevant to their proposed project simply by default.

As if these omissions and errors weren't enough to raise doubt about the equanimity and resultant applicability of comparisons the Report makes, CH2M's broad-based, definitive

[50] H.T. Harvey and Associates. (2017). Golden Hills Wind Energy Center Postconstruction Fatality Monitoring Report: Year 1. Prepared for Golden Hills Wind LLC. 97 pp.
[51] Arnett, E.B. and May, R. F. (2016). Mitigating Wind Energy Impacts on Wildlife: Approaches for Multiple Taxa. *Human–Wildlife Interactions* 10(1):28–41
[52] Loss, S. R., T. Will, and P. P. Marra. (2013). Estimates of bird collision mortality at wind facilities in the contiguous United States. Biological Conservation 168:201–209.

[53] IS/MND p. 735
[54] H.T. Harvey and Associates. (2017). Golden Hills Wind Energy Center Postconstruction Fatality Monitoring Report: Year 1. Prepared for Golden Hills Wind LLC. 97 pp.

conclusions include statements like "Studies of the San Gorgonio Pass, including data from the Painted Hills IV site, have documented relatively low numbers of avian species, including few observations of raptors". One cannot be sure which "studies" they are referring to, since their same Report cites studies by McCray and McKernan that find just the opposite.[55,56] The Report fails to conduct *any* of statistical analyses necessary in order to draw the broad conclusions they do. For instance, CH2M refers to point count data from a study that conducted very few observations overall (approximately 4- 6 per location, totally fewer than 8 hours of observations per site) and lumps it in with another study that created a model based on wholly different variables and assumptions, and then compiles the findings from these studies to singular conclusions of low impacts to birds by wind farms. It is one thing to present and discuss these findings in a descriptive summary for the sake of exposition or adding to a database, it is entirely another for the Report to take these findings and draw a singular conclusion from them as if they are comparable in design or statistical approach, especially when such a conclusion has the risk of allowing impacts to many species going unmitigated over decades. As the Report claims, "Based on the data available for the region and the turbine specifications and design elements incorporated into the Painted Hills IV Project, it is reasonable to assume that the Project would not contribute to significant adverse impacts to any avian species potentially present in the area."[57] Actually, based upon the erroneous comparisons and other errors described above, such a conclusion is not reasonable. This Report would never be accepted to a peer reviewed journal, and its findings cannot be taken as well-vetted science or evidentiary for something as important as impact analysis extrapolated two-fold for this Project.

5. The Bio Memo ignores the analysis and evidence put forth in my original comments regarding the lack of appropriate baseline data available to assess impacts to the golden eagle. (See also comments above establishing evidence of the presence of golden eagles in the region, and a potential increase in breeding and mortality of eagles.) In fact in the Bio memo Mr. Ramsey erroneously argues that CURE provides no evidence that the Project will increase impacts to eagles; I propose once again the burden is on the IS/MND to prove that the Project will *not* impose significant impacts to eagles (or present how impacts will be successfully mitigated), a burden they have clearly not met with their outdated, invalid, illegal eagle surveys.

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[55] McCrary, M. D., R. L. McKernan, and R. W. Schreiber. (1986). San Gorgonio wind resource area: Impacts of commercial wind turbine generators on birds, 1985 data report. Prepared for Southern California Edison Company.

[56] McCrary, M., McKernan, R., Landry, R., Wagner, W., and Schreiber, R. (1983). Nocturnal Avian Migration Assessment of the San Gorgonio Wind Resource Study Area, Fall 1982. Report Prepared for Research and Development Southern California Edison Company by the L.A. County natural history Museum Foundation. 142 pp.

[57] IS/MND p. 736

In fact, one wonders why the IS/MND would bother presenting a survey of eagles as part of their analysis if they did not consider eagles to be potentially impacted by the project.

6. See my responses above and below.

7. The Bio Memo claims that, "CURE alleges that the Plan (CVMSHCP) is inadequate because it was prepared at a plan level." No, that is not what is alleged; my comments stated that the IS/MND's descriptions of mitigated impacts are lacking due to the IS/MND's reliance on simply pointing to the existence of the Plan as all they deem necessary for their explanation (or lack thereof) of how Project impacts will be mitigated for different species, for different impacts (direct, indirect, cumualtive impacts?) from which kind of disturbances (temporary, permanent?), and what kind of mitigation would be applied (compensatory, off-site, best management practices, adaptive management practices, monitoring followed by consult, etc?). Specifically, my comments[58] stated,

> "The CVMSCHP is not a document that provides a host of clearly defined, species-specific, Project-specific mitigation protocols as the IS/MND would have the reviewer believe. Neither does it make review of said "protocols" available to the public, as is required under CEQA. And yet it bases its conclusions of successful mitigation on the assumption that "consistency" with the CVMSCHP equates successful mitigation analyzed and described. It does not, and these conclusions are wholly unsupported. The CVMSHCP is comprised of thousands of pages of discussion regarding umbrella topics including goals of research monitoring, conservation, FAQ's, and suggestions for adaptive management for species. It does not provide specific protocols unique to specific developments with their unique array of habitats, species, and development threats. And yet the IS/MND relies on generic statements for impacts to entire taxa, such as stating, "The Project is subject to the requirements of the CVMSHCP. Based on the recommendations outlined above, the Project is consistent with the CVMSHCP...."[59] and yet do not actually spell out what these recommendations are, or how they apply. The burden is on the Applicant to provide the details they are referring to. They fail to meet this burden, instead merely pointing to the existence of the CVMSHCP, and saying in essence they will follow undescribed, indeterminate CVMSHCP "protocols" and therefore be "consistent" and therefore reduce impacts to below significant. This is completely unsatisfactory, especially when one conducts a review of the actual content of the CVMSHCP: no such specific mitigation protocols exist as the IS/MND infers, certainly not for a wind farm in this region, in this mix

[58] R. Owens, Letter from Renée Owens to Kyle Jones (Nov. 27, 2018) Comments for the Painted Hills Wind Repowering Project Initial Study, Commercial WECS Permit No. 180001 / Variance Case No. 180003 – Intent to Adopt a Mitigated Negative Declaration – CEQ180059

[59] IS/MND Exhibit S p. 15.

of habitat, with this (yet to be determined) combination, density, abundance, richness, etc. of species present.

For instance, their mitigation details for impacts to the protected Desert tortoise are comprised primarily of the statement that "During construction-related activities, contractors will comply with the mitigation and minimization measures contained in the CVMSHCP protocol." However, they do not provide any details about this protocol, nor do they discuss how indirect impacts will be mitigated, and do not acknowledge the reality of cumulative impacts onsite for the Desert tortoise, despite the fact that the CVMSHCP concludes one of the reasons for its existence is to address concerns regarding the high potential for cumulative impacts to regional sensitive species including the Desert tortoise."[60]

In summary, my comments do not question the validity or integrity of the Plan, they question its ability as a *guideline* to dictate and describe *specific* mitigation actions that will be appropriate and relevant to this Project's specific design, biological resources, and related disturbances. If such actions and protocols exist already scripted in the Plan, it would be more than appropriate for the IS/MND to reiterate these protocols in the IS/MND so that in order to assess the appropriateness of how impacts will be mitigated the reviewing public need not mind-read what the IS/MND authors are thinking. For example: if one visits the Plan website, www.cvmshcp.org, one will find links to thousands of pages including web page links titled "Fact sheet / FAQ's / Plan Documents / Plan Maps / Final permit/ NCCP Permit and Findings / Management and Monitoring / GIS Data / BWG Materials." If one clicks on the link "Plan Documents" they will then be presented with another page that has no fewer than 68 new links of topics to search, many not explanatory (i.e. Appendices labelled by letter, EIR sections labeled by number, other headings simply labeled "Section" and number). If one clicks on the "Management and Monitoring" link, they will be presented with 15 large documents titled by habitat, species, action, Unit Plan, etc. One must therefore ask how the reviewing public is expected to know exactly which of these documents contains the appropriate information for mitigation that applies to this Project, and what it says. If the actual mitigation protocol for each and any Project species impact is outlined somewhere herein, it behooves the IS/MND to repeat those protocols in the IS/MND.

8. The Bio Memo attempts to defend the IS/MND's numerous baseline omissions, poorly defined impacts, inadequate description of how impacts will be mitigated, and resultant ineffectiveness of purported mitigation by not addressing these issues as raised. It instead

[60] See http://www.cvmshcp.org/Monitoring_Management.htm Retrieved 11-25-2018.

proffers a red herring by defending the validity of the CVMSHCP (Plan). My comments did not question the validity or integrity of the Plan. However, it is also true that the Plan is a complicated and obtuse set of thousands of pages of documents that define species and conservation goals for the broad region in which the Project falls, but does not define specific protocols required for this Project. Neither does the existence of the Plan, nor its documentation therein, guarantee that any mitigation protocols will be implemented appropriately and adequately as required, including exactly where, when, and how, and in respect to which types of impacts. Reports on the long history of the Plan's development underscore this reality, including the historical research that states, "The CVMSHCP process became bogged down—despite strong scientific input and many political advantages—due to problematic relationships between the Plan's local supporters, its municipal signatory parties, and officials from the state and federal wildlife agencies, particularly the regional office of the US Fish and Wildlife Service, with some detail regarding monitoring of the species in various locales and habitats" and "those charged with actually executing the Plan after its passage will encounter a political, economic, and ecological environment much more complicated, and perhaps less amenable, to comprehensive regional biodiversity conservation than the one that existed when the process began 13 years ago. Enacting a habitat conservation plan should be considered just the beginning—not the end—of a scientifically informed... and openly democratic political process."[61] In summary, the Plan is a complex package of research and resultant guidelines, not the required script necessary for a project IS/MND.

9. The Bio Memo once again attempts to mislead by erroneously claiming that my comments provide "no evidence" that there will be significant impacts to bats, and criticizing CURE for relying on research applicable to "other wind projects". To begin with, I would be quite willing to assess research on bats from *this proposed* Project and its site to use as evidence for the baseline conditions and resultant potential impacts, however since the IS/MND provides zero such evidence this is impossible. Second, I refer Mr. Ramsey back to my comments so that he may actually review them in detail, while I reiterate that once evidence demonstrating that bats may be present in the area and impacted by the project, the burden is on the IS/MND, not the reviewer, to clearly demonstrate that the Project will *not* incur significant impacts to bats or that any significant impacts will be mitigated, and how. By hardly alluding to the existence of bats at all, clearly the IS/MND has not met this burden of describing and establishing a baseline for discussion. Equally surprising is Mr. Ramsey's assertion in the Bio Memo that "there are no listed bat species in California and the lack of roosting habitat on site did not warrant more surveys." He goes on to say that mortality studies at other wind facilities in California have shown low impacts to bats. It appears Mr. Ramsey is confused on the subject of bats and wind

[61] Alagona, S. and Pincetl, S. (2008). The Coachella Valley Multiple Species Habitat Conservation Plan: A Decade of Delays. Environmental Management, 41:1–11.

farms altogether. To this end, I will reiterate my original comments here, followed by further evidence that contradicts the Bio Memo's assertions:

> "...it is widely accepted by scientists and wildlife agencies that wind facilities cause significant mortalities to bats, and do not discriminate between common, sensitive, or endangered species by design.[62,63,64] This results in the conclusion by researchers of a multi-faceted study of bat mortality at different wind facilities that, "we recommend that individual wind facilities conduct project-specific pre- and postconstruction monitoring rather than infer mortality effects based on published results from other wind facilities."[65] However, the IS/MND ignores this fact by conducting no surveys, no analysis, and thus no mitigation for bats. The IS/MND fails to assess or discuss an entire taxon of species, namely bats, in its analysis of impacts, despite the fact that the CVMSCHP and CNDDB identifies several protected bat species, including the Southern yellow bat (a primary conservation "covered species" for the CVMSCHP)[66], and the Townsend's big-eared bat (*Corynorhinus townsendii*), as occurring in the region. Even the DRECP, the massive Desert Renewable Energy Conservation Plan for the desert southwest that includes the Project site region, focuses on bats as part of their conservation priority species. According to U.S. Geological Survey (USGS) biologists, "North American bats face unprecedented threats including habitat loss and fragmentation, white-nose syndrome, wind energy development, and climate change."[67] They also state that "It is difficult to evaluate impacts of these threats because there is a lack of basic information about the distribution and abundance of bats across the continent. A statistically robust and standardized bat monitoring program across North America would help managers estimate extinction risk, set conservation priorities and evaluate the effectiveness of conservation actions."[68] Indeed, if project biological consultants including LSA

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[62] Wellig, S. D., Nusslé, S., Miltner, D., Kohle, O., Glaizot, O., Braunisch, V., Obrist, M. K., Arlettaz, R. (2018). Mitigating the negative impacts of tall wind turbines on bats: Vertical activity profiles and relationships to wind speed. *PloS one*, 13(3), e0192493. doi:10.1371/journal.pone.0192493

[63] David Drake, Christopher S. Jennelle, Jian-Nan Liu, Steven M. Grodsky, Susan Schumacher, and Mike Sponsler. Regional Analysis of Wind Turbine-Caused Bat Mortality, *Acta Chiropterologica.* Jun 2015 : Vol. 17, Issue 1, pp 179- 188 https://doi.org/10.3161/15081109ACC2015.17.1.015

[64] USFWS. 2012. Land Based Wind Energy Guidelines. OMB Control No.10-18-0148 https://www.fws.gov/ecological-services/es-library/pdfs/WEG_final.pdf

[65] *Ibid.*

[66] See http://www.cvmshcp.org/Plan_Documents_old.htm Retrieved Nov 25, 2018

[67] See https://www.usgs.gov/ecosystems/status-and-trends-program/science/bats?qt-science_center_objects=0#qt-science_center_objects Retrieved No 14, 2018.

[68] *Ibid.*

would embrace the scientific reality that bats are an essential component of ecosystem biodiversity and viability by conducting the necessary surveys for CEQA and similar analyses - which they could then contribute to CNDDB and elsewhere – databases would be more complete, allowing for more efficacious conservation planning as development increases and spreads throughout the desert southwest. And yet the IS/MND makes no attempt to analyze impacts to bats, not to mention to present a Bird and Bat Monitoring Program that should be part and parcel to every wind facility that proposes to mitigate injuries and deaths that are incurred during the life of a wind development, as recommended by USFWS official wind energy guidelines for wildlife monitoring and mitigation.[69]

Finally, it should be noted that although it is important for data collection that drives best management practice, a bat monitoring program does not actually reduce impacts to bats. As such a conservation plan, including compensatory mitigation, should be part of the IS/MND's analysis to reduce potential significant impacts to bird and bat species that will be incurred throughout the life of the project. However, the IS/MND completely fails to offer any such mitigation, and thus fails once again to meet the requirements for a MND.

Not only is there abundant evidence that wind turbines kill bats, research has demonstrated that artificial light and noise can increase the risk of mortality and reduce foraging success by bats in both urban and rural settings.[70,71] As such, bats could be impacted by the presence of artificial lighting by the Project, throughout the life of the Project, as well as by its other various anthropogenic disturbances in the form of noise, light, dust, barriers, negative attractants, etc.

The necessity of detailed, baseline data for bats (as well as other sensitive species mentioned above) is underscored by the fact that the definition of a substantial impact analyses under CEQA as used in the significance criteria has

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[69] USFWS. 2012. Land Based Wind Energy Guidelines. OMB Control No.10-18-0148 https://www.fws.gov/ecological-services/es-library/pdfs/WEG_final.pdf

[70] Warner, K. A. (2016). *Investigating the effects of noise pollution from energy development on the bat community in the Piceance basin* (Order No. 10149854). Available from ProQuest Central; ProQuest Dissertations & Theses Global. (1815584239).

[71] Cravens, Z. M., Brown, V. A., Divoll, T. J., & Boyles, J. G. (2018). Illuminating prey selection in an insectivorous bat community exposed to artificial light at night. *The Journal of Applied Ecology*, 55(2), 705-713. doi:http://dx.doi.org.jerome.stjohns.edu:81/10.1111/1365-2664.13036

> three principal factors: magnitude or intensity and duration of the impact; rarity and context of the affected resource; and susceptibility of the affected resource to disturbance. The evaluation of significance must also consider the interrelationship of these three factors. For example, a relatively small-magnitude impact on a state or federally listed species could be considered significant if the species is rare and highly susceptible to disturbance. This is true not only for determining significance of impact, but degree of significance in respect to what mitigation measures would be adequate. One cannot determine factors such as context and susceptibility of an entire population regarding impacts of the development of the Project if one does not know whether there may be one, ten, or one hundred or more individuals of a special status species present. It is therefore impossible to determine, without such data, if any given mitigation measure – during construction impact reduction protocol, restoration, relocation, or compensatory mitigation will reduce the Project impacts to below significant. It is especially difficult to determine the efficacy of mitigation protocols when they are not even provided, as is the case with this IS/MND. Given all of these factors, and the complete lack of any discussion regarding presence or impacts to bats, the IS/MND has completely failed to describe how and to what extent bats may likely be impacted by the Project, and as it stands any impacts to bats remain significant and unmitigated by the Project."

In addition to these facts regarding the high potential of sensitive bat species to occur onsite, it is important to note that the USGS has designated that the Project site location is a high priority for data acquisition in respect to bat surveying.[72] Also, the CVMSHCP itself describes the protected yellow bat as occurring in the Whitewater canyon area in close proximity to the site. Although it is correct that there are no bats listed under the ESA or CESA as protected, the inference by Mr. Ramsey that the status of a threatened or endangered bat is the only reason for surveying them to determine baseline and resultant impacts to populations demonstrates an irresponsible disregard and /or gross lack of comprehension of the ecological importance of the bat species and populations that exist in California, including those mentioned above as occurring on and near the Project, and protected under the CVMSCHP. Indeed, if bats were only significant by default of having a C/ESA listed status, one would question why dozens of bird and bat monitoring and mitigation plans have been scripted for wind projects statewide, with assistance from CDFW and USFWS. And it should go without saying that one of the main

[72] USGS bat Sampling Grid Priorities. Conservation Biology Institute Data Basin. Retrieved from: https://drecp.databasin.org/maps/new#datasets=f9d248d688e04d55ac423de5bac7bec6

reasons for avoiding and minimizing significant impacts to sensitive and rare species is to prohibit them from becoming so vulnerable in their population status as to necessitate the need to be protected under the C/ESA, accompanied by the obligatory costly and long-term endeavor to Recover the endangered population.

Further, for the Bio Memo to state that a lack of roosting habitat did not warrant more surveys is absurd. First, one cannot have "more" surveys for bats when none were conducted to begin with. Second, apparently it is necessary to point out that much like most birds, bats fly. In fact, it is not unusual for them to fly miles in search of food, mates, breeding habitat, and when migrating; therefore, proximity to roosts is just one of many factors that influence potential for bats to occur and to thus be potentially significantly impacted by developments wind turbines.

More the point of this Project, there is abundant evidence in the peer reviewed literature that demonstrates that taller turbines – similar to those proposed for the Project – are known to increase risk and rate of mortality of bats around wind farms, as are other factors (such as turbine micro-siting) that may be imposed by this Project but are yet to be discussed or mentioned by the IS/MND. In their studies of bat mortalities at many different wind facilities, including repowered wind farms, Barclay *et. al.* concluded that, "There is considerable variation in the fatality rates of birds and bats among sites that is not explained by the size of the turbines alone. Turbines differ in other ways that may influence fatality. For example... monopoles [part of taller, newer turbines] have been hypothesized to mimic potential roost trees for bats (Kunz et. al. 2007). Our analysis indicates that fatalities of bats per megawatt of installed energy capacity are greater at some of the new, larger turbines, and overall, bat fatalities increase per megawatt....therefore, the potential impact on bat populations may be greater [as a result]." In summary, "bat fatalities increased exponentially with tower height. Minimizing tower heights may minimize bat fatalities."[73] Smallwood and Karas's research on repowered wind farms also concluded that repowering wind facilities may result in greater bat mortality,[74] as did the research finding summaries provided by Arnett and May,[75] Loss *et. al.*,[76]

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[73] Barclay, R. M. R., E. F. Baerwald, and J. C. Gruver. (2007). Variation in bat and bird fatalities at wind energy facilities: assessing the effects of rotor size and tower height. *Canadian Journal of Zoology*. 85:381–387.

[74] Smallwood, K. S., and B. Karas. (2009). Avian and bat fatality rates at old-generation and repowered wind turbines in California. *Journal of Wildlife Management* 73:1062–1071.

[75] Arnett, E.B. and May, R. F. (2016). Mitigating Wind Energy Impacts on Wildlife: Approaches for Multiple Taxa. *Human–Wildlife Interactions* 10(1):28–41

[76] Loss, S. R., T. Will, and P. P. Marra. (2013). Estimates of bird collision mortality at wind facilities in the contiguous United States. *Biological Conservation* 168:201–209.

Baerwald et. al.,[77] and Arnett *et. al.* (2008, 2013)[78,79] As significantly, Frick *et. al.*'s recent study concludes that fatalities at wind turbines may threaten[80] the population viability of a migrating (as opposed to roosting, resident) bat. Simply put, to adequately and thoroughly analyze the potential impacts a repowering project such as this Project may have on bats, the minimum requirement is for the Applicant to conduct current, thorough surveys of both resident and migrating bats. It is important to note that in order to adequately asses the long term, cumulative impacts of the Project in operation (if permitted), the research demonstrates that not only is a mortality monitoring program essential (despite the fact that monitoring does not actually mitigate any impacts), it should include a mitigation and monitoring plan that incorporates the use of dogs to detect fatalities of birds and bats. Where dogs have been used for mortality monitoring on wind facilities, the bird and bat fatalities discovered have been exponentially higher.[81,82,83,84] Such a methodology is essential to adapt best management practices to be applied to mitigate mortalities. On the subject of monitoring and the need for appropriate mitigation, Arnett and May summarize important, relevant recommendations as follows:

> "Mitigating impacts of wind energy development on wildlife is important for conservation and public acceptance of this energy source...Planning and avoiding predicted high-risk areas is fundamental to reduce impacts on birds and bats. Contrary to avoidance, once facilities are built, options to minimize impacts need to be tailored to species at the specific

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[77] Baerwald. E. F., and R. M. R. Barclay. (2011). Patterns of activity and fatality bats at a wind energy facility in Alberta. *Journal of Wildlife Management* 75:1103–1114.

[78] Arnett, E. B., K. Brown, W. P. Erickson, J. Fiedler, T. H. Henry, G. D. Johnson, J. Kerns, R. R. Kolford, C. P. Nicholson, T. O'Connell, M. Piorkowski, R. Tankersley Jr. (2008). Patterns of fatality of bats at wind energy facilities in North America. *Journal of Wildlife Management* 72:61–78.

[79] Arnett E. B., E. F. Baerwald. (2013). Impacts of wind energy development on bats: implications for conservation. Pages 435–456 *in* R. A. Adams, S. C. Peterson, editors, Bat Evolution, Ecology, and Conservation.Springer, New York, New York.

[80] Frick, W.F., E.F. Baerwald, J.F. Pollock, R.M.R. Barclay, J.A. Szymanski, T.J. Weller and A.L. Russell, S.C. Loeb, R.A. Medellin, and L.P. McGuire. (2017). Fatalities at wind turbines may threaten population viability of a migratory bat. *Biological Conservation*. 209: 172–177.

[81] Huso, M. M. P., and D. H. Dalthorp. (2014). Accounting for unsearched areas in estimating wind turbine-caused fatality. *Journal of Wildlife Management* 78:347–358.

[82] Mathews, F., M. Swindells, R. Goodhead, T. A. August, P. Hardman, D. M. Linton, and D. J. Hosken. (2013). Effectiveness of search dogs compared with human observers in locating bat carcasses at wind-turbine sites: a blinded randomized trial. *Wildlife Society Bulletin* 37:34–40.

[83] Paula, J., M. C. Leal, M. J. Silva, R. Mascarenhas, H. Costa, and M. Mascarenhas. (2011). Dogs as a tool to improve bird-strike mortality estimates at wind farms. *Journal for Nature Conservation* 19:202–208.

[84] Reyes, G. A., M. J. Rodriguez, K. T. Lindke, K. L. Ayres, M. D. Halterman, B. B. Boroski, and D. S. Johnston. (2016). Searcher efficiency and survey coverage affect precision of fatality estimates. *Journal of Wildlife Management* 80:1488–1496.

site, and can be limited especially for bats. Curtailing wind turbine operations is the only approach proven effective at reducing bat mortality... Compensation should be considered only as part of the mitigation hierarchy when unforeseen or unavoidable impacts remain. **Offsite habitat-based compensatory measures may provide the best offsets for incidental bird and bat mortality.** While the conceptual framework and predictive modelling for compensatory measures are well-established, empirical evidence demonstrating effectiveness and achievement of no-net loss for wildlife populations is lacking. Similarly, few studies have evaluated effectiveness of minimization measures and other forms of mitigation. Evaluating effectiveness of preconstruction wildlife assessments and habitat modeling in predicting wildlife mortality at wind facilities remains a research need. Additionally, lack of population data for many species of wildlife hinders knowledge of population-level impacts and effectiveness of mitigation measures. [Emphasis added]."[85]

10. It is worth reiterating that the Bio Memo's assertion that the Project was vetted by the CVCC via the Joint Project Review is misleading. The JPR report for this Project (October 30, 2018) as provided is titled a draft, and thus review is incomplete. However, it does state the following, "The Project footprint crosses through an MWD owned parcel, (as shown in Map 3) that is not a participate in the multiple species plan. The Project also has species and natural impacts, (Map 4a) CV Jerusalem Cricket (5.50 acres), (Map 4b) Desert Tortoise (43 acres), (Map 4c) Sand Source areas (43 acres)." The Bio Memo, nor the IS/MND, makes no mention of these "new" impacts, nor how they will be mitigated.

Finally, in respect to the Jerusalem cricket mitigation, "Attachment 1", the Riverside County-Environmental Programs Department (EPD) Conditions provided by the County states that Prior to issuance of any grading permit, a biologist with a Memorandum of Understanding with Riverside County will prepare a Restoration Plan to cover the restoration of, at minimum, 3.74 acres of new temporary disturbance found in Coachella Valley Jerusalem cricket habitat on site." It appears yet another oversight by the IS/MND that no such mitigation plan for the cricket is even mentioned or detailed.

CONCLUSION

For the reasons outlined above, despite the claims put forth by the Bio Memo, the Project IS/MND fails to meet the requirements of impact analysis and mitigation under the California Environmental Quality Act (CEQA). Based on my responses in this letter, and my original

[85] Arnett, E.B. and May, R. F. (2016). Mitigating Wind Energy Impacts on Wildlife: Approaches for Multiple Taxa. *Human–Wildlife Interactions* 10(1):28–41

comments to the Project not being adequately addressed, it is my professional opinion that the IS/MND has not met the obligations of CEQA and that the Project would result in significant and unmitigated impacts to several sensitive biological resources. The IS/MND must be revised and resubmitted to disclose, adequately analyze, and mitigate the significant impacts. If the impacts cannot be reduced to less than significant, they are unavoidable. No further consideration should be given to the proposed Project until a complete IS/MND or Environmental Impact Report is prepared and circulated that fully complies with CEQA.

Sincerely,

Renée Owens, M.S.
Conservation Ecologist

Professional Background

I am a conservation biologist and environmental consultant with 25 years of professional experience in wildlife ecology and natural resource management. I have managed an independent environmental consultancy since 1993, contracted for work in the U.S. and Latin America. Since 1994 have maintained U.S. Fish and Wildlife (USFWS) Recovery permits for listed species under the federal Endangered Species Act (ESA), including species discussed herein. I also hold several California state and federal certifications for surveys and monitoring of protected and special status species. I have extensive experience monitoring and studying many species across several taxa, including reptiles and amphibians, passerines and raptors, and marine and terrestrial mammals. I have served as a biological resource expert on over a hundred projects involving water, urban and rural residential developments, mines, and industrial scale energy projects; on private, public, and military lands; in California, the southwest, and Latin America. I have extensive experience observing the species and habitats located within and in proximity to the Project presented in the DEIR.

The scope of work I have conducted as an independent environmental contractor, supervisor, and full time employee has included assisting clients to evaluate and achieve environmental compliance, restoration, mitigation, and research as related to biological resources; as well as submitting written reports and comments for such work to oversight agencies. This work

includes analyzing and reviewing actions pursuant to the California Environmental Quality Act, the National Environmental Policy Act, the Endangered Species Act, the Clean Water Act, the Migratory Bird Treaty Act, and other regulations, along with surveying for and preparing Biological Technical Reports and Assessments. I have been contracted as an environmental consultant by the USFWS, the USDA Forest Service, Ultrasystems, ICF, Helix Environmental, URS, AECOM, AMEC, GeomorphIS, DUDEK, ESA, Tetra Tech, Bridgenet, Bioacoustics, among others. I am a member of the National Sierra Club's Wildlife and Endangered Species Committee and Marine Advisory Committee.

My conservation and natural history research on endangered vertebrate species in Latin America have received various awards including the National Geographic Research and Exploration Award and the National Commission for Scientific and Technological Research Award. My research has been featured on National Geographic Television and Discovery Channel documentaries, and I have served as technical consultant for wildlife documentaries filmed by National Geographic Television, Discovery Channel, BBC, and Animal Planet; in 2017 I received a Special Commendation for contributions to environmental conservation from the City of San Diego.

I have a Master's degree in Ecology; my teaching experience includes college instruction since 1991. I have been an adjunct instructor in Biology, Zoology, Botany, and Environmental Science at Palomar Community College, San Diego State University, and Imperial Valley College. I taught field courses in Tropical Ecology in Ecuador and the Galapagos for Boston University, and was a Visiting Full Time Professor in Environmental Science and Botany at Imperial Valley College. At present I am completing a second MS degree in Environmental Studies from Green Mountain College, focusing on Environmental Education and Communication.

I have gained particular knowledge of the biological resource issues associated with the Project through my extensive work on numerous research and consulting projects throughout southern California. My comments are based upon first-hand observations, review of the environmental documents prepared for the Project, review of scientific literature pertaining to biological resources known to occur in and near the Project area, consultation with other biological resource experts, and the knowledge and experience I have acquired throughout my 25 years of working in the field of natural resources research and management.

EXHIBIT F

Lorrie J. LeLe

From: Oscar Vizcarra
Sent: Wednesday, October 31, 2018 10:49 AM
To: Heather.Pert@wildlife.ca.gov; KBAEZ@RIVCO.ORG; Jenness McBride (jenness_mcbride@fws.gov); rskaggs@terra-gen.com
Cc: Katie Barrows; Jim Sullivan
Subject: Painted Hills Wind Energy Repowering Project
Attachments: EPD Conditions Attachment 1.pdf; Excerpt of Legal settlement restoration language.pdf

The applicant has reduced disturbance to 3 acres from 5.50 acres for Jerusalem Cricket. The applicant will be required to do restoration on at least that much existing disturbance according to the requirements of the legal settlement and County policy. The County will require the attached "All Environmental Programs Department (EPD) Conditions" on the project. The new draft JPR, the County restoration policy, and an excerpt of the legal settlement restoration language converted to Word. The actual restoration plan does not need to be completed until the project is approved and actual restoration would need to commence within 12 months of grading permit issuance. A grading permit is at least a year away under the most favorable conditions. Please submit any comments by November 30, 2018 so we can finalize the JPR.

Revised JPR will be sent out today next day to each of you.
Thank you

Oscar Vizcarra
GIS Technician
Coachella Valley Association of Governments
760-346-1127
CVAG

EXHIBIT G

Coachella Valley Conservation Commission
Draft Joint Project Review (JPR)

Date: October 30, 2018

Project Information

Applicant/Project Name: Painted Hills Wind Energy Repowering Project

CVCC ID: 18-004

Conservation Area: Upper Mission Creek/Big Morongo Canyon Conservation Area

Total Project Acreage: 45 Acres

Project Acreage within Conservation Area: 45 Acres

Project Location: APN's 516030004, 516030008, 516030014, 516030015

Project Summary:
The Project comprises the following components and activities:

- Decommission and remove the approximately 291 existing, antiquated turbines from the Project site.
- Install up to 14 new wind turbines and related infrastructure with a per-turbine generating capacity of between 2.0 MW and 4.2 MW on land within the County's Wind Energy Resource (W-E) Zone.
- Install up to 2 new permanent, lattice meteorological towers to support operations of the wind development.
- Install up to 3 new temporary, guyed lattice meteorological towers to support the power curve testing of the wind development.
- Installation of WECS and met tower foundations and erection of the WECS and met towers.
- Construct pad areas for individual turbines and met towers to accommodate cranes and heavy equipment needed for turbine and met tower installation.
- Construct a temporary expansion of the existing laydown yard for use during the decommissioning of existing turbines and the construction of the Project.
- Temporarily widen and improve portions of the existing internal road system.
- Construct new, temporary and permanent roads outside of the existing road system footprint to accommodate cranes and heavy equipment needed for turbine and met tower installations and access to the proposed turbine and met tower foundations. Temporary new roads and existing roads that will not be used by the Project will be restored after the construction phase and permanent new roads will be reduced to a width of 16 feet.

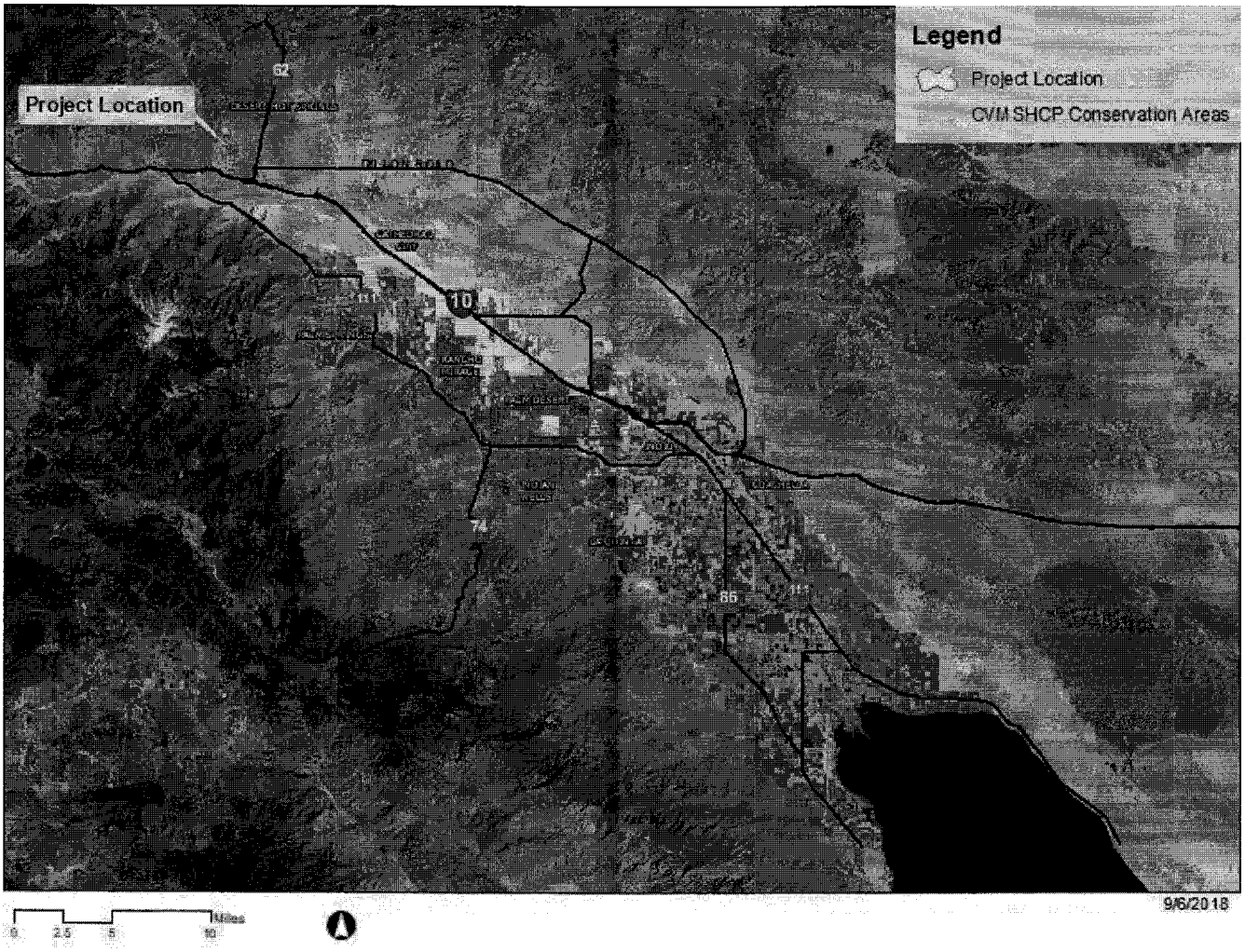
- Install new 12 kV underground and/or overhead electrical collection lines to collect energy from the Project's new turbines. All, or a portion of these lines may interconnect directly into the Southern California Edison (SCE) 115 kV Ven wind substation located inside the Project boundary. Alternatively, one or more of these collection lines may tie directly into the existing, SCE-owned, 12 kV overhead collection lines inside the Project boundary that are used by the existing wind farm to interconnect into Ven wind.
- Decommissioning and removing the new wind turbines at the end of their useful life cycle.

The Project footprint crosses through an MWD owned parcel, (as shown in Map 3) that is not a participate in the multiple species plan. The Project also has species and natural impacts, (Map 4a) CV Jerusalem Cricket (3 acres), (Map 4b) Desert Tortoise (41 acres), (Map 4c) Sand Source areas (41 acres).

Acres of Proposed New Disturbance: 45 Acres

Acres of Proposed Conservation: 0 Acres

Project Location



Conservation Objectives Review

Painted Hills Wind Repowering Project Upper Mission Creek/Big Morongo Canyon Conservation Area							
Conservation Objective	Total Acres of Proposed Disturbance 1	Acres of Disturbance Authorized by Plan	Proposed Disturbance as a Percentage of Authorized Disturbance	Rough Step (*If project is approved as submitted)*	Acres Conserved by Project	Acres to be Conserved by Plan	% Required Conservation
Conserve Other Cons. Habitat for CV Jerusalem cricket	*3*	*47*	*8.50%*	*-4*	*0*	*419*	*0*
Conserve Core Habitat for desert tortoise	*41*	*882*	*4.75%*	*634*	*0*	*7984*	*0*
Conserve sand source areas	*41*	*721*	*5.75%*	*476*	*0*	*6488*	*0*

Rough Step

If the County approves this project as submitted, it will exceed Rough Step for Coachella Valley Jerusalem cricket and will not be able to approve any future project that impacts this species until more land containing this species is conserved within this unit of the Conservation Area. CVCC is actively seeking such land but cannot guarantee when this will occur. A Transfer of Conservation Objectives may be possible but that would require Wildlife Agency approval. Full details on Rough Step can be found beginning on page 6-13 of the following link

http://www.cvmshcp.org/Plan%20Documents/13.%20CVAG%20MSHCP%20Plan%20Section%206.0.pdf

Legal Agreement

This project is covered under a legal agreement, attached as Exhibit A, which details the requirements for restoration on this site.

Biological Resources Assessment

The applicant submitted a biological assessment of the site which is attached as Exhibit B.

Section 4.4: Avoidance, Minimization, and Mitigation Measures

Desert tortoise. This measure does not apply to single-family residences and any non-commercial accessory uses and structures, including but not limited to second units on an existing legal lot, or to O&M of Covered Activities for Permittee infrastructure facilities. Within Conservation Areas, the Permittees will require surveys for desert tortoise for Development in

modeled desert tortoise Habitat. Prior to Development, an Acceptable Biologist will conduct a presence/absence survey of the Development area and adjacent areas within 200 feet of the Development area, or to the property boundary if less than 200 feet and permission from the adjacent landowner cannot be obtained, for fresh sign of desert tortoise, including live tortoises, tortoise remains, burrows, tracks, scat, or egg shells. The presence/absence survey must be conducted during the window between February 15 and October 31. Presence/absence surveys require 100% coverage of the survey area. If no sign is found, a clearance survey is not required. A presence/absence survey is valid for 90 days or indefinitely if tortoise-proof fencing is installed around the Development site.

If fresh sign is located, the Development area must be fenced with tortoise-proof fencing and a clearance survey conducted during the clearance window. Desert tortoise clearance surveys shall be conducted during the clearance window from February 15 to June 15 and September 1 to October 31 or in accordance with the most recent Wildlife Agency protocols. Clearance surveys must cover 100% of the Development area. A clearance survey must be conducted during different tortoise activity periods (morning and afternoon). All tortoises encountered will be moved from the Development site to a specified location. Prior to issuance of the Permits, CVCC will either use the Permit Statement Pertaining to High Temperatures for Handling Desert Tortoises and Guidelines for Handling Desert Tortoises During Construction Projects, revised July 1999, or develop a similar protocol for relocation and monitoring of desert tortoise, to be reviewed and approved by the Wildlife Agencies. Thereafter, the protocol will be revised as needed based on the results of monitoring and other information that becomes available.

For O&M activities in the Conservation Areas, the Permittees shall ensure that personnel conducting such activities are instructed to be alert for the presence of desert tortoise. If a tortoise is spotted, activities adjacent to the tortoise's location will be halted and the tortoise will be allowed to move away from the activity area. If the tortoise is not moving, it will be relocated by an Acceptable Biologist to nearby suitable Habitat and placed in the shade of a shrub. To the maximum extent Feasible, O&M activities will avoid the period from February 15 and October 31.

Utility development protocols have been developed to avoid or minimize potential adverse impacts to the desert tortoise in the Conservation Areas from utility and road right of-way projects, such as the installation and maintenance of water, sewer, and electric lines and roadway maintenance. The objectives of these protocols are to provide reliable and consistent direction on utility development within the Conservation Areas. Two utility development protocols, inactive and active season, provide specific direction on site preparation and construction phases of utility projects in the Conservation Areas. The protocols include steps to be followed during the desert tortoise active and/or inactive season. The inactive season protocol must be used for utility maintenance or development within the November 1 to February 14 time frame; the active season protocol must be used for utility maintenance or development within the February 15 to October 31 time frame. Deviations from these time frames must be presented to the RMOC.

Inactive Season Protocol. This protocol is applicable to pre-construction and construction phases of utility Covered Activity projects occurring between November 1 and February 14. These protocols apply only to the site preparation and construction phases of projects. The project proponent must follow the eight pre-construction protocol requirements listed below.

1. A person from the entity contracting the construction shall act as the contact person with the representative of the appropriate RMUC. He/she will be responsible for overseeing compliance with the protective stipulations as stated in this protocol.

2. Prior to any construction activity within the Conservation Areas, the contact person will meet with the representative of the appropriate RMUC to review the plans for the project. The representative of the appropriate RMUC will review alignment, pole spacing, clearing limits, burrow locations, and other specific project plans which have the potential to affect the desert tortoise. He or she may recommend modifications to the contact person to further avoid or minimize potential impacts to desert tortoise.

3. The construction area shall be clearly fenced, marked, or flagged at the outer boundaries to define the limits of construction activities. The construction right-of way shall normally not exceed 50 feet in width for standard pipeline corridors, access roads and transmission corridors, and shall be minimized to the maximum extent Feasible. Existing access roads shall be used when available, and rights-of way for new and existing access roads shall not exceed 20 feet in width unless topographic obstacles require greater road width. Other construction areas including well sites, storage tank sites, substation sites, turnarounds, and laydown/staging sites which require larger areas will be determined in the preconstruction phase. All construction workers shall be instructed that their activities shall be confined to locations within the fenced, flagged, or marked areas.

4. An Acceptable Biologist shall conduct pre-construction clearance surveys of all areas potentially disturbed by the proposed project. Any winter burrows discovered in the Conservation Areas during the pre-construction survey shall be avoided or mitigated. The survey shall be submitted to the representative of the appropriate RMUC as part of plan review.

5. All site mitigation criteria shall be determined in the pre-construction phase, including but not limited to seeding, barrier fences, leveling, and laydown/staging areas, and will be reviewed by the representative of the appropriate RMUC prior to implementation.

6. A worker education program shall be implemented prior to the onset of each construction project. All construction employees shall be required to read an educational brochure prepared by the representative of the appropriate RMUC and/or the RMOC and attend a tortoise education class prior to the onset of construction or site entry. The class will describe the sensitive species which may be found in the area, the purpose of the MSHCP Reserve System, and the appropriate measures to take upon discovery of a sensitive species. It will also cover construction techniques to minimize potential adverse impacts.

7. All pre-construction activities which could Take tortoises in any manner (e.g., driving off an established road, clearing vegetation, etc.) shall occur under the supervision of an Acceptable Biologist.

8. If there are unresolvable conflicts between the representative of the appropriate RMUC and the contact person, then the matter will be arbitrated by the RMOC and, if necessary, by CVCC.

The following terms are established to protect the desert tortoise during utility related construction activities in the Conservation Areas and are to be conducted by an Acceptable Biologist.

- An Acceptable Biologist shall oversee construction activities to ensure compliance with the protective stipulations for the desert tortoise.

- Desert tortoises found above ground inside the project area during construction shall be moved by an Acceptable Biologist out of harm's way and placed in a winter den (at a distance no greater than 250 feet). If a winter den cannot be located, the USFWS or CDFG shall determine appropriate action with respect to the tortoise. Tortoises found above ground shall be turned over to the Acceptable Biologist

- No handling of tortoises will occur when the air temperature at 15 centimeters above ground exceeds 90 degrees Fahrenheit.

- Desert tortoise burrows shall be avoided to the maximum extent Feasible. An Acceptable Biologist shall excavate any burrows which cannot be avoided and will be disturbed by construction. Burrow excavation shall be conducted with the use of hand tools only, unless the Acceptable Biologist determines that the burrow is unoccupied immediately prior to burrow destruction.

- Only burrows within the limits of clearing and surface disturbance shall be excavated. Burrows outside these limits, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the construction area. Installation and removal of such barrier fencing shall be under the direction and supervision of an Acceptable Biologist.

- For electrical transmission line and road construction projects, only burrows within the right-of-way shall be excavated. Burrows outside the right-of-way, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the right-of-way. Installation and removal of such barrier fencing shall be under the direction and supervision of an Acceptable Biologist.

- Tortoises in the Conservation Areas are not to be removed from burrows until appropriate action is determined by USFWS or CDFG with respect to the tortoise. The response shall be carried out within 72 hours.

- Blasting is not permissible within 100 feet of an occupied tortoise burrow.

During construction, contractors will comply with the mitigation and minimization measures contained within this protocol. These measures are:

- All trenches, pits, or other excavations shall be inspected for tortoises by an Acceptable Biologist prior to filling.

- All pipes and culverts stored within desert tortoise Habitat shall have both ends capped to prevent entry by desert tortoises. During construction, all open-ended pipeline segments that are welded in place shall be capped during periods of construction inactivity to prevent entry by desert tortoises.

- Topsoil removed during trenching shall be re-spread on the pipeline construction area following compaction of the backfill. The area shall be restored as determined during the environmental review.

- All test pump water will be routed to the nearest wash or natural drainage. The route will be surveyed by an Acceptable Biologist. If tortoises are found in the drainage area the Acceptable Biologist will remove the tortoises.

- Powerlines associated with water development, such as to provide power for pumps, should be buried underground adjacent to the pipe. All above ground structures deemed to be necessary shall be equipped with functional anti-perching devices that would prevent their use by ravens and other predatory birds and shall adhere to the electrical distribution protocol which follows.

- In order to perform routine O&M of the water systems such as wells, pumps, water lines and storage tanks, etc., employees are to be trained in the area of desert tortoise education. This training will be performed on a regular basis by an Acceptable Biologist for those personnel not previously trained. The training will include at a minimum the following: identification of tortoises, burrows, and other sign; and instructions on installing tortoise barrier fencing. During the course of basic O&M, desert tortoise will be avoided. Untrained employees shall not perform maintenance operations within the reserve.

- All disturbance areas around poles or concrete pads will be reduced to a size just large enough for the construction activity.

- Areas disturbed around poles or construction pads will be restored as determined during the pre-construction process.

- Poles or other above ground structures necessary for electrical distribution development shall be minimized as much as possible. All above ground structures shall be equipped with functional anti-perching devices that would prevent their use by ravens and other predatory birds.

- In order to perform routine O&M of the electrical distribution systems such as transmission lines and poles, substations, etc., employees are to be trained in the area of desert tortoise education. This training will be performed on a regular basis by a qualified biologist for those personnel not previously trained. The training will include at a minimum the following: identification of tortoises, burrows, and other sign; and instructions on installing tortoise barrier fencing. During the course of basic O&M,

desert tortoise will be avoided. Untrained employees shall not perform maintenance operations within the non-Take areas.

- All trash and food items shall be promptly contained and removed daily from the project site to reduce the attractiveness of the area to common ravens and other desert tortoise predators.

- Construction activities which occur between dusk and dawn shall be limited to areas which have already been cleared of desert tortoises by the Acceptable Biologist and graded or located in a fenced right-of-way. Construction activities shall not be permitted between dusk and dawn in areas not previously graded.

Active Season Protocol. This protocol is applicable to pre-construction and construction phases of utility development projects occurring between February 15 and November 1. It is identical to the Inactive Season Protocol with the following additions:

- Work areas shall be inspected for desert tortoises within 24 hours of the onset of construction. To facilitate implementation of this condition, burrow inspection and excavation may begin no more than seven (7) days in advance of construction activities, as long as a final check for desert tortoises is conducted at the time of construction.

- All pre-construction activities which could Take tortoises in any manner (e.g., driving off an established road, clearing vegetation, etc.) shall occur under the overall supervision of an Acceptable Biologist. Any hazards to tortoises created by this activity, such as drill holes, open trenches, pits, other excavations, or any steep sided depressions, shall be checked three times a day for desert tortoises. These hazards shall be eliminated each day prior to the work crew leaving the site, which may include installing a barrier that will preclude entry by tortoises. Open trenches, pits or other excavations will be backfilled within 72 hours, whenever possible. A 3:1 slope shall be left at the end of every open trench to allow trapped desert tortoises to escape. Trenches not backfilled within 72 hours shall have a barrier installed around them to preclude entry by desert tortoises. All trenches, pits, or other excavations shall be inspected for tortoises by a biological monitor trained and approved by the Acceptable Biologist prior to filling.

- If a desert tortoise is found, the biological monitor shall notify the Acceptable Biologist who will remove the animal as soon as possible.

- Only burrows within the limits of clearing and surface disturbance shall be excavated. Burrows outside these limits, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the construction area. The barrier fence shall be at least 20 feet long and shall be installed to direct the tortoise leaving the burrow away from the construction area. Installation and removal of such barrier fencing shall be under the direction and supervision of the biological monitor.

- If blasting is necessary for construction, all tortoises shall be removed from burrows within 100 feet of the blast area.

Disposition of Sick, Injured, or Dead Specimens. Upon locating dead, injured, or sick desert tortoises under any utility or road project, initial notification by the contact representative or Acceptable Biologist must be made to the USFWS or CDFG within three (3) working days of its finding. Written notification must be made within five (5) calendar days with the following information: date; time; location of the carcass; photograph of the carcass; and any other pertinent information. Care must be taken in handling sick or injured animals to ensure effective treatment and care. Injured animals shall be taken care of by the Acceptable Biologist or an appropriately trained veterinarian. Should any treated tortoises survive, USFWS or CDFG should be contacted regarding the final disposition of the animals.

Section 4.5 Land Use Adjacency Guidelines

The purpose of Land Use Adjacency Guidelines is to avoid or minimize indirect effects from Development adjacent to or within the Conservation Areas. Adjacent means sharing a common boundary with any parcel in a Conservation Area. Such indirect effects are commonly referred to as edge effects, and may include noise, lighting, drainage, intrusion of people, and the introduction of non-native plants and non-native predators such as dogs and cats. Edge effects will also be addressed through reserve management activities such as fencing. The following Land Use Adjacency Guidelines shall be considered by the Permittees in their review of individual public and private Development projects adjacent to or within the Conservation Areas to minimize edge effects and shall be implemented where applicable.

4.5.1 Drainage

Proposed Development adjacent to or within a Conservation Area shall incorporate plans to ensure that the quantity and quality of runoff discharged to the adjacent Conservation Area is not altered in an adverse way when compared with existing conditions. Storm water systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the adjacent Conservation Area.

4.5.2 Toxics

Land uses proposed adjacent to or within a Conservation Area that use chemicals or generate bio-products such as manure that are potentially toxic or may adversely affect wildlife and plant species, Habitat, or water quality shall incorporate measures to ensure that application of such chemicals does not result in any discharge to the adjacent Conservation Area.

4.5.3 Lighting

For proposed Development adjacent to or within a Conservation Area, lighting shall be shielded and directed toward the developed area. Landscape shielding or other appropriate methods shall be incorporated in project designs to minimize the effects of lighting adjacent to or within the adjacent Conservation Area in accordance with the guidelines to be included in the Implementation Manual.

4.5.4 Noise

Proposed Development adjacent to or within a Conservation Area that generates noise in excess of 75 dBA L_{eq} hourly shall incorporate setbacks, berms, or walls, as appropriate, to minimize the effects of noise on the adjacent Conservation Area in accordance with the guidelines to be included in the Implementation Manual.

4.5.5 Invasives

Invasive, non-native plant species shall not be incorporated in the landscape for land uses adjacent to or within a Conservation Area. Landscape treatments within or adjacent to a Conservation Area shall incorporate native plant materials to the maximum extent Feasible; recommended native species are listed in Table 4-112. The plants listed in Table 4-113 shall not be used within or adjacent to a Conservation Area. This list may be amended from time to time through a Minor Amendment with Wildlife Agency Concurrence.

Table 4-112: Coachella Valley Native Plants Recommended for Landscaping[1]

BOTANICAL NAME	COMMON NAME
Trees	
Washingtonia filifera	California Fan Palm
Cercidium floridum	Blue Palo Verde
Chilopsis linearis	Desert Willow
Olneya tesota	Ironwood Tree
Prosopis glandulosa var. torreyana	Honey Mesquite
Shrubs	
Acacia greggii	Cat's Claw Acacia
Ambrosia dumosa	Burro Bush
Atriplex canescens	Four Wing Saltbush
Atriplex lentiformis	Quailbush
Atriplex polycarpa	Cattle Spinach
Baccharis sergiloides	Squaw Water-weed
Bebia juncea	Sweet Bush
Cassia (Senna) covesii	Desert Senna
Condalia parryi	Crucilllo
Crossosoma bigelovii	Crossosoma
Dalea emoryi	Dye Weed
Dalea (Psorothamnus) schottii	Indigo Bush
Datura meteloides	Jimson Weed
Encelia farinosa	Brittle Bush
Ephedra aspera	Mormon Tea
Eriogonum fasciculatum	California Buckwheat
Eriogonum wrightii membranaceum	Wright's Buckwheat
Fagonia laevis	(No Common Name)
Gutierrezia sarothrae	Matchweed
Haplopappus acradenius	Goldenbush
Hibiscus denudatus	Desert Hibiscus
Hoffmannseggia microphylla	Rush Pea
Hymenoclea salsola	Cheesebush
Hyptis emoryi	Desert Lavender
Isomeris arborea	Bladder Pod
Juniperus californica	California Juniper
Krameria grayi	Ratany
Krameria parvifolia	Little-leaved Ratany
Larrea tridentate	Creosote Bush
Lotus rigidus	Desert Rock Pea
Lycium andersonii	Box Thorn
Petalonyx linearis	Long-leaved Sandpaper Plant
Petalonyx thurberi	Sandpaper Plant
Peucephyllum schottii	Pygmy Cedar
Prunus fremontii	Desert Apricot
Rhus ovata	Sugar-bush
Salazaria mexicana	Paper-bag Bush
Salvia apiana	White Sage
Salvia eremostachya	Santa Rosa Sage

BOTANICAL NAME	COMMON NAME
Salvia vaseyi	Wand Sage
Simmondsia chinensis	Jojoba
Sphaeralcia ambigua	Globemallow (Desert Mallow)
Sphaeralcia ambigua rosacea	Apricot Mallow
Trixis californica	Trixis
Zauschneria californica	California Fuchsia
Groundcovers	
Mirabilis bigelovii	Wishbone Bush (Four O'Clock)
Mirabilis tenuiloba	White Four O'Clock (Thin-lobed)
Vines	
Vitis girdiana	Desert Grape
Accent	
Muhlenbergia rigens	Deer Grass
Herbaceous Perennials[2]	
Adiantum capillus-veneris	Maiden-hair Fern (w)
Carex alma	Sedge (w)
Dalea parryi	Parry Dalea
Eleocharis montevidensis	Spike Rush (w)
Equisetum laevigatum	Horsetail (w)
Juncus bufonis	Toad Rush (w)
Juncus effuses	Juncus (w)
Juncus macrophyllus	Juncus (w)
Juncus mexicanus	Mexican Rush (w)
Juncus xiphioides	Juncus (w)
Notholaena parryi	Parry Cloak Fern
Pallaea mucronata	Bird-foot Fern
Cacti and Succulents	
Agave deserti	Desert Agave
Asclepias albicans	Desert Milkweed (Buggy-whip)
Asclepias subulata	Ajamete
Dudleya arizonica	Live-forever
Dudleya saxosa	Rock Dudleya
Echinocereus engelmannii	Calico Hedgehog Cactus
Ferocactus acanthodes	Barrel Cactus
Fouquieria splendens	Ocotillo
Mamillaria dioica	Nipple Cactus
Mamillaria tetrancistra	Corkseed Cactus
Nolina parryi	Parry Nolina
Opuntia acanthocarpa	Stag-horn or Deer-horn Cholla
Opuntia bigelovii	Teddy Bear or Jumping Cholla
Opuntia basilaris	Beavertail Cactus
Opuntia echinocarpa	Silver or Golden Cholla
Opuntia ramosissima	Pencil Cholla, Darning Needle Cholla
Yucca schidigera	Mojave Yucca, Spanish Dagger
Yucca whipplei	Our Lord's Candle

[1] Source: "Coachella Valley Native Plants, Excluding Annuals (0 ft. to approximately 3,000 ft. elevation)." Compiled by Dave Heveron, Garden Collections Manager, and Kirk Anderson, Horticulturist, The Living Desert, May, 2000, for the Coachella Valley Mountains Conservancy.

[2] Common names for herbaceous perennials that are followed by "(w)" indicate a water or riparian species.

Table 4-113: Prohibited Invasive Ornamental Plants[1]

BOTANICAL NAME	COMMON NAME
Acacia spp. (all species except A. greggii)	Acacia (all species except native catclaw acacia)
Arundo donax (✓)	Giant Reed or Arundo Grass
Atriplex semibaccata (✓)	Australian Saltbush
Avena barbata	Slender Wild Oat
Avena fatua	Wild Oat
Brassica tournefortii (✓✓)	African or Saharan Mustard
Bromus madritensis ssp. *rubens* (✓)	Red Brome
Bromus tectorum (✓✓)	Cheat Grass or Downy Brome
Cortaderia jubata [syn.*C. atacamensis*]	Jubata Grass or Andean Pampas Grass
Cortaderia dioica [syn. *C. selloana*]	Pampas Grass
Descurainia sophia	Tansy Mustard
Eichhornia crassipes	Water Hyacinth
Elaegnus angustifolia	Russian Olive
Foeniculum vulgare	Sweet Fennel
Hirschfeldia incana	Mediterranean or Short-pod Mustard
Lepidium latifolium	Perennial Pepperweed
Lolium multiflorum	Italian Ryegrass
Nerium oleander	Oleander
Nicotiana glauca (✓)	Tree Tobacco
Oenothera berlandieri (#)	Mexican Evening Primrose
Olea europea	European Olive Tree
Parkinsonia aculeata (✓)	Mexican Palo Verde
Pennisetum clandestinum	Kikuyu Grass
Pennisetum setaceum (✓✓)	Fountain Grass
Phoenix canariensis (#)	Canary Island Date Palm
Phoenix dactylifera (#)	Date Palm
Ricinus communis (✓)	Castorbean
Salsola tragus (✓)	Russian Thistle
Schinus molle	Peruvian Pepper Tree or California Pepper
Schinus terebinthifolius	Brazilian Pepper Tree
Schismus arabicus	Mediterranean Grass
Schismus barbatus (✓✓)	Saharan Grass, Abu Mashi
Stipa capensis (✓✓)	No Common Name
Tamarix spp. (all species) (✓✓)	Tamarisk or Salt Cedar
Taeniatherum caput-medusae	Medusa-head
Tribulus terrestris	Puncturevine
Vinca major	Periwinkle
Washingtonia robusta	Mexican fan palm
Yucca gloriosa (#)	Spanish Dagger

[1] Sources: California Exotic Pest Plant Council, United States Department of Agriculture-Division of Plant Health and Pest Prevention Services, California Native Plant Society, Fremontia Vol. 26 No. 4, October 1998, The Jepson Manual; Higher Plants of California, and County of San Diego Department of Agriculture.

Key to Table 4-113:

# indicates species not on CalEPPC October 1999 "Exotic Pest Plants of Greatest Ecological Concern in California" list

✓ indicates species known to be invasive in the Plan Area

✓✓ indicates particularly troublesome invasive species

4.5.6 Barriers

Land uses adjacent to or within a Conservation Area shall incorporate barriers in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping in a Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls and/or signage.

4.5.7 Grading/Land Development

Manufactured slopes associated with site Development shall not extend into adjacent land in a Conservation Area.

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MEMORANDUM

To:	Jay Olivas, Riverside County Planning Department
From:	Collin Ramsey, Dudek
Subject:	Painted Hills Wind Energy Repowering Project (WECS Permit No. 180001) Responses to CURE's Appeal Letter, Dated December 14, 2018
Date:	January 15, 2019
cc:	Ken Baez, Riverside County Planning Department
Attachment(s):	A – Bracketed Comment Letter and Supporting Materials B – Health Risk Assessment Data and Supporting Materials

This memorandum responds to the December 14, 2018 appeal letter submitted by Adams Broadwell Joseph & Cardozo on behalf of California Unions for Reliable Energy ("CURE"), appealing the Planning Commission's decision to approve the Initial Study/Mitigated Negative Declaration ("IS/MND") for the Painted Hills Wind Energy Repowering Project and related approvals (the "Project"). The individual comments contained in that letter have been bracketed and numbered (see Attachment A) for ease of reference. A separate letter, responding to comments raised in Exhibit E to CURE's appeal letter, will be submitted under separate cover. As set forth below, there is no substantial evidence in the record that would support a fair argument that the Project may have a significant effect on the environment. Accordingly, CURE's appeal lacks merit.

Responses to Comments

Response to Comment 3-1

This is an introductory comment summarizing CURE's decision to appeal, to which no response is necessary.

Response to Comment 3-2

This is an introductory comment providing a description of the project, to which no response is necessary.

Response to Comment 3-3

This comment summarizes what CURE believes to be its grounds for appeal, including its belief that the IS/MND fails to comply with the requirements of the California Environmental Quality Act ("CEQA"). The comment does not provide any substantive analysis in support of CURE's position, and the comment is generally acknowledged.

Response to Comment 3-4

This comment further summarizes CURE's belief that the IS/MND fails to comply with CEQA and that an Environmental Impact Report ("EIR") is required. The comment does not provide any substantive analysis in support of CURE's position, and the comment is generally acknowledged.

Response to Comment 3-5

This comment summarizes the assistance that CURE received in preparing its appeal, including the assistance of both Phyllis Fox, Ph.D., PE, and Biologist and Independent Environmental Consultant, Renee Owens. The comment also references other technical comments and responses to letters prepared by Dr. Fox and Ms. Owens. These comments were previously reviewed and responded to, and further responses are provided herein.

Response to Comment 3-6

This comment summarizes CURE's purported interest justifying its appeal and identifies CURE members who supposedly reside in the general vicinity of the Project. The comment does not provide any substantive analysis in support of CURE's position, and the comment is generally acknowledged.

Response to Comment 3-7

This comment purports to summarize CEQA and related case law with respect to preparation of an EIR. The comment does not provide any substantive analysis in support of CURE's position, and the comment is generally acknowledged.

Response to Comment 3-8

This comment purports to summarize CEQA and related case law with respect to mitigation. The comment does not provide any substantive analysis in support of CURE's position, and the comment is generally acknowledged.

Response to Comment 3-9

This comment summarily states that the IS/MND fails to satisfy CEQA because: the County's conclusions that the Project will have less than significant air quality and public health impacts are unsupported; and Dr. Fox and Ms. Owens provide substantial evidence to support CURE's position. The comment then claims that a fair argument can be made that the Project may cause significant impacts requiring the preparation of an EIR. The comment does not provide any substantive analysis in support of CURE's position.

Generally, an agency's decision not to prepare an EIR is supported where it cannot be fairly argued on the basis of substantial evidence that a project may have a significant environmental impact. Under Public Resources Code sections 21080(e) and 21082.2(c), and CEQA Guidelines sections 15064(f)(5) and 15384, "substantial evidence" includes facts, reasonable assumptions predicated upon fact, and expert opinions supported by fact. It does not include the following:

- Argument;
- Speculation;
- Unsubstantiated opinion or narrative;
- Clearly inaccurate or erroneous evidence;
- Evidence that is not credible; or

- Evidence of social and economic impacts that do not contribute to, and are not caused by, physical impacts on the environment.

The County may consider several factors to determine whether evidence is "substantial":

- Whether the evidence has an adequate foundation in the witness's personal knowledge of facts. Expressions of subjective concerns and personal beliefs do not constitute substantial evidence. Speculation, argument, and unfounded conclusions likewise are not substantial evidence.
- Whether the evidence is provided by a qualified source. Opinions can constitute substantial evidence when they are provided by a witness who is qualified to render an opinion on the subject. Testimony by a witness who is not competent to render an opinion on the subject is not substantial evidence.
- Whether the evidence is credible. The County may disregard even un-contradicted testimony if the testimony is inherently improbable or not credible, for instance if it is clearly inaccurate or erroneous.
- The County need not accept expert testimony that lacks an adequate factual foundation.
- Expert opinion that is not directly relevant to the Project's environmental impacts may be disregarded.
- The County need not accept expert opinion that lacks specificity or fails to adequately explain why the Project might cause a significant impact.
- Expert opinion also may be disregarded if it relates to a subject outside the expert's field.

As set forth below, CURE has failed to provide any substantial evidence supporting a fair argument that the Project may have a significant effect on the environment. To the contrary, CURE's evidence is based upon argument, speculation, unsubstantiated opinion, clearly inaccurate or erroneous evidence, and evidence that is not credible. Accordingly, CURE's assertion that an EIR is required lacks merit.

Response to Comment 3-10

This comment summarily states that the IS/MND fails to provide a complete project description and generally purports to summarize CEQA and related case law. The comment does not provide any substantive analysis in support of CURE's position.

Generally, under CEQA Guidelines sections 15063(d)(1) and 15071(a), an IS/MND must include a brief description of the project. (See also *El Dorado Taxpayers for Quality Growth v. County of El Dorado* (2004) 122 Cal.App.4th 1591, 1597 ["An accurate and complete project description is necessary to fully evaluate the project's potential environmental effects."].) Here, and as more fully explained in the following responses, the IS/MND provides a detailed project description, including discussion of all Project components associated with decommission, construction, and operation of the wind turbines. This includes, among other things, a description of the transportation of the new turbine blades to the Project site, decommission of the existing wind turbines, and installation of the new turbines on the site.

Response to Comment 3-11

As discussed in the Air Quality (page 27) and Transportation/Traffic (page 69) of the IS/MND and restated within the November 27, 2018 Painted Hills Wind Energy Repowering Project – Response to Comments (Dudek 2018)

("Response Memorandum"), the Project would have trip generation associated with construction worker vehicles and vendor trucks. The category of vendor trucks includes deliveries of Project components. Total average AADT for the Project during construction is estimated to be 105 per day at its peak. This annual average daily traffic ("AADT") represents only a nominal percentage of the AADT on nearby highways, including HWY 10, which supports an AADT of 88,000 trips, and HWY 62, which experiences an AADT of 20,000 trips. These vendor trips were assumed to be diesel in accordance with the CARB EMFAC2014 which is utilized within the CalEEMod. The CalEEMod default trip length was assumed for the distances for all construction related trips and more detailed trip related information was not available. It would be speculative to estimate where the Project materials would come from and their offsite impacts. CEQA requires that 'any significant effect on the environment shall be limited to substantial, or potentially substantial, adverse changes in physical conditions which exist *within the area* as defined in Section 21060.5.' (Italics added.) Section 21060.5 refers to 'the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, [and] objects of historic or aesthetic significance.'" While the area that will be affected by a proposed project may be greater than the area encompassed by the project itself, an agency is not required to conduct an exhaustive analysis of all conceivable impacts a project may have in areas outside its geographical boundaries. *See Save the Plastic Bag Coalition v. City of Manhattan Beach* (2011) 52 Cal.4th 155.

This construction-related trip estimate was provided by the Project applicant's construction team and based on previous project experience. These trips accounted for truck and vehicle trips generated during all phases of construction, including decommissioning, mobilization/staging, and delivery of components of the new wind turbines. The trucks also accounted for reasonable disassembly and delivery of the turbines using standard haul truck trailers within local and regional transportation weight restrictions.

The commenter states that the Response Memorandum missed the points of the comments and that standard trucks cannot move the turbine blades to the site. As discussed above and in the Response Memorandum, the information used in the air quality modeling was provided by the Project applicant and is based on previous project experience where standard trucks were used to transport turbine blades. Therefore, the commenter is mistaken in claiming that unconventional transportation would be required and was not accounted for within the IS/MND.

The IS/MND adequately discusses transportation of Project materials to the Project site, including turbine components. CURE's speculation to the contrary is unfounded.

Response to Comment 3-12

This comment restates comments made in CURE's November 26, 2018 comment letter, all of which were addressed by the Response Memorandum. The comment again claims that the IS/MND fails to accurately describe the decommissioning of the existing turbines because disposal could supposedly result in the release of volatile organic compounds and/or methane.

Given that the turbine blades are composed of steel and glass, however, it is not anticipated that the cutting of the blades would result in the release of any methane or other volatile organic compounds at the Project site. All solid waste likely would be disposed of at the Lamb Canyon Landfill or the Badlands Landfill, both of which have the maximum permitted throughput to accept solid waste generated as part of the decommissioning of the existing turbines. Because the blades are made of steel and glass, it is expected that they will be recycled. Where recycling is not possible, components will be transported to an approved disposal site. If the resale market for used wind turbines and components is viable, some of the turbines and components, such as blades, may be transported off site intact for resale.

All of CURE's purported evidence regarding methane and VOCs is inapposite. The study principally relied upon by CURE and Dr. Fox, for example, generally focuses on the dismantling and disposal of wind turbines in Sweden, not California. That analysis is not applicable to the Project site. The comment also cites part of an abstract of a study regarding wind turbine waste worldwide. But again, this study did not evaluate the Project site or the particular existing turbines. Rather, it generalized the materials of a wind turbine generator and applied them on a macroscopic level. This is not appropriate for evaluating impacts on a project-specific basis. Similarly, the study and table presented by CURE and Dr. Fox references the release of methane and VOCs from wood production and other organics in the blades. This does not apply to the project, however, as the blades primarily consist of steel and glass. Furthermore, the referenced Mishnaevsky article, which is relied upon for the claim that VOCs and methane would be released, does not actually state that VOCs or methane would be released. CURE's reliance on all of these materials is unfounded, factually incorrect, and does not constitute substantial evidence.

The comment also states that the IS/MND fails to account for offsite dismantling and disposal of the existing turbines. But again, the applicant has explained that solid waste generated by the Project likely would be disposed of at the Lamb Canyon Landfill or the Badlands Landfill, and that the blades should be recyclable because they are made of steel and glass. Where recycling is not possible, components will be transported to an approved disposal site. None of the documents referenced by CURE alter this conclusion. Further, any offsite disposal impacts would have been accounted for within the permitting and environmental disclosure documents of those facilities. It would now be considered double counting if those impacts were accounted for within the current Project as well.

The comment also claims that the IS/MND does not identify specific details on applicable OSHA regulations. But CEQA imposes no such specific requirement and, in any event, CURE offers no substantial evidence suggesting that applicable regulations would be insufficient to protect worker safety. As the applicant has previously explained, all disassembly activities would be performed in compliance with all applicable employee safety regulations. Workers performing these activities would be required to take the necessary precautions to protect themselves from exposure to any materials that may be released into the air during cutting. These same precautions would be taken by any solid waste disposal or materials recovery facility that further handles or processes wind turbine components from the Project site, as required by applicable federal and state law. CURE offers no substantial evidence even suggesting that compliance with these regulatory programs will be insufficient.

Response to Comment 3-13

This comment claims that the IS/MND fails to provide a complete project description because it does not identify the specific type of turbines that will be installed. While it is true that the exact make and model of the new turbines has not been finalized, CEQA imposes no such specific requirement. Instead, the IS/MND describes the maximum possible dimensions of the new turbines so as to provide a conservative analysis of potential Project impacts. To that end, the IS/MND explains on pages one and two that the new turbines would have a maximum hub height of up to approximately 309 feet, a total height of up to approximately 499 feet (i.e., from the base to the top of the blade in the twelve o'clock position), and that the blades would be up to approximately 213 feet with a rotor diameter of up to approximately 427 feet.

Based on these specifications, the IS/MND conducts a "worst case" analysis to assess potential impacts resulting from decommissioning, construction, and operation of the Project. While the dimensions of the new turbines ultimately may be smaller than the parameters described in the IS/MND, any potential impacts associated with turbine dimensions would not exceed those presented in the IS/MND. Ironically, CURE at the same time claims that the IS/MND needs to analyze the potential impacts associated with new turbines that are higher than the turbines that are being replaced. As described above, that is precisely what the IS/MND does.

Response to Comment 3-14

This comment claims that the project description is incomplete because the Project has not yet completed a Joint Project Review ("JPR") as required by the Coachella Valley Multiple Species Habitat Conservation Plan.

Riverside County submitted the JPR to the Coachella Valley Conservation Commission on August 22, 2018. The final JPR was received by the County on December 19, 2018. Given that the JPR process has now been finalized, CURE's comment is moot. The Project remains as described in the IS/MND.

Response to Comment 3-15

This comment claims that the IS/MND violates CEQA's prohibition on piecemeal environmental review because the JPR may require further action with respect to Coachella Valley Jerusalem Cricket habitat and because a restoration plan to revegetate the Project site will be required.

Based on the now final JPR for the Painted Hills Wind Repowering Project, the Project is consistent with the CVMSHCP conservation goals within the Upper Mission Creek/Big Morongo Canyon Conservation Area. CURE's claims regarding the Coachella Valley Jerusalem Cricket therefore are moot. With respect to a restoration plan, such plan does not constitute a separate project under CEQA, and there is no requirement that such plan be completed and disclosed prior to consideration by the County. As required, this restoration plan will be submitted for approval prior to any site disturbance and implemented by the applicant at the appropriate time.

Response to Comment 3-16

This comment claims that the IS/MND fails to adequately describe the environmental setting so as to enable the County to properly assess transportation, air, and public health impacts. The comment does not provide any substantive analysis in support of CURE's position.

As set forth below in Responses to Comments 3-17 through 3-25, the IS/MND's description of the environmental baseline is more than adequate. In particular, Sections I(C) through Section I(F) of the IS/MND (pages 8 and 9) provide a description of the existing setting on and surrounding the Project site. In addition, the Air Quality and Greenhouse Gas Emissions Technical Report (Appendix B of the IS/MND) includes its own detailed description of the existing setting, focusing on regional (air basin) and local baseline settings. The level of detail presented in the IS/MND and supporting technical studies establishes a stable, finite, and fixed environmental setting that sufficiently provides for an accurate and meaningful analysis of environmental impacts.

Response to Comment 3-17

This comment claims that the IS/MND is silent on how the new wind turbine blades will be transported to the Project site and fails to provide an adequate description of existing traffic patterns, the air basin, and sensitive receptors along the transportation route.

As noted above in Response to Comment 3-11, CURE's assertion that standard trucks will be insufficient is speculative and not supported by substantial evidence. Based on its prior experience with similar types of projects and its industry knowledge, the applicant continues to believe that standard trucks will be utilized to deliver all materials to the Project site. CURE's related contention that the IS/MND must describe all existing traffic patterns, air basins, and sensitive receptors along every possible route throughout the country that could theoretically be utilized to deliver materials is likewise unsupported. CEQA requires no such speculative analysis. Sections I(C) through Section I(F) of the IS/MND (pages 8 and 9) provide a description of the existing setting on and surrounding the Project site. The existing setting also is discussed in detail in Sections 2.1 and 2.3 of the Air Quality and Greenhouse Gas Emissions Analysis Technical Report. Sensitive receptors are addressed in Sections 2.1.3 and 2.5.4 of the same report. This description is more than adequate under CEQA.

Response to Comment 3-18

This comment claims that the IS/MND underestimates the amount of habitat that will be disturbed. Based on the opinion of Ms. Owens, the comment suggests that the actual area of disturbed land may be closer to 20 acres.

As a factual matter, CURE erroneously states that the IS/MND describes the Project as permanently impacting 2.59 acres. The grading plan included in the IS/MND, however, depicts the limits of disturbance and is based upon engineering design. The acreage associated with these limits of disturbance are clearly stated throughout the IS/MND. That is, the Project will impact a total of 40.07 acres, comprising 3.74 acres of temporary impacts and 36.33 acres of permanent impacts. This is approximately double the 20 acres estimate that Ms. Owens estimates, in her purported expert opinion. All Project technical studies assumed these disturbance figures for their analyses. With respect to its characterization of disturbance, therefore, CURE simply is wrong.

That being said, the Biological Assessment for the Project did state that permanent disturbance would be limited to 2.59 acres. However, this is due to an earlier characterization of permanent versus disturbed acres, prior to having discussions with CVCC. Under the CVMSHCP, the project can pay a Local Development Mitigation Fee of $5,728/acre in lieu of full restoration, rather than attempt to restore 37.48 out of 40.07 acres of disturbance.

Finally, it should be noted that the final JPR estimates that disturbance will be slightly more than 40 acres. This is not a significant deviation from the 40.07 acres disclosed in the IS/MND, and the Project will mitigate all impacts as disclosed in the final JPR.

Response to Comment 3-19

This comment claims that the IS/MND fails to describe the existing levels of impacts to avian species on the Project site, and that the IS/MND's conclusion that the replacement of 291 existing wind turbines with 14 taller turbines will lead to fewer impacts is unsupported by the evidence.

Contrary to CURE's assertion, it is not necessary to know the precise levels of current avian mortality at the site in order to assess potential impacts from the Project. The relevant inquiry is whether avian impacts will be increased as compared to current baseline conditions (i.e., 291 turbines on the site). This analysis can be conducted without precise reference to current mortality levels, as documented in the IS/MND and as explained by the applicant in prior responses to CURE's comments. The IS/MND also references various memorandums, surveys, and studies reflecting that impacts as compared to baseline may in fact be reduced as a result of the Project. CURE does not offer any compelling critique of this methodology. Instead, it fixates on the fact that a single turbine could potentially result in increased avian impacts where baseline does not include any turbines at all. But again, the relevant inquiry is whether impacts will be increased as compared to the existing 291-turbine wind farm. Given this failure, CURE's claims regarding potential avian impacts are irrelevant.

For these same reasons, CURE's unsupported opinion that avian impacts will result should be ignored. Based on publicly available reports from nearby facilities, avian fatality rates at the site are expected to be low. Avian fatality rates expected at the Project will likely be comparable to the estimated fatality rates at the Mountain View IV (1.63 birds per MW per year; 90 percent confidence interval: 0.96 - 2.43) and Dillon Springs (4.71 birds per MW per year; 90 percent confidence interval: 3.22 – 6.99) wind facilities. These facilities are expected to be the most predictive to fatality rates at the Project because they have relatively similar turbine specifications, are situated in similar habitat, and likely share the avian community present at the Project. The proposed turbines for the Project have higher hub heights and longer turbine blades than these two facilities. However, there is limited evidence of a direct relationship of avian fatality rates with turbine size (e.g., Loss et al. 2013, Erickson et al. 2014).

CURE also fails to take into account the potential avoidance of larger turbines. Even though the speed of rotor revolution has significantly decreased with the development of larger turbines, blade tip speeds have remained about the same. So, while the blades of the new turbines that will be used to repower the Project will be up to approximately six times longer than the old turbine blades, the speed of the blade, and presumably the risk to birds and bats, varies considerably throughout the rotor-swept area. Birds and bats flying near the central portion (the "donut") of the rotor-swept area may be able to avoid colliding with the relatively slow-moving blades of larger turbines, while, at some point within the rotor-swept area the blades are moving at a speed that birds and bats are unable to avoid. Caution should, therefore, be taken in extrapolating fatality rates based on overall rotor-

swept area or turbine height alone, as the central portion of newer turbines may pose proportionately less risk to birds and bats than the outer reaches of the turbine blades. Additionally, repowering a site with fewer, larger turbines potentially creates more space for birds to fly beneath the rotor-swept area, and also between adjacent turbines, including raptor species.

Furthermore, because the Project will result in a large reduction in the number of older-generation turbines, this is anticipated to reduce the existing level of avian collision risk per MWh. Studies from other repowering projects in California and elsewhere have consistently demonstrated a reduction in avian fatality rates per MWh compared to the original wind facilities (Brown et al. 2013, Hjernquist 2014 as cited in Rydell et al. 2017). For example, the number of raptor fatalities on a per MWh basis appears to be declining substantially (67 – 96 percent depending on the species) at the Altamont Pass Wind Resource Area as a result of replacing smaller, low-capacity turbines with taller, higher-capacity turbines (Smallwood and Karas 2009; ICF International 2016). The fatality rate for all bird species combined was 78 percent lower after repowering of Vasco Winds, one of the facilities within the Altamont Pass Wind Resource Area (Brown et al. 2013).

Thus, based on the data available for the region and the turbine specifications and design incorporated into the repowering of the Project, it is reasonable to assume that the Project would not contribute to significant adverse impacts to any avian species potentially present in the area. Ultimately, the Project may in fact provide a beneficial impact by reducing the existing avian collision risk per MWh.

The comment also claims that the IS/MND omits any analysis of bats. But with respect to bats, CURE relies on research applicable to other wind projects. It presents no data that any bat species are present at the Project site or that taller turbines present a greater risk to bats. There are no listed bat species in California, and the lack of roosting habitat on site did not warrant more surveys. In addition, post-construction mortality studies at other southern California wind facilities have shown low impacts to bats. At new-generation wind energy facilities in the open desert scrub habitats in southern California's Tehachapi WRA and San Gorgonio WRA bat fatality rates have been among the lowest in North America. In the TWRA, bat fatality rates have ranged from zero bats/MW/year at a number of facilities (see Levenstein and Bay 2013, 2014, Chatfield et al. 2014, Rintz et al. 2016, Thompson et al. 2016, WEST 2016, 2018, Rintz and Pham 2018) to 2.59 bat/MW/year at the North Sky River Wind Energy Facility (Levenstein et al. 2014). Although publicly available bat fatality data are limited within the SGWRA, where the Project is located, the bat fatality estimate at the Dillon Wind Energy Facility, located about two kilometers (1.2 miles) northeast of the Project, was 2.17 bats/MW/year during a year-long fatality monitoring study in 2008-2009 (Chatfield et al. 2009). The Dillon facility comprises 45 1-MW turbines each with a hub height of 69 m and rotor diameter of 61 m for a facility-wide rotor-swept area of 133,200 m2. This is slightly smaller than the maximum rotor-swept area for the proposed Project. Thus, the Project is not expected to result in any increased impacts to bats as compared to the current baseline of 291 wind turbines.

Response to Comment 3-20

This comment claims the IS/MND fails to adequately survey and describe onsite biological resources.

As a factual matter CURE's characterization of the IS/MND is incorrect. The IS/MND includes an analysis of special status species and identifies 44 state and/or federally listed, candidate, or otherwise sensitive species with potential to occur within the Project area. The likelihood of occurrence was determined for each species

based on habitats present and known species' range. The IS/MND also describes pre-construction surveys for desert tortoise, burrowing owl, and nesting birds that would be required prior to ground-disturbing or vegetation removal activities during construction to avoid/minimize impacts to these species, consistent with the CVMSHCP. CURE has not provided any substantial evidence demonstrating that the analysis provided in the IS/MND is inadequate or that the Project otherwise will result in any undisclosed impacts to onsite biological resources. In addition, CURE ignores the many additional days of field surveys for a jurisdictional delineation and the many hours of review of existing reports and literature searches. CURE simply alleges that the survey efforts were inadequate without any facts to support its opinion.

As an example, the comment also states that the IS/MND omits any data on bats. Again, CURE provides no evidence that the Project will result in increased risks to bats. For further discussion of potential bat impacts, refer to the response provided in Response to Comment 3-19.

Response to Comment 3-21

This comment claims that the CH2M Hill memo is too old and unscientific to constitute substantial evidence.

Contrary to CURE's characterization, the IS/MND does not characterize the CH2M Hill as a site-specific survey completed for the Project. The document is clearly identified as an "avian use memorandum" examining regional survey efforts at various wind energy facilities in the San Gorgonio Pass area, near the Project site, and serves as a reference point for data in the surrounding area. Lacking other, more recent, site-specific data, however, the memorandum does provide relevant information regarding species use and fatality information for the region. CURE's claim that the CH2M Hill memorandum would not be suitable for a peer reviewed journal is similarly a nonstarter—the IS/MND makes no claim that the document would be published in any such journal. Regardless, CURE again offers no evidence that the Project will result in increased avian impacts. For further discussion of potential avian impacts, refer to the response provided in Response to Comment 3-19.

Response to Comment 3-22

This comment claims that the NREL Survey cited by the Bio Memorandum and relied on by the CH2M HILL Survey is insufficient to determine the existing environmental setting for the Project.

CURE again mischaracterizes the CH2M Hill memorandum and the accompanying NREL Survey. The IS/MND does not purport to rely on these documents to provided standardized estimates of avian mortality. While the NREL Survey does have its limitations, which are clearly identified therein, it does provide information relevant to establishing regional baseline conditions (e.g., species composition of fatalities at old-generation wind turbines in the San Gorgonio Pass area). Fatalities have included a number of raptor species (including a single golden eagle) establishing known risk to these raptor species at old-generation turbines. This is relevant information even if standardized fatality rates cannot be estimated. In any event, CURE again fails to present any evidence that the Project will result in increased avian impacts. For further discussion of potential avian impacts, refer to the response provided in Response to Comment 3-19.

Response to Comment 3-23

This comment claims that the IS/MND fails to survey migratory birds protected under California law.

CURE offers no substantial evidence that the Project will increase risks to migratory birds in comparison to baseline conditions. To the contrary, results from studies at other repower projects in Altamont Pass and Europe suggest that more bird fatalities per turbine may occur, but that substantially lower impacts are observed on a per MWh basis. At other modern wind energy facilities in Southern California, most located in the Tehachapi Pass Wind Resource Area, impacts to migratory birds, including raptors and sensitive species, have generally been quite low. These projects include turbines similar in size to those proposed for Painted Hills. Impacts to birds and bats from these Tehachapi projects have been well documented during post-construction fatality monitoring. All of this data reflects that the Project is not expected to result in increased impacts to birds. For further discussion of potential avian impacts, refer to the response provided in Response to Comment 3-19.

Response to Comment 3-24

This comment claims that studies are needed to determine if the Project will lead to eagle mortality.

As stated in the IS/MND, golden eagles occur in the San Gorgonio Pass area and are known to nest in the Project vicinity. In general, eagle use of the region appears to be low, although use may fluctuate somewhat from year to year based on occupancy of nesting territories in the region. CURE, however, provides no evidence that the Project will result in increased risks to golden eagle populations in comparison to baseline conditions. In fact, CURE presents no data showing that golden eagle mortality has increased due to any wind repowering projects anywhere in California. To the contrary, studies at repowered wind plants (particularly Altamont Pass) show that repowering can substantially reduce impacts to golden eagles. (Smallwood and Karas 2009, Insignia Environmental 2012, Brown et al. 2013). CURE therefore has presented no evidence to support the claim that the removal of 291 towers (the majority of which have lattice towers) will result in increased impacts to golden eagles. For further discussion of potential avian impacts, refer to the response provided in Response to Comment 3-19.

Response to Comment 3-25

This comment claims that the Wildlife Research Institute, Inc. survey for golden eagles referenced in the IS/MND fails to accurately inventory habitat and impacts to eagles and is too old to represent current conditions.

CURE mischaracterizes the IS/MND, which makes no such claim regarding the applicability of the WRI survey. That survey is referenced to reflect the presence of known nesting territories within the Project region. The IS/MND does not rely on the WRI survey to inventory habitat or to otherwise assess impacts to golden eagles. For these same reasons, CURE's disparaging statements regarding the author of the WRI survey are irrelevant.

Aside from this misguided critique of the WRI survey, CURE offers no substantial evidence that the Project will result in any increased risks to golden eagle populations as compared to baseline conditions. Again, CURE has not presented any data indicating that golden eagle mortality has increased due to any wind repowering projects anywhere in California. By contrast, studies at other repowering sites show that such projects can substantially

reduce impacts to golden eagles. For further discussion of potential avian impacts, refer to the response provided in Response to Comment 3-19.

Response to Comment 3-26

This comment summarizes sections from CEQA, the CEQA Guidelines, and case law that addresses when an EIR is required. Refer to response provided in Response to Comment 3-7.

Response to Comment 3-27

The commenter has not provided substantial evidence, but rather an opinion, that the Project would have a significant health impact. On page 26, the commenter cites the County concluding that "the toxics impact related to construction would be less than significant." In footnote 137, the commenter cites DEIR, Section 4.2 for this statement. Since there is no DEIR for the project, the statement is unfounded.

The commenter cites cases involving heavy polluters with long-term operational air impacts. These cases do not support an argument that a health risk assessment is required for a renewable energy repowering with only short-term construction impacts such as the Project. The commenter first cites *Communities for a Better Environment v. South Coast Air Quality Management District*, which evaluated a petroleum refinery with substantial amounts of toxic air contaminants that are evaluated over a lifetime of the project. The commenter next cites *Communities for a Better Environment v. City of Richmond,* which evaluated the processing of heavy crude oil, also long term impact. The commenter then cites *Bakersfield Citizens for Local Control v. City of Bakersfield* out of context because the actual deficiency identified by the court in that case was that the impacts needed to be evaluated resulting from the entire shopping center and not one retailer. This case has no bearing on the Project. Lastly, the commenter cites *Berkeley Keep Jets Over the Bay Committee V. Board of Port Commissioners*, which involved a development plan for the Oakland International Airport. The development plan in that case was a multifaceted, long-range expansion proposal for the airport that would provide increased capacity for both air cargo and passenger operations. Similar to the other projects cited, that project was a long-term source of toxic air contaminants and thus is not analogous to the Project.

The commenter claims that the failure to prepare a health risk assessment is a glaring omission to adequately disclose, analyze, and mitigate the Project's public health risks. However, the County and South Coast Air Quality Management District (SCAQMD) do not have guidance or thresholds at which a health risk assessment is prepared. Further, the Office of Environmental Health Hazard Assessment's (OEHHA) guidance does not require a construction health risk assessment as purported by the commenter; it only recommends how to prepare a construction health risk assessment under certain conditions that are not implicated by the Project. The commenter also states that the SCAQMD is not the agency charged with health risk assessments, but OEHHA is. This statement is false as the SCAQMD is charged with overseeing air quality within the South Coast Air Basin. As provided on the OEHHA's homepage: "Our mission is to protect and enhance the health of Californians and our state's environment through scientific evaluations that inform, support and guide regulatory and other actions." Therefore, the commenter is incorrect in asserting that OEHHA is charged with health risk assessments, rather they only provide support and guidance to SCAQMD.

The commenter states that the SCAQMD guidance recommends mobile source health risk assessments be prepared for all projects involving vehicular trips. The commenter misquotes this guidance as applying to "all projects involving vehicular trips". Instead, the guidance states the following on Page 1:

"Until such time, this document will serve as an interim technical guidance for estimating potential diesel particulate matter (DPM) impacts from the following activities:

- Truck idling and movement (such as, but not limited to, truck stops, warehouse/distribution centers or transit centers),
- Ship hotelling at ports, and
- Train idling."

Accordingly, this guidance applies to projects with substantial DPM emissions from mobile sources, such as the ones listed above. It is not intended to be used or recommended for "all" projects with any mobile source emissions. Therefore, this guidance does not apply to the Project because the level of traffic is a fraction of that compared to the projects which the SCAQMD includes in its guidance. Furthermore, the citation provided by the commenter is not found within the guidance document or on the SCAQMD's website where the guidance is found.

The commenter states that the Response Memorandum's screening health risk assessment did not use proper model inputs, only evaluated DPM and no other TACs, used inappropriate risk factors, did not include acute exposure, and did not address cumulative impacts. Further, the commenter states that Dr. Fox prepared an assessment using the OEHHA procedures which identified a medium-to-high cancer risk from construction of the project. The screening health risk assessment was prepared using the methodologies and techniques utilized the SCAQMD and OEHHA guidelines for preparing a formal health risk assessment, including model inputs, evaluation of DPM, risk factors, and analysis of acute exposure. DPM does not have an acute reference exposure level and thus acute risk cannot be evaluated. As identified by the commenter, DPM is the primary risk driver for diesel exhaust. In regards to cumulative impacts, there is no established threshold in the AQMD for evaluating cumulative construction impacts. Also, without detailed emissions quantification information for other projects, cumulative health risk cannot be estimated accurately. Notably, the health risk assessment provided by the commenter in Exhibit B and C is defined as a "screening level HRA" within the Exhibit and thus the commenter's argument that a screening level assessment is not sufficient has no merit. The Exhibit C HRA compares emissions from the project to screening level tables, which is a crude way to evaluate risk. In contrast, the health risk assessment results provided in the Response Memorandum took into account site-specific emission rates, topography, meteorology, and dispersion and are therefore more accurate and representative of the actual risk associated with the Project's construction. Additional information is provided below on the screening health risk assessment results stated in the Response Memorandum.

Health Risk Assessment Methodology

As a precautionary measure, a health risk assessment (HRA) was performed to assess the impact of construction on sensitive receptors proximate to the Project site. The HRA evaluated emissions from construction of the Project based on the methodologies prescribed in the OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2015). To implement the OEHHA Guidelines based on Project information, the SCAQMD has developed a three-tiered approach where each

successive tier is progressively more refined, with fewer conservative assumptions. The SCAQMD Modeling Guidance for AERMOD provides guidance with which to perform HRAs within the South Coast Air Basin (SCAQMD 2017b).

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SCAQMD recommends a carcinogenic (cancer) risk threshold of 10 in 1 million. Additionally, some TACs increase non-cancer health risk due to long-term (chronic) exposures. The Chronic Hazard Index is the sum of the individual substance chronic hazard indices for all TACs affecting the same target organ system. The SCAQMD recommend a Chronic Hazard Index significance threshold of 1.0 (project increment). The exhaust from diesel engines is a complex mixture of gases, vapors, and particles, many of which are known human carcinogens. DPM has established cancer risk factors and relative exposure values for long-term chronic health hazard impacts. No short-term, acute relative exposure level has been established for DPM; therefore, acute impacts of DPM are not addressed in this assessment. This HRA evaluated the risk to existing residents from diesel emissions from exhaust from on-site construction equipment and diesel haul and vendor trucks.

The dispersion modeling of DPM was performed using the American Meteorological Society/EPA Regulatory Model (AERMOD), which is the model SCAQMD requires for atmospheric dispersion of emissions. AERMOD is a steady-state Gaussian plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources, building downwash, and simple and complex terrain (EPA 2018). For the Project, AERMOD was run with all sources emitting unit emissions (1 gram per second) to obtain the "X/Q" values. X/Q is a dispersion factor that is the average effluent concentration normalized by source strength and is used as a way to simplify the representation of emissions from many sources. The X/Q values of ground-level concentrations were determined for construction emissions using AERMOD and the maximum concentrations determined for the 1-hour and Period averaging periods. Principal parameters of this modeling are presented in Table 1.

Table 1
AERMOD Principal Parameters

Parameter	Details
Meteorological Data	The latest 3-year meteorological data (2012–2016) for the Desert Hot Springs Airport Station from SCAQMD were downloaded and then input to AERMOD. For cancer or chronic non-cancer risk assessments, the average cancer risk of all years modeled was used.
Urban versus Rural Option	Urban areas typically have more surface roughness, as well as structures and low-albedo surfaces that absorb more sunlight—and thus more heat—relative to rural areas. Based on the SCAQMD guidelines and the Project location, the rural dispersion option was selected.
Terrain Characteristics	The terrain in the vicinity of the modeled Project site is generally hilly. The elevation of the modeled site is between 1,500 and 2,000 feet above sea level. Digital elevation model files were imported into AERMOD so that complex terrain features were evaluated as appropriate.
Elevation Data	Digital elevation data were imported into AERMOD, and elevations were assigned to the emission sources and receptors. Digital elevation data were obtained through AERMOD View in the United States Geological Survey's National Elevation Dataset format with a 10-meter resolution.
Emission Sources and Release Parameters	Air dispersion modeling of DPM from construction equipment and diesel vehicles was conducted using emissions estimated using the CalEEMod, assuming emissions would occur up to 8 hours per day, 5 days per week. The Project site was modeled as a series of volume sources.
Source Release Characterizations	The source release height was assumed to be 5 meters. The length of the volume sources was assumed to be 25 meters on each side with an initial lateral and vertical dimension of 5.81 meters.
Receptors	Discrete Cartesian receptors were placed over all residential receptors nearest to the project site.

Note: See Attachment B.

Dispersion model plot files from AERMOD were then imported into CARB's Hotspots Analysis and Reporting Program Version 2 to determine health risk, which requires peak 1-hour emission rates and annual-averaged emission rates for all pollutants for each modeling source. For the residential health risk, the HRA assumes exposure would start in the third trimester of pregnancy. Based on the HRA included in Attachment B, the maximally exposed individual resident would be located at the east of the project site. The results of the HRA are provided below, and detailed results and methodology are provided in Attachment B.

"Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period would contract cancer based on the use of standard OEHHA risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. TACs that would potentially be emitted during construction activities would be DPM, emitted from heavy-duty construction equipment and heavy-duty trucks. Heavy-duty construction equipment and diesel trucks are subject to CARB ATCMs to reduce DPM emissions. According to the OEHHA, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the

period/duration of activities associated with the Project (OEHHA 2015). Thus, the duration of proposed construction activities (approximately 18 months) would only constitute a small percentage of the total long-term exposure period and would not result in exposure of proximate sensitive receptors to substantial TACs.

During project construction, DPM emissions would be emitted from heavy-duty construction equipment and heavy-duty trucks. Heavy-duty construction equipment and diesel trucks are subject to CARB ATCMs (described in Section 4.2.2) to reduce DPM emissions. According to the OEHHA, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the project. Because the Project would involve construction activities in several areas across the site, the Project would not require the extensive use of heavy-duty construction equipment or diesel trucks in any one location over the duration of development, which would limit the exposure of any proximate individual sensitive receptor to TACs. The results of the HRA for Project construction are summarized in Table 2.

Table 2
Construction Activity Health Risk Assessment Results - Unmitigated

Impact Parameter	Units	Proposed Project Impact	CEQA Threshold	Level of Significance
Cancer Risk	Per Million	2.09	10.0	Less than Significant
HIC	Not Applicable	0.002	1.0	Less than Significant

Source: Attachment B
Notes: CEQA = California Environmental Quality Act; HIC = Chronic Hazard Index.

The results of the HRA demonstrate that the TAC exposure from construction diesel exhaust emissions would result in an on-site cancer risk less than the 10 in 1 million threshold, as well as Chronic Hazard Index less than 1, resulting in a less than significant impact.

As determined above, since the cancer risk at the MEIR exceeds 1 in a million, cancer burden, for which a SCAQMD significance threshold of 0.5, is evaluated. Unlike cancer risk, which is the lifetime probability (chances) of an individual developing cancer due to exposure to a carcinogenic compound, cancer burden estimates the number of theoretical cancer cases in a defined population resulting from a lifetime exposure to carcinogenic TACs. As described in the OEHHA guidance manual:

> The cancer burden can be calculated by multiplying the cancer risk at a census block centroid by the number of people who live in the census block, and adding up the estimated number of potential cancer cases across the zone of impact. The result of this calculation is a single number that is intended to estimate of the number of potential cancer cases within the population that was exposed to the emissions for a lifetime (70 years) (OEHHA 2015).

The SCAQMD has established a procedural screening approach for estimating cancer burden (SCAQMD 2017b), which includes the following steps:

- Recalculate cancer risk from all TACs using a 70-year exposure duration;

- Estimate the distance at which the at which maximum individual cancer risk from a 70-year exposure duration falls below 1 in a million;
- Define a zone of impact in the shape of a circle, with the radius equal to the distance between the TAC source and the point at which the risk falls below 1 in a million;
- Estimate the residential population within this zone of impact based on census data or a worse-case estimate;
- Calculate the screening level cancer burden by multiplying the total residential population in the zone of impact by the maximum individual cancer risk.

Accordingly, the maximum estimated 70-year cancer risk for the unmitigated Project was estimated at 7.94 in a million with HARP2 using the Population-Wide option in the model, which is specified for use in cancer burden estimates. The zone of impact was estimated to be 11.4 square-kilometers. The total population in this area was estimated to be approximately 5,597 persons, based on the average densities of the Census Tracts that would be within the zone of impact (Census Tracts 445.22 and 445.21) (U.S. Census Bureau 2016). Multiplying the maximum estimated 70-year cancer risk by the project population gives a cancer burden of 0.04. Accordingly, the cancer burden indicates that less than one person would contract cancer assuming a 70-year exposure under the modeled scenario of TAC emissions and provided that other factors related to an individual's susceptibility to contracting cancer would occur. This would be less than the SCAQMD cancer burden threshold of 0.5. Thus, the impact with respect to potential cancer burden due to construction of the Project would be less than significant.

Response to Comment 3-28

Odors were evaluated consistent with the SCAQMD and CEQA Guidelines. The CEQA Guidelines threshold states "Would the proposed project create objectionable odors affecting a substantial number of people?" As discussed in the IS/MND and Response Memorandum, the Project would not expose a substantial number of people to objectionable odors during construction or operation. The residential neighborhood closest to the Project site consists of less than 50 homes spread out over a square mile. The emissions from the Project would be dispersed throughout the Project site, not concentrated in any one location, especially those closest to sensitive receptors. Furthermore, the predominant wind direction at the site is blowing from the northeast and would not directly push odors towards the majority of the residents.

The commenter's claims regarding the need for dispersion modeling to assess odor impacts are based on out-of-date information. The study cited by CURE (J.E. Alpert 2012) does not provide thresholds with which to compare the dispersion modeling. Further, SCAQMD and the County do not have odor significance thresholds. The SCAQMD regulates odor emissions as a public nuisance based on a complaint-response basis only, in accordance with SCAQMD Rule 402. The study cited by the commenter (P.A. Partridge 1987) was based on information over 30 years ago. Since then and as discussed in the Response Memorandum, many strides have been taken to reduce diesel particulate matter in exhaust, which coincides with similar reductions in odors. Furthermore, the commenter states that use of diesel oxidation catalysts ("DOC") will eliminate odors and thus should be incorporated as mitigation. However, such mitigation is not required because modern construction equipment already includes DOC as standard. The use of DOC dates back to 1994 for heavy-duty vehicles and 2011 for construction equipment (Dieselnet 2018). Therefore, the vehicles and construction equipment already incorporate DOC into their engines and it would not be an applicable mitigation to reduce odors. This provides

further substantial evidence supporting the conclusion that the Project's odor impact would be less than significant.

The commenter incorrectly states that rules cited by SCAQMD and CARB do not apply until after emissions occur. CARB has created air toxic control measures (ATCMs) that directly apply to diesel engine exhaust in construction equipment, which is the predominant source of odor emissions during construction. The ATCMs that apply to the Project include the ATCM for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater (17 CCR § 93116), ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling (13 CCR Chapter 10 § 2485), ATCM to Reduce Particulate Emissions from Diesel-Fueled Engines – Standards for Nonvehicular Diesel Fuel (17 CCR 93114), and ATCM for Stationary Compression Ignition Engines (17 CCR 93115).

Response to Comment 3-29

This comment was fully addressed in the applicant's November 27, 20018 response to CURE's prior comments, submitted in advance of the hearing before the Planning Commission. To reiterate, the wind-blown emissions are accounted for within the meteorological data used within the CalEEMod, which includes high-wind events. The commenter's claim that emissions were not accounted for between 7.5 and 25 miles per hour is incorrect. The dataset with which the wind speed is based on includes all measured wind speeds from the local meteorological site, including calm wind speeds up through high-wind events. It does not ignore any wind speeds. The commenter claims that default conditions should have been adjusted because the Project site will create greater particulate matter. This is incorrect because the wind value assumed within CalEEMod includes all wind events, including high-wind events into its assumptions. The commenter also claims that emissions from decommissioning of the existing turbines and from moving the turbines to the site were not accounted for. This is incorrect. The air modeling for the IS/MND assumed that components for the Project, including oversized items like blades, nacelles and towers, would arrive by truck. In addition, the Project included two "Turbine Decommissioning" construction phases, clearly identified within the Air Quality and GHG Emissions Technical Report, and included emissions associated with the equipment and vehicles used during that phase. The fugitive dust emissions associated with all construction phases were estimated and include grading, demolition activities, truck loading, and from paved and unpaved roads. This is clearly identified within the assumptions presented within the Air Quality and GHG Technical Report and its Appendix A. The CalEEMod user's manual Appendix A (Sections 4.3 and 4.6) provides discussion on fugitive dust emissions calculated within CalEEMod. The commenter also states that the emissions from unpaved roads were not included. This is incorrect. As shown in the Air Quality and GHG Emissions Technical Report, an unpaved road distance of 3.6 miles was assumed for every vehicle trip for worker, vendor, and haul trucks. This is a highly conservative estimation of unpaved road dust onsite and likely overestimates fugitive dust emissions from unpaved roads.

Response to Comment 3-30

This comment also was addressed in the applicant's November 27, 2018 response to CURE's prior comments. AS explained at that time, the Project site is not endemic to Valley Fever and thus the construction of the Project does not pose a significant risk of exposure of Valley Fever to Project workers or nearby sensitive receptors. Furthermore, workers would comply with applicable protective measures in place by OSHA and California OSHA. No further response is required.

Response to Comment 3-31

This comment claims that the IS/MND incorrectly assumes that there will not be any potentially significant impacts to birds and bats from taller wind turbines. The comment states that there is an increase in avian and bat mortality associated with an increase in wind turbine hub heights, and that other repowering projects have resulted in increased impacts to species.

CURE fails to provide any substantial evidence in support of its claim that impacts to birds and bats will increase in comparison to baseline conditions. Even assuming that, on a per turbine basis, taller wind turbines can result in greater mortality of birds and bats as compared to smaller turbines, the relevant question is whether the presence of 14 taller wind turbines will result in increased avian and/or bat impacts as compared to the 291 existing turbines. CURE does not address this baseline issue at all and, aside from a generic observation that taller individual turbines may result in more impacts than small individual turbines, offers no evidence that any such increased impacts will occur. To the contrary, studies from other repowering projects in California and elsewhere have consistently demonstrated a reduction in avian fatality rates per MWh compared to the original wind facilities. (Brown et al. 2013, Hjernquist 2014 as cited in Rydell et al. 2017.) For further discussion of potential avian and bat impacts, refer to the response provided in Response to Comment 3-19.

Response to Comment 3-32

This comment claims that the IS/MND fails to adequately disclose, analyze, and mitigate the Project's potentially significant impacts to special status species. The comment claims that focused surveys are required.

CURE's claim is misinformed and without merit. There is no evidence that any special status species exist on the site that have not been disclosed in the IS/MND. CURE likewise fails to provide evidence that there will be any impacts to special status species that are not covered by the CVMSHCP, mitigation measures, conditions of approval, and/or any other applicable regulatory requirement.

To the contrary, the IS/MND includes measures to ensure that any impacts to special status species would be less than significant. In particular, compliance with the CVMSHCP will reduce/minimize impacts to covered species to acceptable levels of significance. The County will require the Project to comply with the CVMSHCP and the JPR (which was finalized on December 17, 2018) as a condition of approval. The project will comply with the avoidance, minimization, and mitigation measures outlined within the JPR, which includes survey protocols for the desert tortoise and burrowing owl. In addition, as explained in the IS/MND, impacts to avian species, including eagles, will be less than significant without the need for the incorporation of mitigation measures. MM-BIO-1 was included to cover any potential impacts to nesting birds covered by the MBTA and the Fish and Game Code. For further discussion of potential avian impacts, refer to the response provided in Response to Comment 3-19.

Response to Comment 3-33

This comment claims that the IS/MND fails to adequately disclose, analyze, and mitigate the Project's potentially significant impacts to migratory birds.

CURE offers no substantial evidence that the Project will increase risks to migratory birds in comparison to baseline conditions. To the contrary, results from studies at other repower projects in Altamont Pass and Europe suggest that more bird fatalities per turbine may occur, but that substantially lower impacts are observed on a per MWh basis. At other modern wind energy facilities in Southern California, most located in the Tehachapi Pass Wind Resource Area, impacts to migratory birds, including raptors and sensitive species, have generally been quite low. These projects include turbines similar in size to those proposed for Painted Hills. Impacts to birds and bats from these Tehachapi projects have been well documented during post-construction fatality monitoring. For further discussion of potential avian impacts, refer to the response provided in Response to Comment 3-19.

Response to Comment 3-34

CURE's claim that the IS/MND fails to adequately mitigate impacts to biological resources is misinformed and without merit. The IS/MND includes mitigation measures to reduce all impacts to biological resources to less-than-significant levels. Compliance with the CVMSHCP's requirements will reduce/minimize impacts to species covered in the CVMSHCP to acceptable levels of significance. The County will require the Project to comply with the CVMSHCP and the JPR as a condition of approval. As stated in the IS/MND and addressed herein, impacts to avian species, including eagles, are already less than significant without the need for the incorporation of mitigation measures. MM-BIO-1 was included to cover any potential impacts to nesting birds covered by the MBTA and Fish and Game Code. There are no other significant impacts to species not covered by the CVMSHCP, mitigation measures, conditions of approval, or any other applicable regulatory requirements. Thus, CURE's assertion that the IS/MND must be recirculated is incorrect because the IS/MND already includes enforceable mitigation and other requirements (e.g., CVMSHCP and JPR, conditions of approval, and other applicable regulatory requirements) to reduce/minimize impacts to special-status/listed plant and wildlife species to less than significant.

Response to Comment 3-35

This comment claims that the IS/MND relies on nonbinding mitigation measures with respect to the revegetation plan, and that revegetation is unlikely to occur.

CURE again mischaracterizes the record. As stated in the IS/MND, the requirement that the applicant submit a restoration plan to the County, to be approved by both the County and CVCC prior to any ground disturbance, will be imposed as a condition of approval and therefore is enforceable. Thus, while CVCC is in the process of pursuing acquisition of the habitat type in other areas of the Upper Mission Creek/Big Morongo Conservation Area to meet "Rough Step," the applicant will still be responsible for the restoration of 3.74 acres to address the issue of Rough Step. The condition also will provide that if restoration does not occur to the satisfaction of the County and CVCC, a Transfer of Conservation Goals associated with Conservation Objectives pursuant to Minor Amendments under Section 6.12.3 of the CVMSHCP may be possible. In addition, the Project will be conditioned to pay its fair share of CVMSHCP fees in accordance with County Ordinance No. 875. CURE provides no evidence to support its assertion that revegetation will not occur, and its claims regarding the enforceability of such revegetation are without merit. Upon successful completion of the JPR process, no adverse effects would occur.

Response to Comment 3-36

This comment purports to summarize CEQA and related case law regarding the definition of "mitigation." The comment does not provide any substantive analysis in support of CURE's position, and the comment is generally acknowledged.

Response to Comment 3-37

This comment states that the IS/MND fails to include enforceable mitigation related to the proposed restoration plan. Please refer to Response to Comment 3-35 for a complete response to this topic.

Response to Comment 3-38

This comment claims that the use of bird diverters on guy wires constitutes unenforceable mitigation.

Contrary to CURE's mischaracterization, however, the use of bird diverters on guy wires is not necessary to mitigate an otherwise significant avian impact to a less than significant level. As explained in the IS/MND, the Project is not expected to result in any significant impacts to birds as compared to current baseline conditions. Nor has CURE provided evidence that any such impacts will occur. Because the use of diverters is not necessary to mitigate impacts to birds, therefore, it is inaccurate to characterize such activity as mitigation. Regardless, the inclusion of bird diverters is a standard practice in the industry, and there is no reason to doubt that the applicant will follow through on its representation that diverters will be used. For further discussion of potential avian impacts, refer to the response provided in Response to Comment 3-19.

Response to Comment 3-39

This comment purports to summarize CEQA and related case law regarding deferral of mitigation. The comment does not provide any substantive analysis in support of CURE's position, and the comment is generally acknowledged.

Response to Comment 3-40

This comment states that the IS/MND defers mitigation of significant impacts for Coachella Valley Jerusalem cricket habitat.

CURE again mischaracterizes the revegetation plan. As explained in Response to Comment 3-35, a condition of approval will be imposed on the Project requiring the applicant to prepare a restoration plan, which will be approved by both the County and the CVCC prior to any ground disturbance, and the measure therefore is enforceable. The fact that this plan is not yet finalized, however, does not mean that it has been impermissibly deferred. To the contrary, implementation of the revegetation plan will be subject to specific performance criteria. The applicant, for example, has 66 months for the restoration efforts to satisfy the stringent requirements set forth and agreed upon by the County and CVCC in the restoration plan, or else a Transfer of Conservation Goals associated with Conservation Objectives pursuant to Minor Amendments under Section 6.12.3 of the CVMSHCP

would be pursued. Thus, the preparation and subsequent implementation of the restoration plan is not deferred mitigation, as CURE incorrectly asserts.

Response to Comment 3-41

This comment concludes CURE's appeal letter and reiterates CURE's demand that the County prepare an EIR. As reflected above, however, CURE has failed to provide any substantial evidence supporting a fair argument that the Project may have a significant effect on the environment. Instead, CURE's appeal is riddled with argument, speculation, unsubstantiated opinion, clearly inaccurate or erroneous evidence, and evidence that is not credible. Given the appeal's lack of merit, and as set forth more fully herein, the applicant asks the County to deny the appeal and approve the IS/MND and all related Project approvals.

Response to Comment 3-42

This comment encompasses those comments prepared by Dr. Fox and previously submitted by CURE on November 26, 2018. Responses to these comments already were prepared and submitted to the County in advance of the November 28, 2018 hearing before the Planning Commission.

Response to Comment 3-43

This is an introductory paragraph to Dr. Fox's additional comments. The comment does not provide any substantive analysis in support of CURE's position, and the comment is generally acknowledged.

Response to Comment 3-44

This comment asserts that the SCAQMD is not the agency charged with health risk assessments. Please refer to Response to Comment 3-27 for a complete response to this comment.

Response to Comment 3-45

This comment refers to the "screening health risk assessment" referenced within the applicant's responses to comments provided in advance of the Planning Commission hearing. Please refer to Response to Comment 3-27 for a complete response to this topic.

Response to Comment 3-46

This comment claims that the OEHHA guidelines recommend a different significance threshold for short-term construction exposures. Please refer to Response to Comment 3-27 for a complete response to this topic.

Response to Comment 3-47

This comment states that the screening health risk assessment selected input assumptions to understate impacts. This is incorrect and fully addressed in Response to Comment 3-27. The health risk assessment was prepared in accordance with the OEHHA and SCAQMD guidelines.

Response to Comment 3-48

This comment states that only DPM was analyzed and that diesel exhaust contains other TACs that could increase cancer, chronic, and acute risks. While the statement that diesel exhaust does contain other TACs is true, the statement that the risk would significantly increase is incorrect. DPM is the largest contributor to health risk and is a standard approach for estimating health risk associated with diesel exhaust. It is not necessary to include the other TACs as they would minimally contribute to the total health risk. As stated by OEHHA in Section D-2.1 of the 2015 Air Toxics Hot Spots Program Guidance Manual: "When comparing whole diesel exhaust to speciated components of diesel exhaust (e.g., PAHs, metals), the cancer risk from inhalation exposure to whole diesel exhaust will outweigh the multipathway cancer risk from the speciated components. For this reason, there will be few situations where an analysis of multipathway risk is necessary." This project is not a situation in which a multipathway risk analysis is necessary.

Response to Comment 3-49

This comment states that the unit risk factor for DPM is low within the range of unit risk factors for DPM. However, the source cited by the commenter (OEHHA's "Hot Spots Unit Risk and Cancer Potency Values") identifies the unit risk value as 3.0 E-4 and no range. This unit risk value is the default within HARP2 which was utilized in the health risk assessment and is consistent with the OEHHA guidelines.

Response to Comment 3-50

This comment states that the health risk assessment did not evaluate the acute health impacts of DPM because there is no REL established. The commenter also claims that there is an available REL from Canada. This REL is not applicable and not endorsed by either the OEHHA or the SCAQMD and therefore should not be applied. OEHHA has not established an acute REL for DPM.

Response to Comment 3-51

This comment states that the IS/MND failed to evaluate cumulative health impacts of construction. Please refer to Response to Comment 3-27 for a complete response to this topic.

Response to Comment 3-52

This comment states that the IS/MND failed to evaluate health impacts to construction workers. Please refer to Response to Comment 3-12 for a complete response to this topic.

Response to Comment 3-53

This comment summarizes a screening health risk assessment prepared by Ray Kapahi and included as Exhibit A to Dr. Fox's additional comments. The health risk assessment referenced in this comment and the attached exhibit is a screening health risk assessment that was supposedly performed in accordance with the San Joaquin Air Pollution Control District's guidance, as cited at footnote 1 on page 2 of the assessment.

As the Project is within the jurisdiction of the SCAQMD, the guidance used by Mr. Kapahi is not applicable. Furthermore, a refined health risk assessment is more accurate and preferred over a screening health risk assessment as it uses site-specific topographic, meteorological, and dispersion inputs as provided in the OEHHA guidelines. Finally, the Assembly Bill (AB) 2588 risk prioritization methodology used within the screening health risk assessment is not appropriate. As provided by CARB under AB 2588, stationary sources are required to report the types and quantities of certain substances their facilities routinely release into the air. Emissions of interest are those that result from the routine operation of a facility or that are predictable, including but not limited to continuous and intermittent releases and process upsets or leaks. The Act requires that toxic air emissions from stationary sources (facilities) be quantified and compiled into an inventory according to criteria and guidelines developed by the ARB, that each facility be prioritized to determine whether a risk assessment must be conducted, that the risk assessments be conducted according to methods developed by the Office of Environmental Health Hazard Assessment (OEHHA), that the public be notified of significant risks posed by nearby facilities, and that emissions which result in a significant risk be reduced. Therefore, the screening health risk assessment and application of AB 2588 is not appropriate and is superseded by the refined health risk assessment shown in Response to Comment 3-27.

Response to Comment 3-54

This comment states that the IS/MND does not contain an odor analysis. Please refer to Response to Comment 3-28 for a complete response to this topic.

Response to Comment 3-55

This comment states that sulfur dioxide is not the primary odor component within diesel exhaust but rather aldehydes. Please refer to Response to Comment 3-28 for a complete response to this topic.

Response to Comment 3-56

This comment states that reducing idling emissions of diesel exhaust would not reduce odors. Please refer to Response to Comment 3-28 for a complete response to this topic.

Response to Comment 3-57

This comment states that the IS/MND underestimates PM_{10} and $PM_{2.5}$ emissions because it does not account for wind impacts. Please refer to Response to Comment 3-29 for a complete response to this topic.

Response to Comment 3-58

This comment states that fugitive dust emissions from grading, demolition, truck loading, and paved/unpaved roads was not accounted for in the IS/MND. Please refer to Response to Comment 3-29 for a complete response to this topic.

Response to Comment 3-59

This comment states that alternative emissions quantification methods need to be used to estimate emissions from demolition. Please refer to Response to Comment 3-29 for a complete response to this topic.

Response to Comment 3-60

This comment states that all of Riverside County is endemic to Valley Fever. Please refer to Response to Comment 3-30 for a complete response to this topic.

Response to Comment 3-61

This comment states that compliance with the SCAQMD fugitive dust Rules 403 and 403.1 would not control Valley Fever spores. Please refer to Response to Comment 3-30 for a complete response to this topic.

Response to Comment 3-62

This comment states that the California Department of Industrial Relations guidance was applied at projects that had Valley Fever outbreaks. Please refer to Response to Comment 3-30 for a complete response to this topic.

Response to Comment 3-63

This comment states that the IS/MND fails to evaluate the challenges of transporting very large wind turbines to the project site. Please refer to Response to Comment 3-11 for a complete response to this topic.

Response to Comment 3-64

This comment states that the IS/MND fails to disclose worker health impacts associated with turbine dismantling and blade cutting. Please refer to Response to Comment 3-12 for a complete response to this topic.

Response to Comment 3-65

This comment states that cutting up wind turbines is a new source not covered by existing OSHA and Cal OSHA regulations. Please refer to Response to Comment 3-12 for a complete response to this topic.

Response to Comment 3-66

This comment states that the wind turbine blades would release methane and VOCs when dismantled. Please refer to Response to Comment 3-12 for a complete response to this topic.

Response to Comment 3-67

This comment questions whether certain specified landfills would accept solid waste generated by the Project. Please refer to Response to Comment 3-12 for a complete response to this topic.

Response to Comment 3-68

This comment concludes Dr. Fox's additional comments and states that the Project will result in significant worker and public health impacts, air quality impacts, transportation impacts, and waste disposal impacts. As reflected above, however, Dr. Fox has failed to provide any substantial evidence supporting a fair argument that the Project may have a significant effect on the environment. Instead, her comments are based on speculation, unsubstantiated opinion, clearly inaccurate or erroneous evidence, and evidence that is not credible. Accordingly, Dr. Fox's comments provide no support to CURE's appeal.

Response to Comment 3-69

This comment includes Exhibit A to Dr. Fox's additional comments, which is the same technical memorandum prepared by Environmental Permitting Specialists included as Exhibit C to CURE's appeal letter. A formal response is provided in Responses to Comments 3-72 through 3-74.

Response to Comment 3-70

This comment includes Exhibit B to Dr. Fox's additional comments, which is the SCAQMD CEQA Air Quality Handbook. The comment only provides factual background information and does not set forth any substantive analysis in support of CURE's position.

Response to Comment 3-71

This comment includes Exhibit C to Dr. Fox's additional comments, which is a study titled "Characterization and Analysis of Diesel Exhaust Odor." The comment only provides factual background information and does not set forth any substantive analysis in support of CURE's position.

Response to Comment 3-72

This comment introduces Mr. Kapahi's technical memorandum and purports to summarize portions of the IS/MND. The comment does not provide any substantive analysis in support of CURE's position, and the comment is generally acknowledged.

Response to Comment 3-73

This comment provides a summary of the review of the health risk assessment prepared by Dudek. A complete response is provided in Responses to Comments 3-27 and 3-53.

Response to Comment 3-74

This comment references Mr. Kapahi's evaluation of health risks based on inapplicable guidance. A complete response is provided in Response to Comment 3-53.

Response to Comment 3-75

This comment encompasses those comments prepared by Renee Owens and previously submitted by CURE on November 27, 2018. Responses to these comments already were prepared and submitted to the County in advance of the November 28, 2018 hearing before the Planning Commission.

Attachment A

Bracketed Comment Letter and Supporting Materials

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December 14, 2018

Via Hand-Delivery

Chair Chuck Washington and Board Members
c/o Kecia Harper-Ihem, Clerk of the Board
Riverside County Board of Supervisors
4080 Lemon Street, 1st Floor
Riverside, CA 92501
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Re: Appeal of November 28, 2018 Planning Commission Decision Initial Study/Mitigated Negative Declaration for Painted Hills Wind Repowering Project, WECS Permit No. 180001/Variance Case No. 180003/ Adoption of MND for EA No. 1800059

Dear Chair Washington and Members of the Board of Supervisors:

We write on behalf of California Unions for Reliable Energy ("CURE"), Charles A. McDaniel, Kasey L. Woolridge-Caspersen, Elmer Diaz, William R. Pieper, and Juan O. Dominguez to appeal the County of Riverside Planning Commission's November 28, 2018 decision to approve the Initial Study/Mitigated Negative Declaration ("IS/MND")[1] prepared by Riverside County ("County") for the Painted Hills Wind Repowering Project ("Project"), proposed by Painted Hills, LLC, which is owned by Terra-Gen ("Applicant"). Specifically, we appeal each of the following Planning Commission approvals related to the Project: 3-1

1. Approval of Commercial WECS Permit No. 180001,

2. Approval of Variance Case No. 180003, and

[1] Environmental Assessment Form: Initial Study Number CEQ180059, County of Riverside, at 2 (Oct. 2018) (hereafter "IS/MND").

3. Adoption of the Mitigated Negative Declaration for Environmental Assessment No. 1800059.

The Project proposes to decommission and remove approximately 291 existing commercial wind turbines and install up to 14 new commercial wind turbines up to 499-feet in height with a per turbine generating capacity of between 2.0 megawatts ("MW") and 4.2 MW, which is up to 58.8 total MW, on land within the Wind Energy Resource Zone. The Project will also install ancillary equipment, including meteorological towers up to 309-feet in height, new access roads, collector circuits, and substation. 3-2

The grounds for the appeal are set forth in detail below. In sum, based on our review of the IS/MND and available documents, we conclude that the IS/MND fails to comply with the requirements of the California Environmental Quality Act ("CEQA"). The IS/MND fails to describe the whole Project, fails to describe the existing setting upon which to measure impacts, fails to disclose and analyze the Project's potentially significant environmental impacts and fails to identify enforceable measures that can reduce those impacts to a less than significant level. 3-3

As explained in these comments, there is more than a fair argument based on substantial evidence that the Project will result in potentially significant public health impacts from construction emissions and potentially significant biological resources impacts from construction and operation. The County may not approve the Project until it prepares an environmental impact report ("EIR") that adequately analyzes the Project's potentially significant direct, indirect and cumulative impacts, and incorporates all feasible mitigation measures to avoid or minimize these impacts. 3-4

These comments were prepared with the assistance of Phyllis Fox, Ph.D., PE[2] and Biologist and Independent Environmental Consultant Renée Owens.[3] Dr. Fox and Ms. Owens provide substantial evidence[4] of potentially significant impacts that have not been adequately disclosed, analyzed, or mitigated. Dr. Fox's and Ms. Owens' technical comments and responses to letters received from Project consultant DUDEK are attached hereto and are submitted to the County, in addition to the comments in this letter. 3-5

I. STATEMENT OF INTEREST

CURE is a coalition of labor organizations whose members construct, operate, and maintain powerplants and other industrial facilities throughout California. CURE encourages sustainable development of California's energy and natural resources. Environmental degradation destroys cultural and wildlife areas, consumes limited water resources, causes air and water pollution, and imposes other stresses on the environmental carrying capacity of the State. Environmental degradation also jeopardizes future jobs by making it more difficult and expensive for industry to expand in Riverside County, and by making it less desirable for businesses to locate and for people to live and recreate in the area. Continued environmental degradation can, and has, caused construction moratoriums and 3-6

[2] P. Fox, Comments on the Initial Study for the Painted Hills Wind Energy Repowering Project (November 26, 2018) (hereinafter, "Fox Comments"), **Exhibit A**; P. Fox, Letter from Dr. Phyllis Fox to Kyle Jones (Dec. 14, 2018) Comments on the Responses to Comments on the Painted Hills Wind Energy Repowering Project Initial Study/Mitigated Negative Declaration (hereinafter, "Fox Response"), **Exhibit B** (Dr. Fox's letter and CV are provided via email).

[3] R. Owens, Letter from Renée Owens to Kyle Jones (Nov. 27, 2018) Comments for the Painted Hills Wind Repowering Project Initial Study, Commercial WECS Permit No. 180001 / Variance Case No. 180003 – Intent to Adopt a Mitigated Negative Declaration – CEQ180059 (hereinafter, "Owens' Comments"), **Exhibit D**; R. Owens, Letter from Renée Owens to Kyle Jones (Dec. 14, 2018) Response to County/DUDEK Comments for the Painted Hills Wind Repowering Project Initial Study, Commercial WECS Permit No. 180001 / Variance Case No. 180003 – Intent to Adopt a Mitigated Negative Declaration – CEQ180059 (hereinafter, "Owens' Response"), **Exhibit E** (Ms. Owens' letter and CV are provided).

[4] 14 CCR § 15384 subd. (b) identifies "reasonable assumptions predicated upon facts, and expert opinion supported by facts" as substantial evidence. Attempts to rebut the expert opinions from two highly qualified technical experts with legal argument are inappropriate since the Applicant's attorney's is not qualified to provide expert opinion to meet the standard of substantial evidence. Refutations to DUDEK responses are provided in this appeal.

other restrictions on growth that, in turn, reduce future employment opportunities for CURE's participating organizations and their members. CURE therefore has a direct interest in enforcing environmental laws and minimizing project impacts that would degrade the environment.

CURE's participating organizations and their members also live, recreate, work, and raise families in Riverside County. Thus, CURE, its participating organizations and their members stand to be directly affected by the Project's adverse environmental and health impacts. Members may also work on the Project itself and would therefore be first in line to be exposed to any health and safety hazards that the Project may create.

Charles A. McDaniel lives in, and works and recreates in and around, Desert Hot Springs, California. Kasey L. Woolridge-Caspersen lives in, and works and recreates in and around, Morongo Valley, California. Elmer Diaz lives in, and works and recreates in and around, Cathedral City, California. William R. Pieper lives in, and works and recreates in and around, Desert Hot Springs, California. Juan O. Dominguez lives in, and works and recreates in and around, Cathedral City, California. Mr. McDaniel, Ms. Woolridge-Caspersen, Mr. Diaz, Mr. Pieper and Mr. Dominguez are each concerned about impacts on public health and the environment in the affected areas where they live, work and recreate.

3-6 (cont)

II. AN EIR IS REQUIRED

CEQA requires that lead agencies analyze any project with potentially significant environmental impacts in an EIR.[5] "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made. Thus, the EIR protects not only the environment, but also informed self-government."[6] The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return."[7]

3-7

[5] See Pub. Resources Code § 21000; CEQA Guidelines § 15002.
[6] *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 564 (internal citations omitted).
[7] *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.

CEQA's purpose and goals must be met through the preparation of an EIR, except in certain limited circumstances.[8] CEQA contains a strong presumption in favor of requiring a lead agency to prepare an EIR. This presumption is reflected in the "fair argument" standard. Under that standard, a lead agency "shall" prepare an EIR whenever substantial evidence in the whole record before the agency supports a fair argument that a project may have a significant effect on the environment.[9]

In contrast, a mitigated negative declaration may be prepared only when, after preparing an initial study, a lead agency determines that a project may have a significant effect on the environment, but:

> (1) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed negative declaration and initial study are released for public review *would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur*, and (2) there is *no substantial evidence* in light of the whole record before the public agency that the project, as revised, *may* have a significant effect on the environment.[10]

3-7 (cont)

Courts have held that if "no EIR has been prepared for a nonexempt project, but substantial evidence in the record supports a fair argument that the project may result in significant adverse impacts, the proper remedy is to order preparation of an EIR."[11] The fair argument standard creates a "low threshold" favoring environmental review through an EIR, rather than through issuance of a negative

[8] See Pub. Resources Code § 21100.
[9] Pub. Resources Code §§ 21080(d), 21082.2(d); CEQA Guidelines §§ 15002(k)(3), 15064(f)(1), (h)(1); *Laurel Heights Improvement Assn. v. Regents of the Univ. of Cal.* (1993) 6 Cal.4th 1112, 1123; *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 75, 82; *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-151; *Quail Botanical Gardens Found., Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1601-1602.
[10] Pub. Resources Code § 21064.5 (emphasis added).
[11] See, e.g., *Communities for a Better Environment. v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 319-320

declaration.[12] An agency's decision not to require an EIR can be upheld only when there is no credible evidence to the contrary.[13]

"Substantial evidence" required to support a fair argument is defined as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached."[14] According to the CEQA Guidelines, when determining whether an EIR is required, the lead agency is required to apply the principles set forth in Section 15064, subdivision (f):

> [I]n marginal cases where it is not clear whether there is substantial evidence that a project may have a significant effect on the environment, the lead agency shall be guided by the following principle: If there is disagreement among expert opinion supported by facts over the significance of an effect on the environment, the Lead Agency shall treat the effect as significant and shall prepare an EIR.

3-7 (cont)

Furthermore, CEQA documents, including EIRs and MNDs, must mitigate significant impacts through measures that are "fully enforceable through permit conditions, agreements, or other legally binding instruments."[15] Deferring formulation of mitigation measures to post-approval studies is generally impermissible.[16] Mitigation measures adopted after Project approval deny the public the opportunity to comment on the Project as modified to mitigate impacts.[17] If identification of specific mitigation measures is impractical until a later stage in the Project, specific performance criteria must be articulated and further approvals

3-8

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[12] *Citizens Action to Serve All Students v. Thornley* (1990) 222 Cal.App.3d 748, 754.
[13] *Sierra Club v. County of Sonoma* (1992) 6 Cal.App.4th, 1307, 1318; see also *Friends of B Street v. City of Hayward* (1980) 106 Cal.App.3d 988, 1002 ("If there was substantial evidence that the proposed project might have a significant environmental impact, evidence to the contrary is not sufficient to support a decision to dispense with preparation of an EIR and adopt a negative declaration, because it could be 'fairly argued' that the project might have a significant environmental impact").
[14] CEQA Guidelines § 15384(a).
[15] CEQA Guidelines § 15126.4(a)(2).
[16] *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 308-309; Pub. Resources Code § 21061.
[17] *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1393; *Quail Botanical, supra*, 29 Cal.App.4th at p. 1604, fn. 5.

must be made contingent upon meeting these performance criteria.[18] Courts have held that simply requiring a project applicant to obtain a future report and then comply with the report's recommendations is insufficient to meet the standard for properly deferred mitigation.[19]

3-8 (cont)

With respect to this Project, the IS/MND fails to satisfy the basic purposes of CEQA. The County failed to adequately investigate, analyze, and disclose the Project's potentially significant impacts. Therefore, the County's conclusions that the Project will have less than significant air quality and public health impacts are unsupported.[20] Whereas the County lacks substantial evidence to support its conclusions, Dr. Fox and Ms. Owens provide substantial evidence that the Project may result in potentially significant public health impacts from construction emissions and potentially significant impacts to biological resources.[21] Therefore, a fair argument can be made that the Project may cause significant impacts requiring the preparation of an EIR.

3-9

III. THE IS/MND FAILS TO INCLUDE A COMPLETE PROJECT DESCRIPTION

The IS/MND does not meet CEQA's requirements because it fails to include a complete project description, rendering the entire analysis inadequate. Without a complete project description, the environmental analysis under CEQA will be impermissibly narrow, thus minimizing the Project's impacts and undercutting public review.[22]

CEQA places the burden of environmental investigation on the government rather than the public. Accordingly, a lead agency may not hide behind its failure to obtain a complete and accurate project description.[23] CEQA requires that the project description contained in a CEQA document that is circulated for public review contain sufficiently detailed information to permit a meaningful evaluation

3-10

[18] *Id.*
[19] *Id.*
[20] Pub. Resources Code § 21064.5; MND, pp. 31-36.
[21] *See* Fox Comments; Owens' Comments
[22] *See, e.g., Laurel Heights Improvement Assn. v. Regents of the Univ. of Cal.* (1988) 47 Cal.3d 376.
[23] *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 311.

and review of the potential environmental impacts of a proposed project.[24] California courts have repeatedly held that "an accurate, stable and finite project description is the sine qua non of an informative and legally sufficient [CEQA document]."[25] In contrast, an inaccurate or incomplete project description renders the analysis of environmental impacts inherently unreliable. Without a complete project description, the environmental analysis under CEQA will be impermissibly narrow, thus minimizing the project's impacts and undercutting public review.[26]

3-10 (cont)

A. The IS/MND Fails to Describe the Transportation of the New Turbine Blades to the Project Site

The Project consists of numerous large components, including 213-foot wind turbine blades.[27] However, the IS/MND is silent as to how these components will be transported to the Project site. Wind turbine blades cannot be manufactured on-site, thus requiring transport.[28] Furthermore, the nearest blade manufacturer to the Project site is in Colorado.[29] This means that the blades may have to travel over land, either a far distance from other states, or from a nearby port, such as Long Beach. Transportation of such long pieces of equipment is difficult, requiring careful planning to ensure they are routed through turns properly.[30] These large blades will require several diesel-powered trucks to move and may have to operate very slowly.[31]

3-11

Transporting large components of the Project has the potential to lead to serious impacts. Traffic could be severely delayed moving such long blades, especially if they are routed through existing congested traffic corridors, such as Los

[24] 14 Cal. Code Regs. § 15124 (hereafter "CEQA Guidelines").
[25] County of Inyo v. City of Los Angeles (3d Dist. 1977) 71 Cal.App.3d 185, 193.
[26] *See, e.g., Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376.
[27] IS/MND, at 2.
[28] *See* Next-Generation Wind Energy Technologies and their Environmental Implications, California Energy Commission (Oct. 29, 2018) *available at* https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-ERDD-01.
[29] Ryan Wiser and Mark Bolinger, 2017 Wind Technologies Market Report, United States Department of Energy, 12 (Aug. 2018) *available at* https://emp.lbl.gov/sites/default/files/2017_wind_technologies_market_report.pdf.
[30] Fox Comments, p. 11.
[31] Fox Comments, p. 11.

Angeles. The use of diesel engines could increase exposure of sensitive populations to Toxic Air Contaminants ("TACs"), which can lead to heightened cancer risks to those who live and work along the route.[32]

Depending on which route is selected, different homes and schools will be affected. Residents and school patrons may be required to modify their own schedules and practices to accommodate, or avoid the adverse effects of, the trucks in their neighborhood. The County must also analyze the impacts that each potential route will cause to the differently affected neighborhoods and must identify appropriate mitigation measures that will mitigate significant impacts to each neighborhood.

3-11 (cont)

The Memorandum responding to our November 26, 2018 comments ("Response Memorandum") admits that the IS/MND contains no analysis of traffic or air impacts beyond the Project site.[33] The Response Memorandum then assumes that standard haul trucks would be used and concludes the Project would not result in significant impacts on air quality, public health, or traffic.[34] This response misses the point of our comments. Because these blades are so large, standard haul trucks cannot move them to the Project site.[35] Different equipment, with potentially greater emissions, would have to be used.[36] The maneuvering of such large materials may result in lane closures or other transportation-adjusting methods to accommodate them.[37] The IS/MND does not consider the unique circumstances of this Project at all.[38] Further, given the limited sources of large wind turbine blades, the location of traffic and air quality impacts will be far beyond Highways 10 and 62, which are the only highways addressed in the IS/MND.

[32] Fox Comments, p. 11.
[33] Memorandum from Adam Poll and Michael Greene to Jay T. Olivas, (Nov. 27, 2018), p. 4 (*hereafter* Response Memo).
[34] Response Memo, p. 4.
[35] Fox Comments, p. 11.
[36] Fox Comments, p. 11.
[37] Fox Comments, p. 11.
[38] Fox Comments, p. 11.

B. The IS/MND Fails to Accurately Describe the Decommissioning of the Existing 291 Wind Turbines

The IS/MND discusses the decommissioning of existing wind turbines from the Project site, but does not disclose disposal of the existing wind turbines.[39] Cutting up of wind turbines can release hazardous fibers into the air, which can negatively impact public health.[40] The IS/MND fails to discuss where the blades will be cut up, what equipment will be used, and where material would be shipped for recycling.[41] Moreover, the IS/MND discusses recycling the blade material; however, the blade material is not suitable for recycling.[42] The IS/MND must accurately describe the decommissioning and disposal of the existing wind turbines.

The Response Memorandum attempts to address this issue by asserting that the materials that will be cut up on the Project site will be steel and glass only, and existing state and federal Occupational Safety and Health Administration ("OSHA") regulations would protect workers.[43] Dr. Fox notes that there is no Material Safety Data Sheet or chemical composition report in the record; therefore, there is no evidence to support the claims in the Response Memorandum that no release of methane or other volatile organic compounds would occur, or that the turbines will be recycled.[44] Instead, Dr. Fox provides substantial evidence through cited, published studies that show that turbine blades normally consist of materials that can result in releases of methane and other volatile organic compounds when cut, and are unrecyclable.[45] Additionally, the IS/MND does not identify specific details on applicable OSHA regulations and how they would protect workers and the environment from exposure.[46] 3-12

[39] Fox Comments, p. 8.
[40] Fox Comments, pp. 8-9.
[41] Fox Comments, pp. 8-9.
[42] Fox Comments, p. 9.
[43] Response Memo, pp. 4-5.
[44] Fox Response, pp. 8-9; Response Memo, pp. 4-5.
[45] Fox Response, p. 9.
[46] Fox Response, p. 9.

C. The IS/MND Fails to Adequately Describe the New Turbines to Be Installed on the Project Site

The IS/MND provides a potential maximum height for new turbines that can be installed, rather than what turbines are *actually* proposed to be installed, which makes any determination of impacts to birds and bats speculative at best.[47] Higher, wider wind turbine blades can lead to increased avian and mortality from the Project.[48] Some birds, such as Golden Eagles, fly in ranges that are higher than the wind turbines that are being replaced.[49] Should raptors be present at elevations where the proposed turbines are operating, but not at lower elevations where existing turbines are operating, a greater risk of collision and take for those species will occur.

The Memorandum that responds to our November 27, 2018 comments ("Bio Memorandum") suggests that higher turbines will not increase risks to eagles because "actual mortality at Shiloh IV indicates no eagle takes at all since the repowering with fewer taller turbines occurred."[50] The fact that no take has been observed at the Shiloh IV project post-construction does not support the claim that repowering decreased overall take at the site, since the data does not include the past six years.[51] Furthermore, the fact that there has not been documented take of Golden Eagles at one project in a different part of the state does not disprove the fact that the *risk* associated with taller turbines increases impacts to raptors.[52] 3-13

The Bio Memorandum also states that Ms. Owens' observations at the "Octotillo Wind Farm are simply inapposite since it was not a repowering project."[53] This statement misses the point of Ms. Owens' evidence, which was that raptors prefer flying ranges that put them in greater risk of collision with taller turbines.[54]

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[47] IS/MND, p. 2.; Owens' Comments, p. 2.
[48] Owens' Comments, pp. 2-3.
[49] Owens' Comments, p. 3.
[50] Memorandum from Collin Ramsey to Jay T. Olivas, (Nov 28, 2018), p. 1 (*hereafter* Bio Memo).
[51] Owens' Response, pp. 3-4.
[52] Owens' Response, pp. 4-5.
[53] Bio Memo, p. 1.
[54] Owens' Comments, p. 3.

Whether or not the project was a new project or a repowering project does not refute Ms. Owens' substantial evidence of collision risk posed by taller wind turbines.[55]

The Bio Memo asserts that comments regarding turbine specifications are irrelevant because the largest possible turbine size was assumed, and that there is no data that smaller turbines with a smaller rotor diameter would have a greater impact on birds.[56] This misstates the issue with the IS/MND, which is that no specifics on turbine size were provided, preventing accurate analysis by the public and decisionmakers as to the significance of Project impacts.[57] Because the IS/MND never attempted to calculate the amount of avian mortality from the proposed Project, nor compared that data with the baseline, then the assumption of the largest possible blades without any numbers of data does not further the analysis or provide information the public can use to assess the Project's potentially significant impacts.[58] 3-13 (cont)

Without an adequate description of the width and height, in addition to the length, of the turbines, impacts to biological resources cannot be determined. Since the Project description is incomplete, the IS/MND fails as an informational document as required by CEQA.

D. The Project Description is Not Complete Because the Project has Not Completed Joint Project Review as Required by the Coachella Valley Multiple Species Habitat Conservation Plan

The Coachella Valley Multiple Species Habitat Conservation Plan ("CVMSHCP") requires projects within its boundaries to undergo a Joint Project Review ("JPR") between the Coachella Valley Conservation Commission ("CVCC"), the United States Fish and Wildlife Service ("USFWS"), and California Department of Fish and Wildlife ("CDFW") in order to determine if the project can be approved consistent with the existing take permits provided to the plan.[59] 3-14

[55] Owens' Response, pp. 4-5.
[56] Bio Memo, p. 1.
[57] Owens' Response, pp. 1-2.
[58] Owens' Response, p. 2.
[59] Final Recirculated Coachella Valley Multiple Species Habitat Conservation Plan and Natural Community Conservation Plan (Sept. 2007), pp. 1-2-1-3 (*hereafter* "HCP").