

### GR-5 Biological Resources

Commenters expressed concern regarding potential impacts to biological resources as analyzed in the Campo Wind Project with Boulder Brush Facilities (Project) Draft Environmental Impact Report (EIR), including impacts to Quino checkerspot butterfly, eagles, other avian species, and bats. Potential impacts to these species, among others, have been adequately analyzed in the Draft EIR as presented in Chapter 2.3, Biological Resources, and the Project's Biological Resources Technical Report, which is included as Appendix D to the Draft EIR.

Several comments received referred to the potential “take” of species following Project implementation. “Take” refers to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct” (federal Endangered Species Act [ESA] Section 3[19]). Take authorization is provided by the U.S. Fish & Wildlife Service (USFWS) if a federally listed species would be impacted by the project.<sup>1</sup> In the context of biological resources, the purpose of the California Environmental Quality Act (CEQA) is not to analyze take of an endangered species; instead, the analysis under CEQA addresses whether a project will have a significant adverse impact to a species on a population basis and that all mitigation for those impacts are analyzed. The impact analysis by the County of San Diego (County) and the evaluation of effects on biological resources, including the species listed above, reflects this approach. Additionally, all methodologies employed to perform impact analyses as described in Chapter 2.3 of the Draft EIR and Appendix D to the Draft EIR were vetted by relevant resource agencies, including consultation with the U.S. Fish and Wildlife Service (USFWS) on March 12, 2018, October 10, 2018, and July 2, 2019, to discuss Quino checkerspot butterfly protocol surveys, survey methods for migratory birds and eagles, and Quino checkerspot butterfly modeling, respectively. Furthermore, this Project has received incidental take authorization for the Quino checkerspot butterfly through the Section 7 consultation process, as explained in detail below. Therefore, the Project's biological resources analyses satisfy the requirements of CEQA, are consistent with recommendations and protocols provided by applicable resource agencies and are compliant with the County's CEQA Guidelines regarding impact evaluations of biological resources. Details pertaining to the analyses of specific species of concern are provided below.

#### Quino Checkerspot Butterfly

Several commenters expressed concern regarding the adequacy of the impact analysis pertaining to the Quino checkerspot butterfly (*Euphydryas editha quino*) and the consistency of the impact analysis methodology with USFWS survey protocol, habitat assessment, host plant mapping and modeling, and analysis methodologies.

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<sup>1</sup> The California Department of Fish & Wildlife provides similar authorization under the California Endangered Species Act if a state-listed species would be impacted by a project. No California listed species require take authorization in the Boulder Brush Corridor.

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The Quino checkerspot butterfly is the only known federally listed species to occur within the Boulder Brush Corridor and the Campo Corridor. Due to the presence of and the potential Project impacts to this species, the USFWS is the consulting agency under the ESA for impacts to Quino checkerspot butterfly.

The County disagrees with the commenters' critiques of the impact analysis and methodologies employed related to Quino checkerspot butterfly. Full details of existing conditions, due diligence, impact analysis methodology, surveys conducted, species modeling, and impact analysis for the Quino checkerspot butterfly are provided in Chapter 2.3 and the Biological Resources Technical Report (Appendix D) of the Draft EIR. All survey methods and protocols, species modeling and impact analysis methodologies were conducted in coordination and consultation with the USFWS and the County to ensure adequacy and accuracy for disclosure in the Draft EIR.

The purpose of conducting analyses of impacts to biological resources under CEQA is to determine whether a project will have a significant impact on a species (the standard of significance under Appendix G) or whether the project will result in any biologically related mandatory findings of significance under CEQA Guidelines Section 15165. The purpose of CEQA is not to determine whether a project will result in take of a species, as that term is defined in the federal or state ESA. Thus, critiques about methodologies and survey protocols that are designed to establish whether a project will result in take of a species are not relevant to whether an EIR has adequately addressed significant environmental impacts to species under CEQA. This response nonetheless explains how the survey protocols for the Quino checkerspot butterfly were approved by USFWS for purposes of determining take under the ESA and how they were likewise more than adequate for determining the broader question of substantial adverse impact to the species under CEQA.

### *Surveys*

Dudek performed protocol-level surveys beginning in early 2018. On March 12, 2018, USFWS authorized Dudek to begin surveys late due to inclement weather conditions common in eastern San Diego County. This approach is consistent with the December 2014 USFWS Quino checkerspot butterfly survey protocol, which allows for modifications to the survey based on coordination with the USFWS. Additionally, the USFWS reserves the right to not accept survey results based on drought conditions or other factors. The 2018 focused Quino checkerspot butterfly surveys followed the 2014 USFWS protocol with the addition of an amendment included in the 2018 notification.<sup>2,3</sup> The approved amendment allowed surveys to begin the week of March 12,

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<sup>2</sup> Dudek. 2019. *2018 Focused Quino Checkerspot Butterfly Survey Report for the Campo Wind Project, Campo, San Diego County, California*. April 2, 2019.

<sup>3</sup> Porter, E. 2018. QCB Survey Notification. Email from E. Porter (USFWS) to P. Schuyler (Dudek), B. Ortega (Dudek), D. Stadlander (USFWS), and S. Love (USFWS). March 12, 2018.

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2018, to account for the location's higher elevation, generally colder conditions, and generally later start of Quino checkerspot butterfly emergence.

Similarly, the 2019 focused Quino checkerspot butterfly surveys followed the 2014 USFWS protocol with the exception of an USFWS-approved amendment discussed in the 2019 notification. The amendment allowed surveys to begin the week of March 11, 2019. Surveys were conducted over 10 weeks in 2018 and 9 weeks in 2019 per USFWS protocol. Minor and rare deviations occurred during the course of the survey effort as a result of various weather and access constraints.

Prior to performing focused Quino checkerspot butterfly surveys in 2018 and 2019, Dudek biologists conducted Quino checkerspot butterfly host plant mapping and a habitat assessment within approximately 564 acres within the Boulder Brush Corridor and 699 acres within the Campo Corridor in order to identify suitable habitat and exclude unsuitable habitat. Exclusion areas that were not surveyed were determined based on the 2014 USFWS survey protocol and consisted of developed areas and densely vegetated chaparral with tall shrubs forming closed canopies. Prior surveys were conducted within portions of the Campo Band of Diegueño Mission Indians Reservation (Reservation) Boundary, including areas within the Campo Corridor, for the Shu'Luuk Project by AECOM in 2012 that utilized a similar method when excluding areas for surveys.<sup>4</sup> Areas that were excluded only included habitat that was either excluded by both AECOM and Dudek or unique habitat assessment areas that were excluded by either AECOM or Dudek. Areas excluded by one entity but not the other were included in the model as potentially suitable habitat.

### *Habitat Modeling*

Dudek modeled potentially occupied Quino checkerspot butterfly habitat following parameters based on general industry guidance from USFWS:

- 200-meter buffer around Quino checkerspot butterfly locations
- 200-meter buffer around “significant” plant populations (i.e., > 20 individuals)
- Hilltops
- Ridgelines (centerline with 100-foot [31.2-meter] buffer)

As discussed in Section 3 of the Biological Resources Technical Report (Appendix D of the Draft EIR), potentially occupied habitat was modeled based on Quino checkerspot butterfly occurrence data and host plants observed by AECOM in 2010 on the Reservation (i.e., within the Campo Corridor) and supplemented by the Dudek studies in 2017 and 2018.<sup>5</sup> The 2018 surveys did not detect any host plants within the Quino checkerspot butterfly survey area (defined as the non-excluded areas that were surveyed during the 2018 and 2019 survey years). Quino checkerspot

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<sup>4</sup> AECOM. 2012. *Draft Environmental Impact Statement, Shu'luuk Wind Project*. December 27, 2012.

<sup>5</sup> AECOM 2012.

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butterfly populations vary annually based on a variety of factors, including rainfall, temperature, timing of rain events, and host plant growth patterns, among others. Low rainfall and other factors can cause larva to extend diapause and delay emergence. Lack of adult Quino checkerspot butterfly observations in one year may not equate to absence at a particular site in another year; therefore, potentially occupied habitat was originally modeled based on Quino checkerspot butterfly records and host plants observed in 2010.

After the model parameters were developed and preliminary results had been provided, the model and associated results were then presented to the USFWS on July 2, 2019, in connection with the biological opinion (BO) and incidental take authorization process, which, as explained above, is separate from the CEQA review process. Based on the feedback received from the USFWS on July 2, 2019, Dudek revised the analysis methods to include all Project components that occurred within 1 kilometer of any Quino checkerspot butterfly observation where suitable habitat occurred. In order to implement this parameter, a one-kilometer buffer was applied to all known (California Natural Diversity Database or USFWS) data points from the Project vicinity. Quino checkerspot butterfly suitable habitat was then identified where it overlapped the one-kilometer buffer. The acreage of these resulting areas was then calculated. Areas that were excluded only included habitat that was either excluded by both AECOM and Dudek or unique habitat assessment areas that were excluded by either AECOM or Dudek. As stated previously, areas excluded by one entity but not the other were included in the model as potentially suitable habitat. The final iteration of the model resulted in approximately 55.5 acres of suitable, potentially occupied habitat within the Boulder Brush Corridor and 277.1 acres of suitable, potentially occupied habitat within the Campo Corridor that would be impacted and for which mitigation would be provided.

These modeling methodology revisions associated with the incidental take authorization process conducted with the USFWS, which were implemented based on feedback received from the USFWS on July 2, 2019, for purposes of determining take of the species under the ESA, did not result in substantial new information, did not alter the significance conclusions originally disclosed in the Draft Environmental Impact Statement (EIS) prepared for the Project by the Bureau of Indian Affairs (BIA), and did not result in new mitigation not previously identified in the Draft EIS. The modeling revisions also did not have any impact on the County's conclusions about substantial adverse impacts to the species under CEQA. The modeling methodology and impact analysis prepared as part of the Draft EIS for the BIA's review under the National Environmental Policy Act (NEPA) and the Draft EIR for the County's review under CEQA were appropriate and sufficient for determining significance of impacts under both NEPA and CEQA. The Draft EIR concluded that the impacts were potentially significant but could be mitigated to a less-than-significant level. These conclusions are unchanged by the revisions in methodology associated with the BO and incidental take authorization process conducted with the USFWS. Mitigation measures M-BI-1 (Boulder Brush Facilities) and M-BI-A (Campo Wind Facilities) of the Draft

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EIR would mitigate permanent direct impacts to Quino checkerspot butterfly habitat per the stipulations identified in the BO, as described below.

Habitat modeling identified permanent direct impacts to Quino habitat within the Boulder Brush Corridor and the Campo Corridor, a portion of which is considered occupied based on the 2019 Quino checkerspot butterfly observations. Permanent direct impacts resulting from the Boulder Brush Facilities would be mitigated to less than significant through implementation of mitigation measure M-BI-1. Campo Wind Facilities impacts would be mitigated to less than significant through implementation of M-BI-A. M-BI-1 and M-BI-A describe the Section 7 consultation process with the USFWS. Further M-BI-1 identifies the conservation measures required including, off-site mitigation for permanent impacts to Quino checkerspot butterfly habitat, avoidance of hilltopping habitat, fencing and signage around occupied Quino checkerspot butterfly habitat, and working in suitable habitat areas when the adult and larval activity is low. The Section 7 consultation process is discussed below.

### *Section 7 Consultation Process and Biological Opinion*

Section 7 of the ESA requires federal agencies to ensure that their actions do not jeopardize the continued existence of listed species. To comply with Section 7, the consulting federal agency or its designated non-federal representative must review the proposed Project for potential impacts to federally protected species. Informal consultation provides an opportunity for the action agency and the USFWS to explore ways to modify the action to reduce or remove adverse effects to the species or critical habitat. Formal consultation under Section 7 is a process in which the USFWS assesses the action's potential to jeopardize the listed species, to result in the destruction or adverse modification of critical habitat, or to result in incidental take of a listed species. This assessment is typically conducted through preparation of a Biological Assessment (BA) by the lead agency with discretionary approval over the project, which is then reviewed by the USFWS. Formal consultation concludes when the USFWS issues a BO. For the purposes of Section 7, the "action area" means all areas to be affected directly or indirectly by the proposed action.<sup>6</sup>

A BA was prepared for the Project pursuant to the ESA to evaluate the potential effects of the proposed Project on ESA-listed species that may occur in the Campo Corridor and the Boulder Brush Corridor, specifically Quino checkerspot butterfly. The information provided in the BA was prepared in accordance with legal requirements set forth under Section 7 of the ESA (16 USC § 1536[c]), and follows the standards set forth in the United States Fish and Wildlife Service (USFWS) Endangered

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<sup>6</sup> USFWS (U.S. Fish and Wildlife Service). 2020a. "The Consultation Process in Brief." Accessed July 10, 2020. <https://www.fws.gov/midwest/endangered/section7/s7process/s7glossary.html>.

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Species Consultation Handbook.<sup>7</sup> The USFWS approved the BA prepared by Dudek in August 2019. The BA is available as Appendix P to the Final EIR.

A BO is prepared by the USFWS. The USFWS issued a BO for the Project on January 16, 2020.<sup>8</sup> The BO is included as Attachment 6 to the BIA's Record of Decision (available at [www.CampoWind.com](http://www.CampoWind.com)) and is available on the USFWS website (<https://ecos.fws.gov/tails/pub/document/15387863>).

Using the USFWS-directed revised modeling (included in the BA) and impact analysis, it was determined that the Project would impact approximately 332.62 acres of potentially occupied Quino checkerspot butterfly habitat within the Boulder Brush Corridor and the Campo Wind Corridor. Several conservation measures (CMs) are included in, and required by, the BO, including CM-1: Offsite Land Conservation, CM-2: Limiting Impacts to Occupied Habitat, CM-3: Avoidance of Vehicle Strikes, CM-4: Revegetation of Temporary Impacts, CM-5: Weed Control, CM-6: Trash Control, CM-7: Dust Control, and CM-8: Fire Prevention. The conservation measures as included in, and required by, the BO are as follows:

### ***CM-1 Offsite Land Conservation***

To offset loss of Quino habitat and protect the viability of Quino in the Project vicinity, the Applicant will acquire land at a minimum 1:1 ratio of conservation to direct and indirect impacts as defined in the biological assessment. The conservation site will be approved by the Service and will minimally be in escrow by the time operations commence (i.e., wind turbines are operational and sale of energy occurs per a power purchase agreement). Lands within the eastern San Diego County vicinity (specifically in and around the Southeast San Diego and eastern Southwest San Diego Recovery Units) will be prioritized, and lands will be considered occupied following the definition of occupied habitat used in this analysis (i.e., within a 1 kilometer buffer of known Quino locations) or within 2 kilometers between known Quino clusters will be prioritized. First priority will be given to land within the Campo Core Occurrence Complex defined in the draft Quino recovery plan amendment (Service 2019).

As described in section 7.3.1 of the Draft EIR, pre-construction surveys for Quino host plants will be conducted during the spring and summer of 2020 within an approximately 2.6-acre portion of the Boulder Brush development footprint that

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<sup>7</sup> USFWS and NMFS 1998. "Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act." In *Endangered Species Consultation Handbook*. March 1998.

<sup>8</sup> USFWS. 2020b. "Formal Section 7 Consultation for the Wind and Solar Resource Lease on the Campo Band of Diegueno Mission Indians Reservation, San Diego County, California." January 16, 2020. <https://ecos.fws.gov/tails/pub/document/15387863>.

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has not been surveyed. If any Quino host plants are found, the Quino habitat model will be updated, and consultation will be reinitiated under which additional habitat acquisition maybe required.

Upon acquisition of the conservation site, the Applicant will prepare a Land Management Plan (LMP) for Service approval. The LMP must be provided and approved within 6 months of securing the mitigation site (i.e., completion of escrow). The LMP will minimally include the following components: goals, objectives, and strategies; vegetation management (mapping, targets, non-native plants, weed control, enhancements if any); wildlife and sensitive plant surveys (general inventory and Quino surveys); property management (access controls, roads, fire plan, cultural resource management, trash removal); communications, public involvement, scientific uses, and data sharing; program administration and reporting (LMP implementation, LMP review/revision); a Property Analysis Record (PAR) including administrative costs, contingency funds, and 3-year start-up period funding. The proposed land manager will be given the opportunity to participate in development of the LMP, including the PAR. Funding of the LMP will include a long-term endowment intended to grow for 3 years prior to use and a short-term endowment intended to cover immediate management during the initial 3-year period.

### ***CM-2 Limiting Impacts to Occupied Habitat***

To prevent unnecessary intrusion into occupied Quino habitat, construction fencing and/or signage will be installed where impacts will occur immediately adjacent to Quino Focal Areas, defined as within a 200-meter radius around host plant concentrations or within 1 kilometer of known Quino observations.

Following construction, permanent visible markers will demarcate the border between Project facilities and Quino Focal Areas. Markers will be placed every 30 feet along the border, and signage will be placed every 300 feet or to the extent required, depending on the length of the border. A 5-foot buffer, cleared of vegetation, will be maintained between Project facilities and any Quino Focal Area. If operations and maintenance activities require disturbance in previously undisturbed areas within Quino Focal Areas, coordination with Service will be required prior to initiation of these activities.

A Project biologist(s) will be designated by the Applicant and approved by the Service for both sites, as well as the Tribe for work on the Reservation and by the County for work on Boulder Brush. The Campo Environmental Protection Agency will enforce the duties of the Project biologist for all work conducted on the

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Reservation. The Applicant will submit the names, documented experience, any relevant permit numbers, and resumes for the Project biologist(s) to Service and the Tribe for approval prior to initiation of construction. The Project biologist(s) will be responsible for the following:

- Providing training to all construction workers;
- Reviewing and/or designating the construction area in the field with the construction contractor in accordance with the final grading plan prior to clearing, grubbing, or grading;
- Conducting a field review of the staking to be set by the professional surveyor, designating the limits of all construction activity prior to clearing, grubbing, or grading;
- Regularly monitoring construction activities to verify that construction is proceeding in compliance with all permit requirements specific to biological resources;
- Maintaining communication with the appropriate personnel (i.e., construction Project manager, and resident engineer) so that issues relating to biological resources are appropriately and lawfully managed; and
- Reporting any noncompliance issues to the BIA, resident engineer, the Service, and the Tribe.

### *CM-3 Avoidance of Vehicle Strikes*

To minimize the potential for vehicle collisions, vehicle speeds during construction and operations will not exceed 15 miles per hour (mph) from February 15 through May 15, when Quino are most likely to be in the adult stage and in flight. New Project access roads in Quino habitat will have 15 mph speed limit, and signs will be posted indicating no off highway vehicle (OHV) use.

### *CM-4 Revegetation of Temporary Impacts*

Disturbed areas that are not required to be clear for operations and maintenance activities will be revegetated or stabilized using soil binders within 90 days of construction completion.

Revegetated areas will use native plant species found within adjacent habitats. Locally available seed will be used. Use of native vegetation will minimize intrusion by non-native species that may displace Quino host and nectar plants as well as alter native vegetation structure.



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Revegetation will provide a minimum of 40 percent cover of native species within a 2 year time frame. If 40 percent cover of native species is not achieved within 2 years, adaptive management measures will be pursued until 40 percent cover of native species is achieved. This is the only success criterion required for revegetation of temporary impacts. So, it is unclear whether temporarily impacted areas will be successfully restored to Quino habitat.

To maximize benefits of revegetation for the Quino within Quino Focal Areas, the Applicant will coordinate with the Service to determine the appropriate seed mix once it is determined precisely where revegetation will occur. Seed mixes may include Quino host plants throughout revegetation area areas, Quino host plants beyond a predetermined buffer from ongoing Project impacts, or no Quino host plants to discourage Quino occupancy and minimize future impacts. The seed mix that most benefits Quino depends on the location of the restoration relative to specific Project operations (or non-Project related operations).

When the Campo Wind Facilities are decommissioned, a decommissioning plan will be prepared and implemented. The decommissioning plan will include revegetation of the previously-impacted areas. Soil will be revegetated with native plant species found within adjacent habitats and locally available seed will be used. By revegetating with native plants, suitable Quino habitat may be recovered within the Project Area following decommissioning. Revegetation shall provide a minimum of 40 percent cover of plant species native to adjacent habitats within 2 years. If 40 percent cover of native species is not achieved within 2 years, adaptive management measures will be pursued until 40 percent cover of native species is achieved.

When the Boulder Brush facilities are decommissioned, soil will be stabilized and revegetated with plant species characteristic of native species within adjacent habitats. Locally available seed will be used.

### ***CM-5 Weed Control***

To minimize spread of non-native invasive plant species, no planting or seeding of invasive plant species [per the most recent version of the California Invasive Plant Council's (CIPC) California Invasive Plant Inventory for the Project region] will be permitted. The County will provide a list of County-approved plants for revegetation within Boulder Brush that will minimally comply with CIPC standards.

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A weed management plan will be developed and approved by the Tribe prior to the commencement of construction activities. The Service will be given the opportunity to review a draft of the weed management plan, but the Tribe has ultimate approval authority for the weed control plan. The plan will include the following: (1) weed inventory and risk assessment; (2) identification of problem areas and necessary preventative measures; (3) annual surveys within the temporary impact areas to document weed patches for two years post construction; (4) success standards, such as temporarily impacted areas have no more than a 10 percent increase in weed species; adaptive management measures; and (6) reporting.

### ***CM-6 Trash Control***

To avoid attracting wildlife to the site, including potential Quino predators, fully covered trash receptacles that are animal-proof and weather-proof will be installed and used by the construction contractor(s) to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Littering will be prohibited, and trash will be removed from construction areas daily.

### ***CM-7 Dust Control***

Dust can impact Quino by reducing digestibility of host plants and blocking spiracles (breathing organs). Therefore, dust control measures will reduce impacts to Quino. The Applicant will develop a fugitive dust control plan in compliance with San Diego County Air Pollution Control Regulations to reduce particulate matter less than 10 microns (PM10) and fine particulate matter less than 2.5 microns (PM2.5) emissions during construction and decommissioning. The following dust control measures will be implemented:

1. All onsite unpaved roads will be effectively stabilized using soil stabilizers that can be determined to be as efficient, or more efficient, for fugitive dust control than California Air Resources Board-approved soil stabilizers, and will not increase any other environmental impacts including loss of vegetation;
2. All material excavated or graded shall be sufficiently watered to prevent excessive dust. Watering will occur as needed with complete coverage of disturbed areas;
3. All haul trucks hauling soil, sand, and other loose materials will be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions);
4. Soil loads will be kept below 18 inches of the freeboard of the truck;

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5. Drop heights will be minimized when loaders dump soil into trucks; and
6. Traffic speeds on unpaved roads will be limited to 15 miles per hour.

### *CM-8 Fire Prevention*

Although fire is a natural component of Quino habitat, artificially frequent fires can severely degrade habitat quality. Therefore, minimization of Project-related ignitions and spread of wildfires will benefit the Quino. In addition to fuel modification zones included in the Project, a Campo Wind Project Fire Protection Plan will be prepared and implemented in conjunction with development of the Project.

### *Biological Opinion Conclusion*

The USFWS determined the following conclusion:<sup>9</sup>

After reviewing the current status of the Quino, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the proposed project is not likely to jeopardize the continued existence of the Quino. We base this conclusion on the following:

1. Although Quino distribution has declined throughout southern California, extant populations remain in Riverside and San Diego counties and northern Baja California, Mexico;
2. Loss or degradation of habitat within 332.6 acres within the 1,024 acres of occupied habitat within the action area will be generally diffuse and minor in any given area;
3. The highest known concentration of Quino within the vicinity of the action area will be avoided by the project;
4. Quino within and surrounding the action area will continue to function as part of a larger metapopulation(s) but at lower levels;
5. Conservation of a large block of occupied habitat with Quino-specific habitat management will likely augment the contribution of Quino within the conservation area to local metapopulation(s); and
6. With implementation of the conservation measures, the proposed action is not anticipated to result in an appreciable reduction in the numbers, reproduction, or distribution of Quino in the action area or range-wide.

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<sup>9</sup> USFWS 2020b.

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In summary, impacts to Quino checkerspot butterfly are appropriately analyzed in the Chapter 2.3 and the Biological Resources Technical Report (Appendix D to the Draft EIR). In addition, impacts are also appropriately analyzed in the BA as part of the Section 7 consultation process with USFWS. Comments regarding Quino impacts did not raise new information not previously addressed in the Draft EIR, or BA, nor did comments identify deficiencies in the Draft EIR analysis. Therefore, no modifications to the Draft EIR biological resources analysis regarding Quino checkerspot butterfly are warranted.

### *Cumulative Analysis – Importance of Quino Checkerspot Butterfly Habitat*

The Boulder Brush Corridor does not overlap with critical habitat for Quino checkerspot butterfly; in fact, critical habitat for this species only occurs south of Interstate 8 in this portion of the County. The USFWS does not designate critical habitat or recovery units on Tribal lands; however, the site is directly adjacent to Campo Core and Jacumba Core populations and the associated recovery areas. There are abundant remaining Quino checkerspot butterfly habitat both on the Tribal lands and in the adjacent Campo and Jacumba Core population areas, which is enough to warrant a less-than-significant finding regarding cumulative effects on Quino checkerspot butterfly. This is further supported by the finding from the USFWS within their BO to the BIA.

### **Golden and Bald Eagles**

Multiple comments stated that the Draft EIR fails to meaningfully analyze impacts to golden eagles. The Draft EIR includes a complete and detailed analysis for impacts to golden eagles, which can be found in Chapter 2.3 and the Biological Resources Technical Report (Appendix D to the Draft EIR).

To evaluate potential Project effects on golden eagles (*Aquila chrysaetos*) and bald eagles (*Haliaeetus leucocephalus*) (generically discussed as “eagles”), the Draft EIR used the Eagle Conservation Plan Guidance Module 1–Land-Based Wind Energy Version 2 and the USFWS Land-Based Wind Energy Guidelines.<sup>10,11</sup> These guidelines were used to inform analysis and study design and to facilitate discussion with the USFWS to identify potential eagle mortality risk posed by a wind energy project and associated powerlines in this location. The results of this process were used to help determine whether an eagle take permit is appropriate.

Dudek coordinated consultation with USFWS to confirm the appropriate methodology, data sets, and industry-standard practices to be used for assessing Project effects on eagles. Methods confirmed with USFWS for use on other recent wind energy projects in California were utilized in order to gather pre-project data to evaluate the need for an eagle take permit. Survey methods

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<sup>10</sup> USFWS 2013. “Eagle Conservation Plan Guidance Module 1–Land-Based Wind Energy Version 2.” April 2013. Accessed from <https://www.fws.gov/migratorybirds/pdf/management/eagleconservationplanguidance.pdf>

<sup>11</sup> USFWS 2012. “U.S. Fish and Wildlife Service Land-Based wind Energy Guidelines.” March 23, 2012. Accessed from [https://www.fws.gov/ecological-services/es-library/pdfs/WEG\\_final.pdf](https://www.fws.gov/ecological-services/es-library/pdfs/WEG_final.pdf)

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for migratory birds and eagles were disclosed to, and approved by, USFWS on October 10, 2018. USFWS did not request any modifications to the survey methods nor were additional surveys requested. All-day eagle-specific migration surveys were performed during fall 2017 and 2018, and year-round 30-minute point count surveys were performed beginning in September 2017, as discussed in Section 3.3 of the Biological Resources Technical Report included as Appendix D to the Draft EIR. The 30-minute point counts were in excess of what was requested by the USFWS.

Regarding eagle nest surveys, it was not necessary to conduct eagle nest surveys for the purpose of analyzing impacts to eagles under CEQA because valid and vetted eagle nest survey data was reviewed and analyzed to determine the potential loss of habitat for eagle nesting. The methodology and data utilized for eagle surveys and the associated CEQA impact analysis were developed in coordination with USFWS and have been vetted by industry and field experts, and the analysis for loss of habitat addresses the County thresholds. Therefore, as an agency-approved methodology was appropriately followed, the analysis adequately analyzes impacts to eagles, including eagle nesting, in the Draft EIR.

The Draft EIR identifies a significant impact to the loss of golden eagle foraging habitat (Impact BI-26). Mitigation measure M-BI-5 would reduce those impacts to less than significant (See Chapter 2.3, Section 2.3.7, of the Final EIR). The following vegetation communities are considered suitable raptor foraging habitat within the Boulder Brush Corridor: big sagebrush scrub, emergent wetland, disturbed habitat, granitic chamise chaparral, granitic northern mixed chaparral, montane buckwheat scrub, red shank chaparral, semi-desert chaparral, wildflower field, unvegetated stream channel, southern arroyo willow riparian forest, coast live oak woodland, disturbed habitat, emergent wetland, freshwater marsh, mulefat scrub, non-native grassland, non-native grassland broadleaf-dominated, scrub oak chaparral, southern coast live oak riparian forest, southern willow scrub, upper Sonoran subshrub scrub, unvegetated stream channel, and valley Sacaton grassland.

The required habitat mitigation of 332.62 acres for quino checkerspot would provide more than the 69 acres (69.8 acres) of suitable eagle foraging habitat or general raptor foraging habitat (130.8 acres that includes the subset of eagle foraging habitat) that would be impacted. Due to the vicinity and vegetation communities that are likely to support quino checkerspot, they are also suitable for raptor (eagle) foraging.

In terms of risk of avian electrocution, electrocution is also of limited risk due to the type of infrastructure and wiring protections proposed for the Project and the Project's required compliance with Avian Power Line Interaction Committee (APLIC) standards. The effects related to potential bird collisions and electrocution are addressed in Chapter 2.3 and the Biological Resources Technical Report (Appendix D) of the Draft EIR. Additionally, mitigation measure M-BI-8 for the Boulder Brush Facilities and M-BI-B for the Campo Wind Facilities include measures to reduce effects to birds, including from collisions or electrocution. Moreover, M-BI-9 for the Boulder Brush Facilities requires all large animal carcasses incidentally found within or adjacent to the development footprint to be removed from the Boulder Brush Corridor to prevent attraction of carrion-consuming birds of prey.

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In summary, it was determined that the Project would have a less-than-significant impact to golden eagles based on impact to suitable habitat, adherence to the Eagle Conservation Plan Guidance Module 1–Land-Based Wind Energy Version 2 and the USFWS Land-Based Wind Energy Guidelines, and compliance with APLIC standards.<sup>12,13</sup> Additionally, consultation with USFWS was undertaken to confirm the appropriate methodology, data sets, and industry-standard practices to be used for assessing Project effects on eagles. Therefore, the Draft EIR includes an adequate evaluation of impacts to eagles. Comments regarding eagles did not raise new information not previously addressed in the Draft EIR, nor did comments identify deficiencies in the Draft EIR analysis. Therefore, no modifications to the Draft EIR biological resources analysis regarding eagles are warranted.

### Avian Species and Bats

#### *Potential Impacts to Avian Species from Wind Turbines*

Several commenters expressed concerns regarding impacts to avian species, including impacts from wind turbines. The Project proposes up to 60 wind turbines on the Reservation; no turbines are proposed on private lands under the County’s land use jurisdiction. To assess potential impacts to avian species, point count surveys were conducted as discussed below.

Dudek conducted weekly 30-minute point count surveys between September 2017 and July 2019 within the Boulder Brush Corridor and Campo Corridor. Permanent and geo-referenced count locations were established a minimum of 2,625 feet (800 meters) apart, with an attempt to maintain coverage over the entire anticipated wind turbine and infrastructure area. Based on the point count surveys and 660 hours of total survey time, one juvenile golden eagle was observed for 2 minutes within the Campo Corridor. Using the Draft USFWS Collision Fatality Model, this results in a prediction of one eagle fatality occurring every 8 years (80% confidence interval) with a 60-turbine design. These conclusions are consistent with the findings of the Draft EIR and there would be no additional impacts anticipated.

Overall, 85 identifiable avian species were observed during 30-minute point count surveys within the Campo Corridor. The majority of individuals observed included crows and allies (42%), perching birds (41%), and raptors (12%). Of 7,999 individuals observed, approximately 25% (2,002 individuals) were detected flying at turbine blade heights proposed for the wind turbines (i.e., within the rotor swept zone, 40 meters to 179 meters above the ground). Of the observations within the rotor swept zone, raptors, crows, and allies occurred with the most frequency. Red-tailed hawks (*Buteo jamaicensis*), turkey vultures (*Cathartes aura*), and common ravens (*Corvus corax*) were the most numerous species of these groups. These results suggest that, due to their relative abundance and occurrence within the rotor swept zone, these three species have the

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<sup>12</sup> USFWS 2012.

<sup>13</sup> USFWS 2013.

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greatest risk of collision with Project wind turbines. Of these three species, only the turkey vulture is a special-status species. It should be noted that although these three species were found to be at greatest risk of collisions, many species were observed within the Campo Corridor, and collision is possible with any of the species traversing the Project Site. However, based on numbers and flight behavior, collision would be most likely with the species that typically fly within the rotor swept zone.

Spring and fall migration periods also showed high numbers of individual birds occurring throughout the Campo Corridor and Boulder Brush Corridor. As a result, there is a possibility of a greater number of collisions with Project wind turbines during these periods, and post-construction monitoring should consider more survey efforts to identify any casualties during these periods. In addition, the data shows that avian use and species richness was generally distributed throughout the Project Site and higher use values were not shown to be particular to any cluster or isolated group of Project wind turbine locations.

Regarding use of post-construction avian monitoring reports from the nearby Tule Wind Project, the Tule Wind Project Post-Construction Fatality Monitoring Study (Tule Wind PCM) provides results of the first year of operations monitoring (August 2018 to August 2019) and contains no unexpected or unusual findings about the project's impacts to birds and bats. The Tule Wind PCM generally concludes that bird and bat mortalities due to Tule Wind operations are average and consistent with fatality rates in the vicinity where landscape and land use are similar. In fact, actual bird and bat mortality was generally less than what was predicted for Tule Wind operations in the East County Substation, Tule Wind, and Energia Sierra Juarez Gen-Tie Projects EIR/EIS (Tule EIR/EIS). The Tule EIR/EIS found that predicted mortality to birds and bats would be less than significant with mitigation, except for golden eagles, for which impacts were found to be significant and unavoidable. Post-construction monitoring at the Tule Wind Project found fewer mortalities of raptors and bats than predicted and no mortalities of golden eagles. Therefore, monitoring results from the Tule Wind operations do not change any of the conclusions in the DEIR about this Project's bird and bat impacts.

### ***Potential Impacts to Avian Species from Boulder Brush Facilities and Other Project Components***

As stated in the Draft EIR, migrating bird species would be at risk for electrocution from the overhead power lines and/or collisions with poles and structures (Impact W-4). The Boulder Brush Facilities would ensure that all transmission towers and lines are designed to conform to APLIC standards (M-BI-8). Impacts to avian species would be reduced to less than significant with implementation of M-BI-8 (conformance to APLIC standards for transmission pole and power line design) and M-BI-B (avian-specific avoidance, minimization, and mitigation measures). The Boulder Brush Facilities shall implement recommendations by the APLIC, which will protect raptors and other birds from electrocution. These measures are sufficient to protect even the largest birds that may perch or roost on transmission lines or towers from electrocution. Specifically, these

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measures will include guidance on proper pole and crossmember dimensions, phasing, and insulator design and dimensions to preclude wire to wire contact with a goal of providing 150 centimeters of separation between energized conductors and energized hardware and ground wire. No additional impacts to avian species beyond what was analyzed in the Draft EIR are anticipated and the significance conclusions would not change.

Impacts to avian species are accurately and sufficiently analyzed in the Chapter 2.3 of the and the Biological Resources Technical Report (Appendix D) of the EIR, as clarified with comment responses in the Final EIR. Comments regarding avian species impacts did not raise new information not previously addressed in the Draft EIR or identify deficiencies in the Draft EIR analysis. No modifications to the Draft EIR analysis of avian species are warranted.

### *Potential Impacts to Bats*

Multiple comments expressed concern regarding the studies and analyses performed to identify potential impacts on bats. In terms of the impact analysis for bats, the wind turbines were considered to present a potential risk to bats for both collision and barotrauma impacts (i.e., impacts from rapid pressure fluctuations that can rupture internal structures in the body and cause internal bleeding and, potentially, death).<sup>14</sup> The Final EIR has been revised in Section 2.3.3.2 to clarify this point. Potential impacts from electrocution to individual bats is less than significant and described below.

Existing bat data collected as part of previous survey efforts was reviewed and analyzed relative to the Project. These previous survey efforts included bat surveys for the Shu’Luuk Wind project,<sup>15</sup> Jewell Valley Wind project (part of which is adjacent to the Campo Corridor to the east as well as overlapping with the current Boulder Brush Corridor) (see Appendix D to the Draft EIR), and the adjacent Tule Wind project.<sup>16,17</sup> These surveys primarily relied on passive acoustical monitoring through AnaBat SD1 or SD2 detectors. Review of this data indicates that between 13 and 22 bat species were observed in the region. In addition, the majority of detections occurred at the lower Met microphones, where collision with turbine blades would not occur, rather than at higher microphones. No maternity roosts or habitat (e.g., caves or mines) to support large roost sites are known to occur in the Project Site or nearby. The data collected for the Shu’luuk project found limited non-maternal roost locations potentially supporting one or few animals only. The Tule Wind

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<sup>14</sup> NREL (National Renewable Energy Laboratory). 2018. *Estimating the Likelihood of Bat Barotrauma using Computational Simulations and Analytical Calculations*. Prepared by M. Lawson, S. Jenne, and R. Thresher. Golden, Colorado: NREL. March 20, 2018.

<sup>15</sup> AECOM. 2012. *Draft Environmental Impact Statement, Shu’luuk Wind Project*. December 27, 2012

<sup>16</sup> Gruver, J., K. Bay, M. Sonnenberg, and E. Baumgartner. 2011. *Bat Acoustic Studies for the Tule Wind Resource Area. San Diego, California. Final Report: September 2008 – November 2010*. Prepared by Western EcoSystems Technology, Inc. (WEST), Cheyenne, Wyoming.

<sup>17</sup> Ocotillo Express LLC. 2012. *Avian and Bat Protection Plan for the Ocotillo Wind Energy Facility*. <https://tethys.pnnl.gov/publications/avian-and-bat-protection-plan-ocotillo-wind-energy-facility>.



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project found only one horizontal mine shaft that had potential to support roosting bats, and it is located 1 mile from Project turbine locations. A total of 76 turbine locations were analyzed; however, a maximum of 60 turbines as contemplated under the Campo Lease would be constructed.

The National Renewable Energy Laboratory conducted one of the few studies to attempt to analyze actual risk related to the barotrauma hypothesis and they concluded that (1) the pressure drop on the suction side of the blade was a factor of four less than the lethality threshold for rats, (2) the low-pressure region over the blade is highly localized, and (3) the minimum pressure in the tip vortex is a factor of three less than the lethality threshold for rats.<sup>18</sup> While the actual relationship between rat thresholds and bat thresholds is not known, they seem to be an equivalent surrogate, and the conclusion was that it seemed unlikely that barotrauma is a significant contributor to turbine-related bat deaths. Additionally, because of the type of turbine infrastructure and turbine wiring protections, electrocution is also of limited risk.

Regarding the potential relative risk of collision for bats, a number of factors were considered in the analysis provided in Chapter 2.3 and the Biological Resources Technical Report (Appendix D) of the Draft EIR). For one, the abundance of bats within and adjacent to the Campo Corridor is low when compared to other habitat types and regions. In addition, the previous data sets collected for the Shu’Luuk and Jewell Valley projects showed the majority of the bat activity occurred around the lower microphone on the Met tower (out of turbine blade striking range), which is placed 15 feet off the ground. The acoustical bat results indicate that the activity at the higher microphone (which captures bats that tend to fly higher) was lower when compared to the lower microphone. Thus, most species of bats are at minimal risk of adverse encounters with wind turbines. The overall magnitude of bat usage within the biological study area is significantly lower than any locations studied that contain attractant features (e.g., dense riparian habitat, open water). This suggests that the risk for bat collisions with Project turbines is low when taking into account the overall low abundance of bats in the area and lower abundance of high-flying bats.

Regarding the attraction of bats to lighting, the California Energy Commission notes that bats can be more attracted to areas with strong lights because of the increased insect prey availability and hypothesized that some observed mortalities may have been generated by the presence of strong lights in the vicinity of roost sites and wind turbines.<sup>19</sup> They go on to state that there is no evidence that aviation lighting associated with wind turbines contributes to bat mortality.<sup>20</sup> No turbines

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<sup>18</sup> NREL 2018.

<sup>19</sup> CEC (California Energy Commission). 2013. *Bird and Bat Movement Patterns and Mortality at the Montezuma Hills Wind Resource Area*. Publication Number CEC-500-2013-015. Prepared by D.S. Johnston, J.A. Howell, S.B. Terrill, N. Thorngate, J. Castle, J.P. Smith (H.T. Harvey & Associates), T.J. Mabee, J.H. Plissner, N.A. Schwab, P.M. Sanzenbacher, and C.M. Grinnell (ABR Inc.).

<sup>20</sup> Kunz et al. 2007, as cited in CEC 2013. *Bird and Bat Movement Patterns and Mortality at the Montezuma Hills Wind Resource Area*. Publication Number CEC-500-2013-015. Prepared by D.S. Johnston, J.A. Howell, S.B. Terrill, N. Thorngate, J. Castle, J.P. Smith (H.T. Harvey & Associates), T.J. Mabee, J.H. Plissner, N.A. Schwab, P.M. Sanzenbacher, and C.M. Grinnell (ABR Inc.).

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would be located closer than 0.25 miles from an On-Reservation receptor and 0.2 miles from an Off-Reservation receptor, so the possibility of resident-induced lighting attractants in proximity to turbines are reduced; therefore, that particular attractant would not draw bats into the Project Area. Thus, the possibility of resident-induced lighting attractants would be reduced.

Additionally, impacts to bats would be reduced to less than significant with implementation of M-BI-8 (conformance to APLIC standards for transmission pole and power line design) and M-BI-B, Bird and Bat Conservation Strategy (avian-specific avoidance, minimization, and mitigation measures). As discussed in Chapter 2.3 of the Draft EIR, the abundance of bats adjacent to the Campo Corridor is low when compared to other habitat types and regions. Thus, most species of bats are at minimal risk of adverse encounters with wind turbines. Direct impacts to bats within the Campo Corridor could result in mortality or injury due to collisions at wind turbines. However, potential effects of the Project on the meta-community of bats in the region, including those species known to be susceptible to collision with turbine blades, would be negligible, and less than significant. All the structures on Boulder Brush would be static, and because bats use echolocation to identify and avoid objects, it is unlikely the Boulder Brush Facilities would result in collision or electrocution impacts. Potential impacts from electrocution to individual bats would not result in the greater population of any bat species known to occur on the Boulder Brush Corridor to drop below self-sustaining levels; therefore, impacts to bats from electrocution are less than significant.

Impacts to bats are accurately and sufficiently analyzed in Chapter 2.3 the Biological Resources Technical Report (Appendix D) of the Draft EIR, as clarified with comment responses in the Final EIR. Comments regarding bats impacts did not raise new information not previously addressed in the Draft EIR or identify deficiencies in the Draft EIR analysis. No modifications to the Draft EIR analysis of bats are warranted.