

2 SUMMARY

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2 SUMMARY

The Applicant proposes to develop a new wind energy facility, the Montezuma II Wind Energy Project, on approximately 2,539 acres of land located south of State Route (SR) 12 in Solano County, California, about halfway between San Francisco and Sacramento. The project would be in the middle of an existing wind resource area in the Montezuma Hills. This Draft EIR analyzes the impacts associated with the project. Figure 1.1-1 provides a regional map of the project area.

2.1 PROJECT DESCRIPTION

The Applicant proposes to construct and operate 34 wind turbines and associated facilities to provide a total generation capacity of 78.2 megawatts (MW) of electricity and connect the project to the PG&E 230-kV grid through a new substation and switchyard in the project area.

The project would use the Siemens 2.3 MW turbine model with two possible blade lengths. All of the turbines would have hub heights of 263 feet, but the blades would have 305-foot or 331-foot blade diameters. The maximum turbine height, involving the turbines with the larger, 331-foot blade diameters would be 428 feet when the turbine blades are in the uppermost, or 12 o'clock, position (415 feet for the turbines with the 305-foot blade diameters).

The applicant has applied for 34 proposed turbine locations and four alternative turbine locations. To support construction and operation of the turbines, the project also includes construction of 34 pads and approximately 11 miles of new access roads; a power collection system; a new substation and switchyard with interconnection lines; a new O&M facility with a 5,000 square foot building, parking, and permanent laydown area, a 10-acre temporary laydown area, and two meteorological towers. The project would connect the High Winds, Montezuma I, and Montezuma II substations to the new switchyard and connect the switchyard to the adjacent existing PG&E 230-kV gen-tie line. The gen tie lines carries power from wind projects in this portion of the field to the existing PG&E Birds Landing Switchyard for connection to the power grid. Chapter 3, Project Description, discusses each of these components in detail. Figure 3.1-1 shows the proposed project layout.

Portions of the project are on parcels currently used for the enXco V project that will be decommissioned prior to proposed project construction. The applicant estimates that approximately 4.1 miles of the existing enXco V access roads may be re-used for the proposed project, with widening and adjustments for the new turbine size.

The project would be privately owned and financed and would be located on private lands under long-term agreements. The applicant has obtained landowner authorization for the 12 parcels in the project area. During construction and operation of the project, landowners would be able to continue dry-land farming and ranching activities.

Energy output from the project would be sold to a power purchaser, who in turn would sell it through California investor-owned utilities, municipalities, or other purchasers, in furtherance of the goals of the California Renewable Energy Portfolio standards as established by Assembly Bill 32 (AB 32).

Although the project would be located outside of any airport area of influence, because the height of the proposed turbines and met towers would be greater than 200 feet, the project would be subject to review by the Solano County Airport Land Use Commission for compatibility with the nearest airport, Travis AFB, Land Use Compatibility Plan and/or as may otherwise be required.

2.2 ENVIRONMENTAL IMPACTS AND MITIGATION

Environmental impacts and any associated mitigation measures for the Project are listed with a summary description in Table 2.2-1 and presented in detail in Chapters 5 through 19. Three major categories are used to classify Project impacts:

- Significant impacts that would remain significant with mitigation;
- Significant impacts that could be mitigated to a less-than-significant level; and
- Less than significant impacts (no mitigation required).

In order to select alternatives to reduce or avoid significant environmental impacts, it is necessary to identify the significant impacts of the Project. As shown in Table 2.2-1, under the proposed Montezuma II project, the following impacts would be significant even after implementation of mitigation measures.

2.2.1 Aesthetics

Impact AES-1: Degradation of Views from Collinsville and Impact AES-5: Degradation of the Visual Character of the Landscape from Public (County) Roads and Dispersed Rural Residences. Many of the proposed Project's turbines would be in the foreground distance zone and would affect the landscape visible from Collinsville Road, Birds Landing Road, Montezuma Hills Road, and dispersed rural residential viewpoints. Even given conformance with the Solano County setback, siting and design standards, the Project would significantly alter the visual appearance of the landscape in these areas when viewed in the foreground distance zone from dispersed rural residential viewpoints. Views of the turbines would similarly and significantly impact residents of the community of Collinsville.

2.2.2 Air Quality

Impact AIR-2: Temporary Increase in Fugitive Dust. The Project would result in significant impacts on air quality during construction due to the generation of dust (PM₁₀).

2.2.3 Biological Resources

Impact BIO-8: Direct Mortality of Raptors, Other Avian Species, and Bats. The Project could reduce the number of and/or interfere with the movements of special-status birds and raptors even with mitigation.

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
5 Aesthetic Resources			
Impact AES-1: Degradation of Views from Collinsville	Significant	None Feasible	Significant and Unavoidable
Impact AES-2: Alteration of Views for Birds Landing, Rio Vista, Pittsburg, and Antioch	Less than Significant	None Required	Less than Significant
Impact AES-3: Degradation of the Views from Residences in the Montezuma II Wind Project Area and Along Local Roads as a Result of the Montezuma II Substation and Switchyard	Less than Significant	None Required	Less than Significant
Impact AES-4: Impact on Scenic Vistas from State Route 12 and 113	Less than Significant	None Required	Less than Significant
Impact AES-5: Degradation of the Visual Character of the Landscape from Public (County) Roads and Dispersed Rural Residences	Significant	None Feasible	Significant and Unavoidable
Impact AES-6: Alteration of Anticipated Views and Character of the Landscape for Visitors to Recreation and Tourist Destinations including the Western Railway Museum and the Sandy Beach Park	Less than Significant	None Required	Less than Significant
Impact AES-7: Additional Light and Glare as a Result of Lighting	Potentially Significant	<p>Mitigation Measure AES-7: Limit Marking and Lighting to FAA Requirements</p> <p>The Applicant shall:</p> <ol style="list-style-type: none"> Only install marking and lighting on turbines in accordance with FAA requirements; the turbines shall not be lighted for other reasons. Strobe lighting shall be prohibited unless specifically required by FAA and no other alternative is available. Obtain a No Hazard Determination from the FAA for each turbine or meteorological tower that would be installed as part of the Project, as required in Mitigation Measure 	Less than Significant

Table 2.2-1

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Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>TRA-5: Notifications and Revised Turbine Siting. The Applicant shall submit an FAA Form 7460-1 for each tower location. Prior to construction, the Applicant shall submit the FAA determination to Solano County.</p> <p>c. If the Applicant modifies the Project after obtaining the FAA determinations, the Applicant shall submit a new FAA Form 7460-1 for each new or modified turbine and meteorological tower taller than 200 feet. The Applicant shall submit the new FAA determinations to Solano County prior to construction of any affected turbines and meteorological towers.</p>	
Impact AES-8: Decommissioning of the Montezuma II Wind Energy Project Facilities Could Cause Aesthetic/Visual Resource Impacts	Potentially Significant	<p>Mitigation Measure AES-8: Remove All Project Facilities and Restore the Project Area</p> <p>The Applicant shall remove all project facilities upon decommissioning. Specifically, at such time as the Project is decommissioned, the following procedures shall apply:</p> <ol style="list-style-type: none"> All facilities shall be removed to a depth of 3 feet below grade, and unsalvageable material shall be disposed of at authorized sites; The soft surface shall be restored to as close as reasonably possible to its original condition; Reclamation procedures shall be based on site-specific requirements and shall include regrading and revegetation of all disturbed areas; Decommissioned roads shall be reclaimed or left in place based on landowner preference. 	Less than Significant
6 Agriculture			
Impact AG-1: Potential Conflict with Williamson Act Contracts in the Project Area	Less than Significant	None Required	Less than Significant
Impact AG-2: Permanent Conversion of Lands to Non-Agricultural Use in the Project Area	Less than Significant	None Required	Less than Significant
Impact AG-3: Temporary Disturbance of Agricultural Lands during Construction	Less than Significant	None Required	Less than Significant

Table 2.2-1

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Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact AG-4: Temporary Impacts on Agricultural Lands Adjacent to Construction Areas	Potentially Significant	<p>Mitigation AG-4: Confine Construction Activities to Necessary Work Areas.</p> <p>Prior to commencement of any construction activities, the Applicant shall fence or flag the construction area boundaries to limit the construction footprint, avoid intrusion into adjacent agricultural areas, and reduce other potential impacts (e.g., dust, spills, invasives) to adjacent agricultural operations. The construction boundary fencing or flagging shall be in addition to, and distinguished apart from, any other exclusionary fencing or flagging required for the protection of sensitive resources pursuant to mitigation measures BIO-1 (Minimize Temporary Disturbance and Restoration of Habitats within Project Area), BIO-2a (Avoid Aquatic Resources, Wetlands, and Waters of the United States), BIO-2b (Avoid Impacts from Horizontal Directional Drilling under Aquatic Resources), and BIO-4 (Avoid Habitat for California Tiger Salamander and Special-status Invertebrate Species).</p> <p>Mitigation Measures AIR-2, HAZ-1a, and HAZ-1b</p>	Less than Significant
Impact AG-5: Soil Erosion, Soil Loss, and Decrease in Soil Productivity	Potentially Significant	<p>Mitigation AG-5: Restore and Decompact Temporarily Disturbed Agricultural Areas.</p> <p>The Applicant shall restore all temporarily disturbed areas to preconstruction conditions to the extent feasible, including decompaction, restoration of natural contours, and revegetation where appropriate.</p> <p>Mitigation Measures BIO-1, BIO-3, GEO-3, and HYD-2</p>	Less than Significant
Impact AG-6: Impediments to the Resumption of Agricultural Use	Potentially Significant	<p>Mitigation Measure AG-6: Restore Disturbed Areas to Previous Conditions after Decommissioning</p> <p>To ensure resumption of full agricultural use after decommissioning, Solano County shall, at its discretion, compare the project area after decommissioning with the baseline conditions established in this Draft EIR, and, based on this assessment, the Applicant shall undertake any additional actions required by Solano County to restore the area to preconstruction conditions.</p> <p>Mitigation Measures HAZ-1a, HAZ-1b, and HAZ-2</p>	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
7 Air Quality			
Impact AIR-1: Short-term Increase in Emissions of Criteria Pollutants from Construction Equipment Vehicles	Less than Significant	None Required	Less than Significant
Impact AIR-2: Temporary Increase in Fugitive Dust	Significant	<p>Mitigation Measure AIR-2: Fugitive Dust Emissions Controls</p> <p>During construction, the applicant shall reduce fugitive dust emissions by implementing the standard mitigation measures outlined in Table 7.4-3. During periods of high wind conditions (i.e., winds exceeding 25 miles per hour [mph]), the Applicant shall reduce fugitive dust emissions from construction activities by implementing the mitigation measures outlined in Table 7.4-4.</p> <p>In addition to the mitigation measures outlined in Tables 7.4-3 and 7.4-4, the Applicant shall reduce fugitive dust emissions from construction activities by implementing the following standard mitigation measures recommended by the BAAQMD and YSAQMD:</p> <ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) and construction sites not controlled with one of the methods outlined in Table 7.4-3 or Table 7.4-4 shall be watered when there is evidence of wind-driven dust. • Hydroseed or apply nontoxic stabilizers to construction areas that are scheduled to be inactive for more than four consecutive days during all wind conditions. • Haul trucks transporting soil, sand, or other loose material off-site shall be covered or haul trucks shall maintain at least two feet of freeboard during all wind conditions. • All visible mud or dirt track-out onto paved access roads, parking areas, staging areas, and adjacent public roads shall be cleaned using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph). • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used. • A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person will respond and 	Significant and Unavoidable

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		<p>take corrective action within 48 hours. The local air district's phone number will also be visible to ensure compliance with applicable regulations.</p> <p>Since construction-related emissions could exceed the applicable thresholds of significance, the following additional construction mitigation measures (recommended by the local air districts) shall be implemented:</p> <ul style="list-style-type: none"> • Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. <p>Prior to the commencement of construction activities, the Applicant shall prepare a Construction Fugitive Dust Control Plan and submit it to the County for approval. This plan shall describe how to minimize fugitive dust generated by construction activities and shall include the following:</p> <ul style="list-style-type: none"> • A description of each active operation that may result in the generation of fugitive dust; • Identification of all sources of fugitive dust (e.g., earthmoving, storage piles, and vehicular traffic); • A description of the control measures to be applied to each of the sources of dust emissions identified above. The description will be sufficiently detailed to demonstrate that the applicable best available control measure(s) will be utilized and/or installed during all periods of active operations; • In the event that there are special technical circumstances (e.g., non-economic), including safety, which prevent the use of at least one of the required mitigation measures for any of the sources identified, a justification statement will be provided to explain the reason(s) why the required control measures cannot be implemented; and • A process for addressing complaints received by sensitive receptors (either directly or through the County) due to dust and alternative strategies to resolve such complaints, such as increased watering and implementation of additional dust control measures. <p>Upon completion of construction, the applicant shall restore and stabilize all areas that will only be temporarily disturbed (i.e., areas that will not be covered with surface structures</p>	

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		such as buildings and pavement and or gravel) according to Mitigation Measure BIO-1.	
Impact AIR-3: Long-Term Emissions	Less than Significant	None Required	Less than Significant
8 Biological Resources			
Impact BIO-1: Temporary and Permanent Impacts to Terrestrial Habitat	Potentially Significant	<p>Mitigation Measure BIO-1: Minimize Temporary Disturbance and Restore Disturbed Habitats within Project Area</p> <p>To minimize temporary disturbance impacts on terrestrial lands, the Applicant shall comply with the following:</p> <ul style="list-style-type: none"> a. Minimize disturbance to habitats and vegetation during site preparation and construction. The clearing of all vegetation, grading, and other soil disturbance shall be restricted to those areas required for construction and, to the extent feasible, shall occur in areas with little or no vegetation. b. Assign a qualified biologist as an on-site point of contact for the Solano County biological monitor (or other County designee). The County monitor shall be allowed access to the site during the construction and post-restoration period to ensure compliance with County policies and procedures and shall have the authority to halt construction activities in consultation with the assigned point of contact. c. After construction, and prior to project operation, restore and revegetate all areas disturbed by construction to pre-construction conditions as follows: <ul style="list-style-type: none"> i. Revegetation shall occur in accordance with Solano Grading Ordinance guidelines (Solano County 2010), with consideration given to landowner input and/or agreement between the Applicant and landowner, where disturbance occurs. ii. Disturbed or graded areas shall be planted with fast-growing and deep-rooted grasses or ground cover, preferably native to the area, unless the area is actively used for farming and re-seeding would conflict with agricultural activities. Invasive pest species, as listed by Cal-IPC, shall not be used (http://www.cal-ipc.org/). A qualified biologist shall have oversight of species selected. iii. Revegetated areas shall be monitored until revegetation has been completed and successful ground cover has been established in accordance with the requirements of the Solano County Grading Ordinance. 	Less than Significant

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		<ul style="list-style-type: none"> iv. If required by the County, previously vegetated areas and inactive portions of the construction site shall be seeded and watered until vegetation is grown, unless the area is actively used for farming and re-seeding would conflict with agricultural activities. v. Any trees with active or suspected raptor or other special-status avian species nests shall not be removed. Other trees without nests that cannot be avoided and are removed shall be replaced with native tree species of similar size and structure, unless otherwise requested by the landowner in writing and approved by the County. Replacement trees shall be watered and maintained as necessary to ensure 90% survival rate after 5 years. <p>Mitigation Measures AG-4, BIO-1.</p>	
Impact BIO-2: Temporary and Permanent Impacts to Aquatic	Significant	<p>Mitigation Measure BIO-2a: Avoid Impacts to Aquatic Resources (Wetlands, Vernal Pools, Streams, and other Potential Waters of the U.S.)</p> <p>To avoid impacts on aquatic resources, the Applicant shall site all construction activities and all project components (e.g., turbine pads, aboveground substation, access roads, collection system lines, etc.) outside and away from aquatic resources as follows:</p> <ul style="list-style-type: none"> a. Site all construction activities and all project components at least 100 feet from all aquatic resources, where possible. If, as determined by Solano County, no feasible alternatives are available to maintain a 100-foot setback from an aquatic resource, , encroachment within said setback may be allowed, depending on site-specific factors, subject to further review and advance approval by the County. Prior to encroachment within the aquatic resource setback, or the start of adjacent construction which has the potential to impact the aquatic resource, the following shall be required unless otherwise determined unnecessary by the County: <ul style="list-style-type: none"> i. The Applicant shall submit a supplemental evaluation that details the proposed construction activity and its potential impact to the aquatic resource, including BMPs the Applicant would be required to implement to avoid impacting the aquatic resource. ii. Advance consultation with USFWS and/or CDFG, as may be determined necessary by the County. 	Less than Significant

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Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>b. Identify aquatic resources and corresponding 100-foot setback from aquatic resources on all project construction drawings and plans (e.g., grading and improvement plans).</p> <p>c. Prior to any construction activity, assign a qualified biologist to fence or flag the location of aquatic resources and the corresponding 100-foot aquatic resources setback. Fencing or flagging shall be in addition to, and distinguished apart from, any required construction boundary fencing or flagging pursuant to mitigation measure AG-4.</p> <p>d. Prior to trenching across dry valleys that are mapped by the USGS as seasonal streams but were not observed during field studies prepared for the project EIR to contain any obvious signs of streambeds or streambanks, the Applicant shall assign a qualified biologist to verify that streambeds or streambanks are, in fact, not present. If there are no streambeds or streambanks present, the Applicant may proceed with trenching. If streambeds or streambanks are present, the Applicant shall proceed using HDD in accordance with Mitigation Measure BIO-2b (Avoid Impacts from Horizontal Directional Drilling under Aquatic Resources). Prior to the commencement of any trenching in these affected areas, the County's biological monitor shall also verify the Applicant's findings regarding the presence or absence of streambeds and streambanks.</p> <p>e. Site and conduct all vehicle fueling and scheduled equipment maintenance at the designated equipment laydown area to prevent spills of fuel or other hazardous materials from affecting aquatic resources. Where vehicle maintenance (excluding fueling) cannot be avoided in areas outside those previously specified, the Applicant shall perform these maintenance activities at least 250 feet from all aquatic resources, on an impermeable bladder or tarp specified for such maintenance activities.</p> <p>f. The Applicant's qualified wetland biologist shall hold a tailgate environmental training program with construction personnel. Training shall be conducted prior to commencement of construction, to inform construction personnel of the aquatic resources in the project area. The training program shall include information about the locations and extent of these aquatic resources, methods of resource avoidance, permit conditions, and possible fines for violations of permit conditions and state or federal environmental laws. The training program shall be recorded and subsequently shown to any construction personnel who are not able to attend the initial training program prior to their participation in any construction activity.</p>	

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		<p>g. If it is not feasible to avoid placement of lines for the power collection system across an aquatic resource, as determined by the County, the Applicant shall install the lines:</p> <ul style="list-style-type: none"> i. Under the aquatic resource using the HDD method, excepting at the vernal pool, in accordance with Mitigation Measure BIO-2b (Avoid Impacts from Horizontal Directional Drilling); or ii. If HDD is not feasible, the Applicant may install the lines above aquatic resources, if approved by the County and subject to the following requirements: <ul style="list-style-type: none"> a) The Applicant shall provide advance notice and sufficient justification that overheading is necessary, as determined by the County; b) Overhead lines shall comply with the design elements listed in Mitigation Measure BIO-8 (Direct Mortality of Raptors, Other Avian Species, and Bats) and all work activities and facilities associated with the overhead line (e.g., poles) shall be set back 100 feet from the boundaries of aquatic resources. <p>h. If construction activities require or otherwise involve placement of fill, crews, or equipment in aquatic resources, then the Applicant shall do the following in direct consultation with Solano County:</p> <ul style="list-style-type: none"> i. Obtain and comply with all necessary Clean Water Act 404 (USACE), 401 (RWQCB), and California Fish and Game (Section 1600) permits in advance of project construction. The Applicant shall prepare a wetland delineation report and submit it to the reviewing agency for verification as part of this permit process. ii. Prepare a Habitat Mitigation and Monitoring Plan, written by a qualified wetland biologist, which shall be submitted to and approved by the USACE, USFWS, and/or CDFG prior to initiating any mitigation activities. The plan shall outline restoration and conservation activities, locations, monitoring and reporting requirements, and criteria to measure mitigation success. Monitoring shall be a minimum of 3 years post-construction. iii. Restore temporarily impacted aquatic resources to pre-construction condition and monitor during and after disturbance. iv. Compensate for permanent impacts on aquatic resources caused by new structures and fill activities, as determined in consultation with the USACE, USFWS, and 	

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		<p>CDFG prior to construction activities. At a minimum, compensation ratios shall be 1:1.</p> <p>Mitigation Measures BIO-1, AG-4, and HYD-2.</p> <p>Mitigation Measure BIO-2b: Avoid Impacts from Horizontal Directional Drilling under Aquatic Resources (Wetlands, Vernal Pools, Streams, and Other Potential Waters of the U.S.)</p> <p>The Applicant shall comply with the following mitigation measures to minimize the potential effects of HDD:</p> <ol style="list-style-type: none"> a. To the extent practicable, HDD drilling shall occur only during the dry season (i.e., typically April through October). <ol style="list-style-type: none"> i. Should it be necessary to conduct HDD operations outside the dry season, the operations shall be monitored by a qualified environmental monitor (i.e., having previous HDD monitoring experience), who shall: <ol style="list-style-type: none"> a) Be a third-party individual who shall work on behalf of Solano County at the expense of the Applicant; and b) Have knowledge of the environmental sensitivities of the project area, an understanding of the design process and construction practices and shall understand the conditions of the site and provide feedback to the construction staff regarding environmental sensitivities, regulatory concerns, and physical limitations of the field conditions. ii. The environmental monitor shall visually inspect the aquatic resource and surrounding area for evidence of drilling fluids surfacing from the operation. The environmental monitor shall monitor the drilling fluid circulation at the HDD site and be aware of the status of the operation. iii. If the environmental monitor suspects a potential drilling fluid leak (frac-out) that is not yet observed at the surface (e.g., loss of drilling mud in the pit but no frac-out at the surface), the Applicant shall cease HDD activities immediately and the HDD contractor shall implement measures to reduce the potential for a frac-out (e.g., increase the density of the drilling mud or reduce the pressure of the drill). The 	

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Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>Applicant shall then be allowed to continue HDD activities. If a frac-out occurs, the Applicant shall implement paragraph e, below.</p> <ul style="list-style-type: none"> b. Prior to HDD activities, the Applicant’s biologist shall conduct on site briefings for all HDD workers to ensure all field personnel understand the location of aquatic resources and their responsibility for timely reporting of frac-outs. c. Barriers (e.g., straw bales, sedimentation fences, etc.) shall be erected between the bore site and required (protective) setback boundary for any nearby aquatic resources prior to drilling, as appropriate, to prevent any material from reaching aquatic resource areas. d. The necessary response equipment and supplies (e.g., vacuum truck, straw bales, sediment fencing) shall be kept on site by the contractor during HDD operations so that they are readily available in the event of a frac-out. e. In the event a frac-out is detected, the Applicant shall implement the following measures to reduce or minimize effects on the affected aquatic resource: <ul style="list-style-type: none"> i. All work shall stop until the frac-out has been contained and cleaned up; ii. The frac-out area shall be isolated with straw bales, sand bags, or silt fencing to surround and contain the drilling mud and clean-up shall be performed using a vacuum truck supported by construction workers on foot using hand tools, as necessary (mechanized equipment shall not be used to scoop or scrape up frac-out materials to prevent impacting the wetland or streambanks); and iii. When a frac-out has occurred within, or clearly has the potential to affect, an aquatic resource, the Applicant shall notify the USACE and RWQCB by telephone and email within 24 hours. If a frac-out occurs in an upland area resulting in no clear impact to any aquatic resource, the Applicant shall notify the USACE and RWQCB within 48 hours. The Applicant shall notify the USACE and RWQCB in writing when the frac-out has occurred; including a description of the frac-out and clean-up measures implemented and shall provide a copy of the correspondence to Solano County. iv. If a frac-out occurs and is considered to have negatively impacted the associated aquatic resource, based on consultation with the Solano County biological monitor, an appropriate restoration plan for that aquatic resource shall be designed as 	

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		<p>outlined in Mitigation Measure BIO-2a h. and appropriately implemented.</p> <p>f. The Applicant shall obtain a well/boring permit from the Solano County Department of Resource Management under Solano County Code Chapter 13.10 prior to initiating any HDD, unless otherwise determined unnecessary by the Solano County Environmental Health Division.</p> <p>g. Use of HDD shall be prohibited under the vernal pool.</p> <p>h. The Applicant shall ensure HDD bore entry and exit pits are located at least 100 feet from aquatic resources and shall conduct suitable evaluations prior to HDD activity to identify the appropriate depth to be maintained underneath aquatic resources to avoid and minimize potential impacts from frac-outs.</p>	
Impact BIO-3: Potential Impacts to Special-Status Plants	Less than Significant	Mitigation Measures BIO-1, BIO-2a, BIO-2b, and HYD-2.	Less than Significant
Impact BIO-4: Temporary and Permanent Impacts on Special-Status Insects, Crustaceans, Amphibians (including California Tiger Salamander), and Reptiles	Potentially Significant	<p>Mitigation Measure BIO-4: Habitat Avoidance – California Tiger Salamander and Special-Status Invertebrate Species</p> <p>To avoid potential impacts on the vernal pool and associated habitat for special-status invertebrate species and CTS, the Applicant shall implement Mitigation Measure BIO-2a (Avoid Impacts to Aquatic Resources) (a-c) and:</p> <p>a. Conduct all ground-disturbing activities within 0.5 miles (2,640 feet) of potential on-site aquatic CTS habitat, including the vernal pool,, during the dry season (typically April 15 through October 15). Ground disturbing activities include but are not limited to clearing, grading, trenching, and ripping or tilling associated with site reclamation and restoration work.</p> <p>i. If the Applicant proposes to conduct ground disturbing activities after October 15, the Applicant shall coordinate with the County, USFWS, and CDFG regarding avoidance measures necessary to continue work past October 15. Such measures may include requirements for biological monitoring, limits on work during rain events, limits on work when rain events are forecast or other appropriate measures acceptable to the USFWS and CDFG. The Applicant shall obtain approval from the County, USFWS, and CDFG for any ground disturbing activities occurring after October 15.</p> <p>b. Conduct a worker-training program that provide workers with information on their</p>	Less than Significant

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MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>responsibilities with regard to the CTS, an overview of the appearance of the species and its biology, and a description of the measures being taken to reduce the potential effects on the species during project construction. The Applicant shall conduct the worker-training program prior to the start of any construction activity and during construction as necessary and shall ensure all personnel working on-site receive the training, including construction contractors and personnel that will operate and maintain project facilities. The training program shall be recorded and subsequently shown to any construction personnel who are not able to attend the initial training program prior to their participation in any construction activity.</p> <p>c. If CTS is encountered during construction work at any location within the Montezuma II Wind project area:</p> <ul style="list-style-type: none"> i. All activities shall cease and work shall not resume until Solano County, in consultation with the USFWS and the CDFG, determines when and where work can begin. ii. In the event of injury or mortality to individual CTS, Solano County, USFWS, and CDFG shall be notified immediately. iii. A USFWS-approved and permitted biologist (i.e., has a handler's permit for CTS) shall carefully move the CTS by hand and shall place it at the entrance of a suitable mammal burrow within walking distance from the excavation site but outside the area where the animal could be injured or killed by activities. iv. The rescued CTS shall be monitored by a qualified biologist until it enters the burrow. v. The USFWS, CDFG, and Solano County Department of Resource Management shall be notified by telephone and letter within one working day if CTS is found in the Montezuma II project area. <p>d. To prevent inadvertent entrapment of CTS during construction of the Project, deep trenches (two feet deep or greater) that are within 2,000 feet of the vernal pool should be completely covered using plywood or other appropriate materials or backfilled at the close of each working day, with the exception of the trenches at the substation and switchyard. Before the trench is filled, it shall be thoroughly inspected for trapped CTS.</p> <p>e. To eliminate the attraction of CTS predators, all food-related trash items such as wrappers, cans, bottles and food scraps that are within 2,000 feet of the vernal shall be</p>	

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>disposed of in closed containers and removed from the Montezuma II project area at the end of each working day.</p> <p>f. Best Management Practices (BMPs; required as part of the SWPPP) shall be implemented to prevent sediment from entering suitable aquatic CTS habitat (vernal pool) at the project site, including but not limited to, silt fencing, sterile hay bales and temporary sediment disposal. The Applicant shall avoid the use of plastic binding in sediment control measures that could pose an entrapment hazard to CTS.</p>	
<p>Impact BIO-5: Temporary Impacts on Nesting Raptors, Owls and Other Avian Species</p>	<p>Potentially Significant</p>	<p>Mitigation Measure BIO-5a: Avoidance of Avian Nests</p> <p>If construction activities are scheduled to occur during the breeding season (February 1 through August 31), the Applicant's qualified wildlife biologist shall conduct pre-construction surveys of all potential suitable nesting habitat within 0.25 miles of active construction areas, including trees, shrubs, grasslands and wetland vegetation. The qualified wildlife biologist shall determine the timing of pre-construction surveys based on the time of year and habitats that are present, and shall conduct the surveys no more than 30 days prior to construction.</p> <p>a. If active raptor or owl nests are found, the Applicant shall maintain a 500-foot no-disturbance setback zone around active nests during the breeding season or until it is determined that young have fledged. The Applicant shall also maintain a 500-foot no-disturbance setback zone around the historic golden eagle nest in accordance with Mitigation Measure BIO-8b (On Site Mitigation).</p> <p>b. If active Swainson's hawk nests are found, the Applicant shall maintain a no-disturbance buffer zone around the active nests during the breeding season or until it is determined that the young have fledged. The no-disturbance buffer zone from active Swainson's hawk nests shall be 0.25 miles, or as may otherwise be determined by the County, in consultation with the USFWS and CDFG as appropriate.</p> <p>c. If active nests for other special-status bird species are found, the Applicant shall maintain a 250-foot no-disturbance setback zone around active nests during the breeding season or until it is determined that young have fledged.</p> <p>d. The Applicant shall identify the location of all active raptor, owl, and other special-status bird nests and the appropriate corresponding nest setback area (e.g., 250 feet, 500 feet, or 0.25 miles) on all project construction plans (e.g., grading and improvement plans).</p>	<p>Less than Significant</p>

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>e. Prior to construction, assign a qualified biologist to fence or flag all active nest setback areas.</p> <p>f. If pre-construction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation shall be required.</p> <p>i. Trees and shrubs that have been determined to be unoccupied by special-status birds or that are located more than 500 feet from active nests (and 0.25 miles from active Swainson's hawk nests) may be removed, unless otherwise restricted.</p> <p>ii. If the active nest(s) is found in an area where ground disturbance is to occur, the Applicant shall avoid the area by delaying nearby ground disturbance until the birds have fledged, or shall reroute the project component to avoid the area.</p> <p>g. If construction is scheduled to occur during the non-nesting season, then no nesting bird surveys shall be required before the start of construction activity, except for provisions for surveys for burrowing owls outside the nesting season (September 1 – January 31), as specified in Mitigation Measure BIO-5b.</p> <p>Mitigation Measure BIO-5b: Habitat Avoidance –Burrowing Owl</p> <p>The following guidelines adapted from the CDFG Staff Report on Burrowing Owl Mitigation (CDFG 1995) shall be implemented by the Applicant:</p> <p>a. Pre-construction burrowing owl surveys shall be conducted in all areas that may provide suitable nesting habitat according to CDFG (1995) guidelines.</p> <p>i. No more than 30 days before construction, a habitat survey including documentation of burrows and burrowing owls shall be conducted by a qualified wildlife biologist within 500 feet of the construction area in areas suitable for burrowing owls.</p> <p>ii. The survey shall conform to the protocol described by the California Burrowing Owl Consortium, including up to four surveys on different dates if there are suitable burrows present. The CDFG shall be consulted by the Applicant prior to survey initiation to ensure the most current pre-construction survey methodologies are utilized.</p> <p>iii. The CDFG defines impacts as disturbance within approximately 160 feet of occupied burrows during the non-breeding season of September 1 through January 31, or within approximately 250 feet during the breeding season of February 1 through August 31. Even when these buffer distances are maintained, the alteration</p>	

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>of breeding and behavioral patterns of burrowing owls during construction activities shall be considered adverse disturbance to the owls, as determined by the Applicant's on site biologist and the Solano County biological monitor.</p> <p>b. The Applicant shall avoid disturbing active burrowing owl nests and occupied nesting burrows and shall implement standard CDFG mitigation guidelines.</p> <p>c. If, as determined by the Solano County biological monitor, construction activities will not adversely affect occupied burrows or disrupt breeding behavior, construction may proceed without any restriction or mitigation measures for burrowing owls.</p> <p>d. If, as determined by the Solano County biological monitor, in consultation with CDFG, construction could adversely affect occupied burrows during the September 1 through January 31 non-breeding season, the subject owls may be passively relocated from the occupied burrow(s) using one-way doors, according to CDFG guidelines, using the following measures:</p> <ol style="list-style-type: none"> i. There shall be at least two unoccupied burrows suitable for burrowing owl within 300 feet of the occupied burrow before one-way doors are installed in the occupied burrow. ii. The unoccupied burrows shall also be located at least 160 feet from construction activities and can be natural burrows or artificial burrows constructed according to current design specifications. iii. If artificial burrows are created, these burrows shall be in place at least one week before one-way doors are installed on the currently occupied burrows. iv. One-way doors must be in place for a minimum of 48 hours to ensure that owls have left the burrow before the burrow is excavated. v. Mitigation for the loss of occupied habitat, as determined by the Solano County Department of Resource Management, based on the recommendations of the Solano County biological monitor, shall be provided by preservation of 6.5 acres of suitable foraging and nesting habitat contiguous with occupied burrow sites per breeding pair or single bird. Suitable preservation habitat is defined as those natural and disturbed vegetated areas (e.g. grasslands, scrublands, and tree and shrub areas with less than 30% ground cover) that have existing natural and artificial ground burrows that can support western burrowing owl. 	

Table 2.2-1

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Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact BIO-6: Displacement of Waterfowl and Other Water Birds Using the Project Area or Moving to and from the Suisun Marsh	Less than Significant	Mitigation Measures BIO-2a and BIO-2b.	Less than Significant
Impact BIO-7: Impacts on Raptors, Other Avian Species, and Bats from Overhead Wires	Potentially Significant	<p>Mitigation Measure BIO-7: Design Specifications for Overhead Power Lines</p> <p>Prior to project operation, the Applicant shall implement the following design elements for the limited overhead power lines:</p> <ol style="list-style-type: none"> a. For any power collection system utility lines that are installed overhead at limited wetland and stream crossings where the use of HDD is infeasible and as approved by Solano County, as applicable: <ol style="list-style-type: none"> i. Avian safe practices, as outlined in Suggested Practices for Avian Protection on Power Lines (APLIC 2006) shall be employed during construction; ii. All jumper wires shall be insulated (5-kV minimum rating and preferably 10-kV to 15-kV); iii. All exposed terminals at the substation (e.g., pot heads, lightning arresters, and transformer bushings) shall be covered by wildlife boots or other insulating materials; iv. Non-conductive materials (e.g., fiberglass and wood) shall be used instead of the straight, aluminum-type combination arms on riser poles; v. Energized wires shall be placed a safe distance apart: 60 inches for cross arm configuration, 55 inches for armless configuration; the distance between grounded hardware and any energized phase conductor shall be a minimum of 60 inches apart; vi. No cut-outs or riser poles shall be used; vii. Jumper leads shall be oriented in a vertical configuration to discourage bird perching; viii. Perch and nest discouragers shall be installed on crossarms and on top of poles; ix. Phase conductors shall be suspended on pole top and cross arms; x. Bonding of pole top devices mounted on non-conductive arms shall be done with insulated wire; 	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<ul style="list-style-type: none"> <li data-bbox="764 407 1696 464">xi. A minimum conductor wire size of 4/0 shall be used to increase the visibility of the wire; <li data-bbox="764 472 1696 561">xii. Excepting angle poles of overhead lines, none of the installed facilities shall require, or otherwise involve, the use of guy wires. All turbines and permanent meteorological towers shall be free standing; <li data-bbox="764 570 1696 748">xiii. Post-construction monitoring activities consistent with those detailed in Mitigation Measure BIO-8a shall be conducted for any overhead lines not owned by PG&E and regulated by the CPUC. If post-construction monitoring indicates that any such new installed overhead lines are having significant impacts on raptor species, bird diverters shall be installed to the extent required by Solano County, based on consultation with CDFG and USFWS. 	
Impact BIO-8: Direct Mortality of Raptors, Other Avian Species, and Bats	Significant	<p data-bbox="764 761 1696 850">Mitigation Measure BIO-8a: Bird and Bat Mortality Monitoring The Applicant shall conduct annual monitoring of bird and bat mortality in the project area, as follows:</p> <ul style="list-style-type: none"> <li data-bbox="764 867 1696 1021">a. Qualified ornithologists shall conduct annual bird and bat mortality monitoring throughout the project area including where any new overhead transmission lines have been installed to determine avian and bat mortality rates and the causes of mortality associated with the project installations. The monitor shall be an independent USFWS-approved biologist. <li data-bbox="764 1029 1696 1183">b. The monitor shall collect sufficient information to allow evaluation of turbine design characteristics and location effects that contribute to mortality. The species, number, location and distance of dead birds relative to turbine location, availability of raptor prey species, and cause of bird and bat mortalities shall be noted. All results shall be provided to the Wildlife Response and Reporting System database. <li data-bbox="764 1192 1696 1313">c. Monitoring shall follow standardized guidelines outlined by California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development (CEC and CDFG 2007) and, as required by the County, shall be conducted for three years following the first delivery of power. <li data-bbox="764 1321 1696 1416">d. The Applicant shall contribute and participate in the efforts of the Solano County Avian Technical Advisory Committee (TAC) to develop mitigation measures to lessen potential impacts on raptors as a result of wind turbine generator operation. The TAC 	Significant and Unavoidable

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>is an interagency organization composed of biologists from the CDFG, the USFWS, the Solano County Department of Resource Management, and representatives from wind facility developers in the wind resource area in Montezuma Hills.</p> <p>e. The Applicant shall prepare and submit annual reports from monitoring efforts to the USFWS, CDFG, Solano County and the Solano County Avian TAC within 90 days after the end of each calendar year, unless additional time has been justified by the Applicant and is acceptable to the Solano County Department of Resource Management. Data collected during the monitoring program shall be submitted to the Biogeographic Information and Observation System Program, in accordance with California Energy Commission Guidelines.</p> <p>f. If a carcass with a band is found in the project area, the Applicant shall promptly report the banding information to the USFWS Bird Banding Laboratory and shall coordinate with the Laboratory to include any information provided by the USFWS and pertinent to avian mortality at the project site, if any, in the annual monitoring reports.</p> <p>g. After three years of post-construction monitoring data have been obtained, the County will review the data and, in consultation with the USFWS and the CDFG, determine which, if any, specific turbines generate disproportionately high levels of avian mortalities (based on evidence of statistically significant higher levels of mortality relative to other turbines). If specific turbines are found to result in disproportionately high avian mortalities, the Applicant shall consult with the County to evaluate any feasible measures that can be implemented at the discretion of the County to reduce or avoid mortalities at those specific turbines.</p> <p>Mitigation Measure BIO-8b: On-site Mitigation The Applicant shall provide on-site mitigation for bird strikes, as outlined below:</p> <p>a. Turbine locations shall avoid features of the landscape known to attract raptors and bats, such as water and foraging habitat that provide habitat for prey species such as insects and small mammals, to the extent feasible.</p> <p>b. The Applicant shall maintain a 500-foot no-disturbance setback zone around any active or historical golden eagle nest(s) identified in the project area.</p> <p>c. Prior to Project construction, the Applicant shall prepare an Avian and Bat Mitigation Plan (ABMP) by a qualified biologist or ornithologist and be furnished to the Solano</p>	

Table 2.2-1

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Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>County Department of Resource Management. The ABMP shall contain specific provisions for actions to minimize or offset impacts on raptors and shall include the following:</p> <ul style="list-style-type: none"> i. Remove rock piles resulting from construction as soon as possible (if applicable). ii. Feather road edges and replace topsoil level with the road to allow cultivation to resume as close as possible to the roadbed. iii. Where it is not feasible to re-vegetate areas in accordance with Mitigation Measures AG-5 (Restore and Decompact Temporarily Disturbed Agricultural Areas) and Bio-1 (Minimize Temporary Disturbance and Restore Disturbed Habitats within Project Area), compact non-vegetated areas to discourage new rodent burrows. iv. Identify appropriate active and historical nests setbacks (e.g., 250 feet, 500 feet, or 0.25 miles) per Mitigation Measure BIO-5a (Avoidance of Avian Nests), Mitigation Measure BIO-5b (Habitat Avoidance – Western Burrowing Owl, and Mitigation Measure BIO-8b (On-Site Mitigation). <p>Mitigation Measure BIO-8c: Off-site Mitigation and Replacement of Disturbed Aerial Habitat</p> <p>The Project would result in the permanent loss of up to 68 acres of aerial habitat. Additionally, fragmentation of the aerial habitat could negatively impact common and special-status avian and bat species. Thus, the impacts due to loss of aerial habitat within and outside the project area are considered significant.</p> <p>To compensate for permanent loss of aerial habitat and for ongoing impacts on avian and bat species, the Applicant shall acquire replacement mitigation habitat off site at a ratio of 1:1 acreage compensation calculated from the total rotor swept area representing aerial habitat within the completed project. These lands will consist of any combination of non-native grassland, grazing land, mixed grain or cropland (excluding orchard or vineyard land), or open oak woodland. The off-site habitat mitigation area would be preserved in perpetuity.</p> <p>The Applicant shall provide off site mitigation by acquiring and preserving up to 68 acres of land, based on total rotor swept area for the 34 proposed Project wind turbines, suitable for impacted avian and bat species. The total number of mitigation acres required shall be determined based on the final mix of the two turbine models ultimately selected for the project. If fewer turbines are installed, the amount of required acreage shall be</p>	

Table 2.2-1

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Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>proportionately reduced. Off site conservation land shall be preserved in fee title and/or easement in accordance with the following:</p> <ol style="list-style-type: none"> a. Prior to the issuance of the first building permit or grading permit for the Project, whichever occurs first, the Applicant shall establish an irrevocable letter of credit in favor of the County of Solano from a reputable bank with a branch in the United States, or a bond as approved by the County, in an amount approved by the County to ensure compliance with the conservation land or easement provisions described in paragraphs b–d below. The letter of credit or bond shall not be required if at least one of the measures described in paragraphs b. through d. below has been fulfilled to the satisfaction of the County prior to issuance of the first grading or building permit, whichever occurs first. b. Off site conservation land or easement: Within two years following the first delivery of power, the Applicant shall purchase and record up to 68 acres of off site conservation land in fee-title and/or easement for open space suitable as breeding and foraging habitat for raptors impacted by the Project, such as the golden eagle and red-tailed hawk, as follows: <ol style="list-style-type: none"> i. The County, in consultation with USFWS and the CDFG, shall approve the location of the conservation land or easement, which approval shall not be unreasonably withheld. ii. If the Applicant requests timely approval of the location of the conservation land or easement, and approval is not granted within the two-year period, the Applicant shall purchase and record the land or easement within a reasonable time after the County gives its approval and shall be deemed to have complied with this two-year requirement. The conservation land or easement shall meet the following requirements: <ol style="list-style-type: none"> a) The conserved area shall be up to 68 acres in size, equivalent to the total rotor swept area for the 34 proposed Project turbines, and shall be located on land in Solano County providing habitat similar to the project area but shall be outside the wind resource area. b) The conserved land or easement site shall be dominated by natural vegetation, agricultural uses or a combination of both. The primary purpose of this land 	

Table 2.2-1

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Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>or easement will be to provide conservation lands for raptor species that could be impacted by the Project.</p> <p>c) The conserved lands shall provide breeding opportunities in an effort to offset raptor mortality associated with operation of the Project. The main species anticipated to be impacted by the Project are raptor species such as golden eagle, red-tailed hawk and American kestrel, although the easement could also provide habitat for other guilds of birds such as ground-nesting songbirds. Types of habitat enhancement measures on the easement will be weighted according to the relative abundance of birds impacted by the Project, the species-specific needs of those species, and the type and quality of habitat that may already exist on the conserved land. A number of management measures and enhancements shall be provided (if such features are not already present) to provide suitable foraging and nesting habitat on the easement.</p> <p>d) The conservation easement shall be recorded, shall run with the land in perpetuity, and shall list and prohibit activities inconsistent with the purpose of supporting avian foraging and breeding opportunities. If the land is acquired in fee-title and conveyed to a land trust or similar entity, an irrevocable deed restriction shall be recorded on the property to ensure that the property permanently remains in conservation regardless of ownership and contains the same restrictions as a conservation easement.</p> <p>iii. The Applicant shall establish a non-wasting funding mechanism to fund the maintenance, management and monitoring of the conserved area. Estimated costs shall be established using a PAR-type analysis. The analysis and funding mechanism shall require approval by the County, in consultation with the resource agencies, prior to recordation of the conservation easement. Management activities or restrictions in the conservation easement shall include:</p> <p>a) Provisions for suitable foraging habitat by maintaining or enhancing natural areas, particularly grasslands and seasonal wetlands, or by maintaining compatible agricultural crops and practices. Suitable crop types for foraging raptors include those with low-lying vegetation such as alfalfa and other hays,</p>	

Table 2.2-1

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Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>and various row and grain crops. Unsuitable crop types that would be restricted in the easement shall include those that do not provide sufficient accessibility or have low prey densities, such as orchards and vineyards.</p> <p>b) Maintaining or enhancing nesting opportunities by protecting trees or planting trees that are suitable for raptor nesting, including native valley oaks and cottonwood trees. The installation of artificial nesting structures would be acceptable only in combination with the planting and maintenance of live trees.</p> <p>iv. Within three years following the first delivery of power, the Applicant's qualified wildlife biologist shall undertake breeding habitat enhancement measures, as determined in consultation with Solano County, on the conserved property, which shall include the following:</p> <p>a) Prior to recording the conservation easement, the Applicant shall submit to Solano County an open space and habitat management plan for the conserved area, which shall be prepared by a qualified wildlife biologist. Approval of this plan by Solano County, in consultation with the resource agencies, shall be required prior to recordation of the easement.</p> <p>b) Types of enhancement measures on the easement, if required by Solano County, will be weighted according to the relative abundance of birds impacted by the Project and the species-specific needs of those species but could include the placement of nesting substrate for golden eagles, red-tailed hawks, and American kestrels (nesting boxes, trees, perches, and/or other features). The use of artificial nesting structures would be acceptable only in combination with the planting and maintenance of live trees.</p> <p>c) A number of management measures and enhancements shall be provided (if such features are not already present) to provide suitable foraging and nesting habitat on the easement.</p> <p>d) Prior to recording the conservation easement or conveying the Project in fee simple, the Applicant shall designate, for Solano County's approval, a public agency or non-profit entity, or a designated representative, to manage the</p>	

Table 2.2-1

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Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>conserved area.</p> <p>v. The Applicant shall be responsible for all mitigation costs including habitat enhancements (if required by Solano County), preparation and implementation of the open space management plan, and long-term management of the conservation area.</p> <p>c. In-lieu fee: As an alternate to the off site conservation easement requirements described in section b, above, the Applicant may contribute an in-lieu fee to the Solano Land Trust or other conservation entity approved by Solano County in consultation with CDFG (hereinafter “Trust”) in an amount and according to the terms as approved by Solano County in consultation with the CDFG for the establishment of up to 68 acres of permanent conservation land or easement in Solano County to replace lost aerial habitat. This fee shall be used by the Trust for the sole purpose of purchasing, recording, enhancing, maintaining and preserving the conserved land in fee-title or easement that provides protected breeding and foraging habitat for the raptors and other avian species impacted by the Project. The requirements for the in-lieu fee alternative shall include the following:</p> <p>i. The amount of the in-lieu fee shall require approval by the County, in consultation with the CDFG, which approval shall not be unreasonably withheld and shall be based on the Trust’s costs for the following:</p> <p>a) Acquisition of up to 68 acres of conservation land in fee-title and/or easement for open space and habitat suitable as breeding and foraging for raptors such as the golden eagle, red-tailed hawk and other guilds of birds impacted by the Project; and</p> <p>b) Reasonable administrative and other overhead costs by the Trust to acquire the land and/or easement; and</p> <p>c) The development, approval, and implementation of the required habitat enhancement and management plan, as required by Solano County in consultation with the CDFG; and</p> <p>d) The perpetual maintenance, management, and monitoring of the conserved land and habitat, based on a PAR-type analysis.</p>	

Table 2.2-1

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		<ul style="list-style-type: none"> ii. The Applicant shall furnish the entire in-lieu fee, as approved by Solano County, to the Trust, and a receipt to this effect shall be provided to Solano County within two years following the first delivery of power. iii. The requirements for the conserved land shall be based on a written Agreement between the Trust and Solano County, shall be binding on the Trust and shall include the following: <ul style="list-style-type: none"> a) The size of conservation land and/or easement shall be up to 68 acres in size, and shall be located within Solano County but outside the wind resource area. The location shall require County approval in consultation with the CDFG, which approval shall not be unreasonably withheld, prior to acquisition. b) The conserved land shall provide habitat similar to the project area, dominated by natural vegetation, agricultural uses, or a combination of both. The land shall also provide, to the maximum extent feasible, foraging and breeding opportunities for the species most affected by the Project, including raptors such as the golden eagle, red-tailed hawk and American kestrel. Habitat for other species such as ground-nesting songbirds is also appropriate. c) The land and/or easement shall be held, maintained, and protected in perpetuity for the conservation purposes prescribed in this mitigation measure. If the land is acquired in fee-title, an irrevocable deed restriction shall be recorded on the property to ensure that the property permanently remains in conservation regardless of ownership. d) The deed restriction or conservation easement shall be recorded, shall run with the land in perpetuity, and shall list and prohibit activities inconsistent with the purpose of supporting raptor and other avian foraging and breeding opportunities. e) Required enhancements, maintenance, management, and monitoring of the easement shall be in accordance with the habitat enhancement and management plan as prepared by the Trust and approved by Solano County in accordance with paragraph iv, below. f) The conservation land and/or easement shall be purchased, and the deed 	

Table 2.2-1

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		<p>restriction or easement shall be recorded, within 2 years following the first delivery of power, and the documentation to this effect shall be furnished to Solano County.</p> <ul style="list-style-type: none"> g) The in-lieu fee furnished by the Applicant shall be held in an interest-bearing or other appropriate investment account until expended for purposes of the land and/or easement acquisition, recordation, maintenance, monitoring and other measures under the terms of the Agreement. h) All in-lieu fees furnished by the Applicant shall be used exclusively for the conservation land or easement associated with the Project only. <p>iv. The Trust shall prepare and submit to Solano County an open space and habitat management plan for the conserved area, which shall be prepared by a qualified wildlife biologist. Approval of this plan by Solano County, in consultation with the CDFG, shall be required prior to implementation. The open space and habitat management plan shall include the following:</p> <ul style="list-style-type: none"> a) Foraging and breeding habitat protection and maintenance measures, as well as land management measures, including restrictions in the conserved area. b) Provisions for suitable foraging habitat by maintaining or enhancing natural areas, particularly grasslands and seasonal wetlands; or by maintaining compatible agricultural crops and practices. Suitable crop types for foraging raptors include those with low-lying vegetation such as alfalfa and other hays, and various row and grain crops. Unsuitable crop types that would be restricted in the easement shall include those that do not provide sufficient accessibility or have low prey densities, such as orchards and vineyards. c) Management measures that include, but are not be limited to, maintenance and protection of trees suitable for raptor nesting, including valley oaks and other native trees, appropriate grazing management practices, vegetation management, and establishment of land use restrictions and activities that may be inconsistent with the purposes of the conserved area. d) Any required enhancements in the conservation easement will be weighted according to the relative abundance of birds impacted by the Project and the 	

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>species-specific needs of those species and the type and quality of habitat that may already exist on the conserved land. At a minimum, the placement of nesting substrate for golden eagles, red-tailed hawks and American kestrels (nesting boxes, trees, perches, and/or other natural features) will be necessary, unless such habitat already exists, as determined by Solano County. The use of artificial nesting structures would be acceptable only in combination with the planting and maintenance of live trees.</p> <p>e) Habitat enhancements (if required by Solano County) shall be fully undertaken by the Trust within one year following the acquisition of the conservation land or easement by the Trust.</p> <p>d. Mitigation bank credits: As an alternate to the off-site conservation requirements described in sections b and c, above, the Applicant may purchase Swainson's hawk or other mitigation credits approved by Solano County, in consultation with CDFG for the benefit of the species of raptors impacted by the Project, equivalent to a total of up to 68 acres, based on total rotor swept area for the 34 project turbines, of established conservation land from a conservation bank with appropriate raptor habitat in Solano County, as approved by Solano County in consultation with the CDFG. The purchase of conservation easement credits shall comply with the following:</p> <p>i. Full purchase of all required credits shall be completed within two years following the first delivery of power, and a receipt to this effect shall be furnished to Solano County.</p> <p>ii. The credits shall be equivalent to the protection of up to 68 acres of similar habitat as the project area, dominated by natural vegetation, agricultural lands or a combination of both. The conserved land shall further provide, to the maximum extent feasible, foraging and breeding opportunities for the avian species most affected by the Project, including golden eagle, red-tailed hawk and American kestrel. Habitat for other species such as ground-nesting songbirds is also appropriate.</p> <p>iii. Purchase of the credits shall include costs for the design, installation and perpetual maintenance of nesting enhancements on the conservation bank property (if nesting opportunities are not already present), as required by the County in consultation</p>	

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>with the CDFG, and in coordination with the conservation bank operator. The nesting enhancement requirements shall include the following:</p> <ul style="list-style-type: none"> a) The enhancements to the conservation bank will be weighted according to the relative abundance of birds impacted by the Project and the species-specific needs of those species but shall include, at a minimum, the placement of nesting substrate for golden eagles, red-tailed hawks and American kestrels (nesting boxes, trees, perches, and/or other natural features), as determined by the County. The use of artificial nesting structures would be acceptable only in combination with the planting of live trees. All nesting enhancement measures shall be specified in the sales Agreement between the bank operator and the Applicant. b) The quantity of nesting enhancements shall be proportionate to the area of the required off-site conservation easement. c) Nesting enhancements, if required by Solano County, shall be completed by the bank operator within one year of the purchase of mitigation credits by the Applicant, and this shall be specified in the sales agreement between the bank operator and the Applicant. d) The bank operator shall be responsible for notifying Solano County upon completion of nesting enhancements, which shall be specified in the sales agreement between the bank operator and the Applicant. <p>iv. The conservation bank operator shall adequately document and report transactions as specifically provided for in their banking agreement with the appropriate resource agencies.</p> <p>Mitigation Measure BIO-8d: Reimbursement</p> <p>Upon the first delivery of power, and by the annual anniversary date of this event for each of three consecutive years thereafter, the Applicant shall furnish to the County a project review and monitoring fee, equivalent to two weeks annually of senior planner staff time at the hourly rate for direct staff services according to Solano County Department of Resource Management fee schedule in effect at the time each deposit is required. This planner shall monitor the implementation of the mitigation measures and other conditions of approval required for the Project.</p>	

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
9 Cultural Resources			
Impact CUL-1: Impacts on Known Cultural Resources	Less than Significant.	None Required	Less than Significant
Impact CUL-2: Impacts on Unknown Cultural Resources, Paleontological Resources, and Human Remains	Potentially Significant	<p>Mitigation Measure CUL-2a: Supplemental Evaluation and Cultural Surveys</p> <p>To address potential impacts on cultural, archeological, and paleontological resources, in areas that the cultural resources inventory did not previously cover and where ground disturbance will occur, the Applicant shall achieve avoidance by implementing the following measures:</p> <ol style="list-style-type: none"> a. Prior to construction, the Applicant shall identify all areas, if any, where project components are proposed that were not covered during the pedestrian surveys conducted for the Cultural Resources Inventory Report for the Proposed Montezuma II Wind Project, Solano County, California (ICF International 2010a) or other supplemental evaluation. In areas where ground-disturbance will occur for project construction, the Applicant shall provide documentation to the County confirming where surveys were previously completed versus not completed. b. In areas where ground-disturbance will occur, the Applicant shall consult and contract with a qualified archaeologist to conduct a supplemental evaluation of known cultural resources occurring within the locations not covered during the pedestrian surveys conducted for the Cultural Resources Inventory Report for the Proposed Montezuma II Wind Project, Solano County, California (ICF International 2010a), including any areas not covered due to subsequent project revisions. These areas include, but are not limited to, access roads, collection system routes, transmission line route, turbine locations, and any other areas where ground disturbance would occur that the pedestrian surveys did not cover. c. As determined by the Applicant's qualified archaeologist, supplemental evaluation of prehistoric and historic archeological sites could include, but is not limited to archival research to establish the site's place in local history and events; intensive surveys, of the revised area of impact to locate artifacts and features; and subsurface testing consisting of shovel-excavated test units in areas with less than 100% ground surface visibility. d. Prior to commencement of ground disturbance in the area requiring supplemental evaluation, the Applicant shall submit a report of findings to Solano County for the 	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>supplemental evaluation, which shall include recommendations of significance to the SHRC for the site(s). Commencement of ground disturbance shall not occur unless authorized by the County.</p> <p>e. Except in areas where the Applicant conducts additional surveys and obtains Solano County approval, the Applicant shall not conduct ground-disturbing activities in areas not previously surveyed for cultural resources, as evaluated in the pedestrian surveys conducted for the Cultural Resources Inventory Report for the Proposed Montezuma II Wind Project, Solano County, California (ICF International 2010a). In any area where the Applicant conducts a subsequent survey, the Applicant shall submit it to Solano County for review and approval and shall not commence ground- disturbing activities there until Solano County has given authorization to do so.</p> <p>f. Identify the locations of known cultural resources on construction plans and drawings (which the Applicant shall not distribute beyond project personnel for the reasons described below), place a protective barrier around known cultural deposits, and educate construction personnel on avoidance measures. Cultural resources are easily disturbed, damaged, or destroyed and are a non-renewable resource. Additionally, some cultural resources may be at risk of looting. Therefore, information pertaining to the exact location of a known cultural resource must remain confidential, as recognized by the California Public Records Act. The Applicant shall make the location of these resources available only on a need-to-know basis to avoid disturbance, damage, or destruction.</p> <p>Mitigation Measure CUL-2b: Cultural and Paleontological Monitoring and Unanticipated Discovery Procedure</p> <p>The Applicant shall minimize impacts on cultural and paleontological resources in project areas that had less than 100% ground surface visibility during the pedestrian surveys for the Cultural Resources Inventory Report for the Proposed Montezuma II Wind Project, Solano County, California (ICF International 2010a) and any subsequent surveys performed in compliance with Mitigation Measure CUL-2a by implementing the following measures:</p> <p>a. An archaeologist, who is also qualified to recognize paleontological resources, shall conduct full-time monitoring of all areas of the Project where ground-disturbing activities would occur. The monitor shall have the following qualifications:</p> <ul style="list-style-type: none"> • Working knowledge of the project area; 	

**Table 2.2-1
MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • Ability to identify the range of cultural resources known to exist in the vicinity of the Project; • Ability to recognize paleontological resources; and • Approval of Solano County at least 30 days prior to commencement of construction activities. <p>The monitor shall have the authority to temporarily stop construction activities to inspect areas where ground-disturbance has revealed potential cultural resources. The Applicant shall suspend construction activities until the archaeologist has inspected the discovery and determined required or recommended treatment for the resource(s), including but not limited to the following:</p> <ol style="list-style-type: none"> a. Evaluation and Avoidance (Cultural Resources): The evaluation of unanticipated discovery of potentially significant cultural resources may require a subsurface testing and evaluation program for cultural resources. Resources determined to be significant or potentially significant shall be flagged and avoided. If necessary, the Project shall be redesigned to avoid impacts on cultural resources. b. Recovery and Documentation (Cultural Resources): If the Applicant cannot implement site avoidance through project redesign, the Applicant shall implement a data recovery program to mitigate impacts. Appropriate treatment of significant or potentially significant cultural resource(s) includes excavation and removal of the resource(s) and curation in an appropriate facility under the direction of a qualified archaeologist. c. Evaluation and Avoidance (Paleontological Resources): If potential paleontological resources are encountered during construction, the qualified monitor shall suspend all construction activities in the vicinity of the potential resource to examine the resource and determine the proper method to avoid adverse effects on the resource. If necessary, a qualified paleontological monitor shall be consulted to assist the cultural monitor through all phases of evaluation, avoidance, recovery, and documentation, as necessary. At the monitor’s discretion, the area in the vicinity of the potential resource may be flagged for avoidance. If necessary, the Project shall be redesigned to avoid impacts on paleontological resources. d. Recovery and Documentation (Paleontological Resources): If site avoidance cannot be implemented through project redesign, the Applicant shall implement a 	

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>data recovery program to mitigate impacts. Appropriate recovery of the potential resource may include removal from the site by plaster jacketing, taking a sample of the potentially fossiliferous formation, or, if necessary, excavation. Recovered specimens that are determined to be important paleontological resources shall be prepared to the point of curation, including the washing of sediments to recover small invertebrates or vertebrates, and stabilized to mitigate impacts. In the event that recovered specimens are determined to be important paleontological resources, the Applicant shall prepare and execute a written repository agreement with an established, accredited museum repository, and all important paleontological specimens shall be curated.</p> <p>e. Unanticipated Human Remains Discovery: If human remains are discovered, work in the vicinity must stop until the County coroner can determine whether the remains are those of a Native American. If they are those of a Native American, the coroner must contact the NAHC. The NAHC will identify the person(s) it believes to be the "Most Likely Descendant" of the deceased Native American. The Most Likely Descendant would be responsible for recommending the disposition and treatment of the remains. The Most Likely Descendant may make recommendations to the Applicant and the County for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.</p> <p>2. For each of the unanticipated discovery scenarios described above, the Applicant shall immediately notify the Solano County Resource Management Department. Solano County will work with the qualified archaeologist, who shall work at the expense of the Applicant. The County shall determine whether the discovered resource can be avoided and, if impacts have not occurred, whether work can continue. If it is determined that the resource has been impacted and an assessment of its significance is required, work shall not resume until permission is received from Solano County.</p>	
10 Geology			
Impact GEO-1: Ground Shaking and Landslides	Potentially Significant	<p>Mitigation Measure GEO-1a: Conduct a Geotechnical Study</p> <p>To further reduce potential impacts associated with geological hazards, the Applicant shall:</p> <p>a. Conduct a geotechnical study to evaluate soil conditions and geologic hazards in the project area. The geotechnical study shall be signed by a California-registered geologist</p>	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>and approved by Solano County, and it shall identify the following:</p> <ul style="list-style-type: none"> i. Location of fault traces and potential for surface rupture; ii. Potential for seismically induced ground shaking, liquefaction, landslides, differential settlement, and mudflows and specific locations to be avoided where practicable; iii. Stability of existing cut-and-fill slopes; iv. Collapsible or expansive soils; v. Foundation material type; vi. Location of abandoned and active production wells to be avoided during construction; vii. Potential for wind erosion, water erosion, sedimentation, and flooding; and viii. Location and description of unprotected drainage that could be impacted by the proposed development. <p>b. Design the Project based on the results of this study, to:</p> <ul style="list-style-type: none"> i. Follow safety and building codes and other design requirements, as indicated by the site-specific geotechnical review, including the California Building Code; ii. Use existing roads to the greatest extent feasible to minimize increased erosion; iii. Design fill slopes for an adequate factor of safety, considering material type and compaction, identified during the site-specific geotechnical study; iv. Cut slopes with a slope ratio compatible with the known geologic conditions or be stabilized by a buttressed fill; v. Avoid locating roads and structures near landslide and mudflow areas. Where avoidance of landslide areas is not feasible, relatively flat cut-and-fill slopes would be constructed (2:1 horizontal to vertical, or 26 percent or flatter). Roads would be constructed with slope buttressing consisting of excavation of the unstable materials, installation of subdrains, and reconstruction of the slopes to the designed grades using the excavated materials in properly compacted fills. Stabilization of soil, where required for tower foundations, shall use the same methods. vi. Utilize setback requirements from surrounding uses, including roads or utilities 	

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>and/or diversion walls to mitigate impacts from mudflow-prone areas.</p> <p>vii. Avoid locating turbine locations, transmission lines, and associated structures astride faults, lineaments, or unstable areas; and</p> <p>viii. Depending on the findings of the site-specific geotechnical study, remove and replace shrink-swell soils with a non-expansive or non-collapsible soil, or use appropriate foundation or construction design to accommodate for the shrink/swell nature of the soils with input from the County.</p> <p>Mitigation Measure GEO-1b: Design Facilities to Withstand Ground Shaking</p> <p>To mitigate potential impacts caused by ground shaking and landslides, the Applicant shall design project facilities to withstand substantial fault movement consistent with findings of the geotechnical report required per RS.1-50 of the General Plan for wind turbine development projects. The geotechnical report shall include consideration of facility placement and design with respect to ground shaking and landslides.</p>	
Impact GEO-2: Expansive Soils and Soil Settlement	Potentially Significant	<p>Mitigation Measure GEO-2: Design Facilities to Withstand Expansive Soils and Other Soils Hazards</p> <p>To reduce potential impacts caused by expansive soils, soil compaction, and soil settlement the Applicant shall design permanent aboveground facilities to withstand changes in soil density and include consideration of facility placement and design with respect to soil shrinking and swelling potential identified in the site-specific geotechnical report required by Mitigation GEO-1a (Conduct a Site-Specific Geotechnical Study).</p>	Less than Significant
Impact GEO-3: Loss of Soil from Erosion	Potentially Significant	<p>Mitigation Measure GEO-3: Implement Erosion Controls</p> <p>The Applicant shall:</p> <ol style="list-style-type: none"> Salvage all topsoil disturbed by project activities for reuse during restoration. Monitor any disturbed areas each spring for eroding or slump areas and rehabilitate them as necessary, in coordination with Solano County. <p>Mitigation Measures HYD-2 and AIR-2.</p>	Less than Significant
Impact GEO-4: Soils Inadequate for Septic System	Potentially Significant	<p>Mitigation Measure GEO-4: Evaluate On-Site Sewage Disposal System Location</p> <p>The Applicant shall evaluate the area proposed for construction of the on-site sewage disposal system in coordination with and under permit from the Solano County</p>	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		Department of Environmental Health. The evaluation shall be performed in accordance with Chapter 6.4 of the Solano County Code, shall be performed by a California licensed professional engineer, registered environmental health specialist, geologist, or soil scientist, and shall consider the proposed design flow of the system.	
11 Greenhouse Gases			
Impact GHG-1: Greenhouse Gas Emissions	Less than Significant	None Required	Less than Significant
12 Hazardous Materials			
Impact HAZ-1: Potential Hazardous Materials Spills	Potentially Significant	<p>Mitigation Measure HAZ-1a: Proper Use and Storage of Materials</p> <p>Hazardous material inventories shall be required if chemicals stored on-site meet or exceed 55 gallons liquid, 200 cubic feet of gas and/or 500 pounds of solid, potentially hazardous materials. Hazardous material inventories shall be provided to and evaluated by the Department of Resource Management's Environmental Health Division. In accordance with the California Health and Safety Code and California Code of Regulations, the Applicant shall prepare, submit to the appropriate agency, and implement a Hazardous Materials Emergency Response Plan (Business Plan) and a Spill Prevention, Control, and Countermeasure (SPCC) Plan to avoid spills and minimize impacts in the event of a spill. The purpose of these plans is to ensure that adequate containment would be provided to control accidental spills, that adequate spill response equipment and absorbents would be readily available, and that personnel would be properly trained in how to control and clean up any spills.</p> <p>The Applicant shall also ensure the following regarding these plans:</p> <ol style="list-style-type: none"> The Applicant shall include as part of the Hazardous Materials Emergency Response Plan (Business Plan) a discussion of best practices to be used for hazardous materials management, including handling and storage procedures for all hazardous materials used on site, spill prevention procedures, access and egress routes, and notification procedures. The Applicant shall store and handle all paint, solvents, and any other hazardous materials in the manner specified by the manufacturer and in accordance with federal regulations and nationally and internationally recognized codes and standards. Small spray cans of carburetor fluid and other hazardous materials should be stored in an enclosed area in the Montezuma II Operations and Maintenance building. A material 	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>safety data sheet shall also be stored with each material.</p> <p>c. The plans shall be provided to all employees, including contractors, working on the Project, and one copy shall be available on site at all times.</p> <p>d. All employees shall be properly trained in the use and handling of these materials.</p> <p>e. Should a spill of hazardous material occur, the Solano County Department of Resource Management shall have jurisdiction over response and cleanup operations.</p> <p>f. The plans shall be certified by a professional engineer.</p> <p>g. The plans shall be submitted to the Solano County Department of Resource Management at least 30 days prior to construction.</p> <p>Mitigation Measure HAZ-1b: Waste Management Plan</p> <p>The Applicant shall prepare and implement a Waste Management Plan (Plan) in accordance with, and shall otherwise comply with, the following:</p> <p>a. The plan shall describe the storage, transportation, and handling of wastes, and emphasize the recycling of construction wastes where possible.</p> <p>b. The plan shall identify the specific landfills that would receive construction wastes that could not be recycled.</p> <p>c. The Applicant shall manage construction wastes in accordance with the Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901, et seq. and RCRA's implementing regulations at 40 CFR 260, et seq.) and other applicable state and local regulations.</p> <p>d. The plan shall be submitted to the Solano County Department of Resource Management at least 30 days prior to construction. Commencement of construction shall not occur unless authorized by the County.</p>	
<p>Impact HAZ-2: Encountering Hazardous Materials/Waste during Construction</p>	<p>Potentially Significant</p>	<p>Mitigation Measure HAZ-2: Plan for Encountering Contaminated Soil, Groundwater, Natural Gas Wells, and Other Hazards</p> <p>Prior to construction, the Applicant shall prepare, submit to the Solano County Department of Resource Management, and implement a written plan in accordance with the following:</p> <p>a. The plan shall specify proper handling, reporting, and disposal procedures to ensure proper protocols are followed in the event that hazardous materials are encountered unexpectedly during construction.</p>	<p>Less than Significant</p>

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<ul style="list-style-type: none"> b. The plan shall address the potential for unearthing or exposing buried hazardous materials or contamination or shallow contaminated groundwater during construction activities, likely within six feet of the surface. c. The plan shall detail the steps that the Applicant or its contractor shall take to prevent the migration of contaminated soils or other materials off site and the remedial action that will be undertaken. d. The plan shall be subject to review and approval by the Solano County Department of Resource Management prior to construction. e. The Applicant shall provide worker awareness training based on the plan prior to construction. f. At a minimum, construction crews shall stop work and notify the Department of Resource Management, and appropriate federal and State agencies, immediately after encountering any hazards. g. The Applicant shall review applicable maps of abandoned natural gas well locations prior to construction to ensure that no ground-disturbing activities will be conducted and no structures will be built over or in proximity to an abandoned well location. h. If any wells are inadvertently uncovered or damaged during excavation or grading, the Applicant shall immediately contact DOGGR's Sacramento District office to obtain information on the requirements for and approval to perform remedial operations, which the Applicant will perform upon DOGGR approval. i. A licensed waste disposal contractor shall remove the hazardous materials, once identified, from the site, according to federal, state, and local requirements. 	
13 Hydrology and Water Quality			
Impact HYD-1: Impacts on Wetlands, Streams, and Waters of the United States	Potentially Significant	Mitigation Measures BIO-2a and BIO-2b	Less than Significant
Impact HYD-2: Water Quality Degradation	Potentially Significant	Mitigation Measure HYD-2: Storm Water Pollution Prevention Plan (SWPPP) A SWPPP is required by law in California as part of the Construction General Permit. Mitigation Measure HYD-2 establishes project-specific requirements for the SWPPP. The Applicant shall develop the SWPPP in consultation with Solano County Public Works Engineering (Public Works).	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>If earthmoving construction activities occur during the restrictive Solano County rainy season between October 15th and April 15th, the Applicant shall obtain prior written approval from the Director of Resource Management. Approval of such wet weather construction activities would be dependent and conditional upon weather, soil conditions, monitoring by the County, and the Applicant's adherence to requirements set by the Department of Resource Management. The Applicant shall also coordinate the construction schedule with Public Works with the goal of identifying construction sites in areas of steep terrain or otherwise high erosion risk and prioritizing those sites for completion before October 15.</p> <p>The SWPPP shall include general erosion control measures for the summer and winter season. The SWPPP shall include the following design elements for general summer construction to minimize erosion potential and subsequent wash-down to low-lying wetland and stream areas:</p> <ol style="list-style-type: none"> a. The Applicant shall apply for, secure, and abide by the conditions of a County grading permit for any and all work within the project limits, or construction associated with the Project. b. Ground disturbance associated with construction of project facilities shall occur at least 100 feet away from streams and wetlands to avoid runoff to these areas, unless approved by the Department of Resource Management. Per Mitigation Measure BIO-2a, the Applicant shall adhere to setbacks identified in Mitigation Measure BIO-2a for wetlands, streams/drainages, vernal pools, and ponds. c. Alignment and location of the proposed access roads shall follow the existing land contours and ridgelines. A minimum amount of earth shall be moved to allow for the proposed 35-foot temporary width for access roads. Tower pads shall be similarly constructed; d. Graded areas and stockpiled soil shall be stabilized to prevent wind or water erosion; e. Cut slopes shall have a slope ratio compatible with the known geologic conditions or be stabilized by a buttressed fill, or be constructed as recommended in the geotechnical report that shall be developed pursuant to Mitigation Measure GEO-1b; f. Rock channel protection shall be employed at points where drainage channels exceed 5% and the soil is prone to erode; 	

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>g. Drainage culverts shall be sized and located to minimize erosion and maximize storm runoff away from the project site. Culverts placed in drainage ways along County roads shall be designed for 100-year storms;</p> <p>h. During construction, vegetation removal and grading shall be limited to the minimal area necessary and restricted to areas required for construction only;</p> <p>i. Erosion control structures shall be placed between disturbed soil and drainage structures or areas prior to the start of the rainy season; and</p> <p>j. The grading, construction, and drainage of roads shall be carried out to maintain any downstream water quality.</p> <p>k. In addition, the SWPPP would include the following design elements that would apply during the moratorium:</p> <p>i. Erosion control BMPs such as scheduling, preservation of existing vegetation, hydraulic mulch, hydroseeding, soil binders, straw mulch, geotextiles and mats, wood mulching, earth dikes and drainage swales, velocity dissipation devices, slope drains, streambank stabilization, and polyacrylamide.</p> <p>ii. Sedimentation control BMPs such as silt fences, sediment basins, sediment traps, check dams, fiber rolls, gravel bag berms, sand bag barriers, straw bale barriers, and chemical treatment.</p> <p>iii. Cover and berm loose stockpiled construction materials that are not actively being used.</p> <p>iv. Discontinue the grading and other ground disturbing activities during precipitation or when told to do so by the Department of Resource Management.</p> <p>Mitigation Measure BIO-1, HAZ-1a and HAZ-1b</p>	
Impact HYD-3: Increased Rate of Storm Water Runoff from Permanently Disturbed Surfaces	Less than Significant	None Required	Less than Significant
Impact HYD-4: Water Use	Less than Significant	None Required	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
14 Land Use			
Impact LU-1: Conflicts with Applicable Land Use Plans and Policies	Potentially Significant	<p>Mitigation Measure LU-1: Provide Public Road, Property Line, Residential, and Transmission Facility Setback Waivers</p> <p>To ensure that the Project is consistent with Solano County setback requirements, the Applicant shall comply with the following measures:</p> <ol style="list-style-type: none"> a. Where a turbine setback of less than three times the total turbine height from a public road is proposed, prior to construction the Applicant shall submit to the Department of Resource Management evidence that the affected turbines meet or exceed the minimum setback requirement of 1.2 times the maximum turbine blade throw distance recommended by the hazards analysis report (Epsilon 2010) and approved by the Public Works Engineering Division. Such evidence shall include, but not be limited to, certification of the elevation of the turbine base and adjacent road. b. Where a turbine setback of less than three times the total turbine height from an adjacent property line, other than a public road, is proposed, prior to construction the Applicant shall: <ol style="list-style-type: none"> i. Submit to the Department of Resource Management evidence of the following: <ol style="list-style-type: none"> a) That no residence or other sensitive residential structure or use is presently located within three times the turbine height from the affected turbine, on either side of the property line; b) That the minimum setback distance equivalent to one turbine blade length plus 5 feet (unless otherwise required by California Building Code) is provided for interior property lines within the project area; c) That the minimum setback distance equivalent to one turbine blade length plus 20 feet is provided for exterior property lines defining the project boundary; and d) That overall an adequate setback will be provided to avoid hazards to the adjacent landowner, as determined by the County. ii. If there is a residence or other sensitive residential structure or use presently located within three times the turbine height from the affected turbine, on either side of the property line, the minimum turbine setback shall be 1.2 times the maximum turbine blade throw distance, as recommended by the hazards 	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>analysis report (Epsilon 2010).</p> <p>c. Where a turbine setback of less than three times the total turbine height from a residence is proposed, prior to construction the Applicant shall: submit to the Department of Resource Management evidence that the affected turbines meet or exceed the minimum setback requirement of 1.2 times the maximum turbine blade throw distance as recommended by the hazards analysis report (Epsilon 2010).</p> <p>d. Where a turbine setback of less than three times the total turbine height from an aboveground electrical transmission facility or railroad is proposed, prior to construction the Applicant shall submit to the Department of Resource Management evidence that the affected turbines meet or exceed the minimum setback requirement of 1.2 times the maximum turbine blade throw distance as recommended by the hazards analysis report (Epsilon 2010). Alternatively, a lesser setback may be allowed by the Department of Resource Management, based on the written consent of the asset owner.</p> <p>e. The Project shall comply with the setback criteria prescribed in Mitigation Measure SA-1b, which allows for certain reduced setbacks.</p> <p>f. Should an alternative turbine be used that is not adequately assessed in the hazards analysis report (Epsilon 2010), as determined by the County, any required setback that is a function of maximum blade throw distance shall be established based on the recommendations of a qualified professional engineer for the turbine model and location, at the Applicant's expense, subject to approval of the Director of Resource Management.</p> <p>g. Prior to construction of the turbine foundation at locations where a reduced setback is proposed, the Applicant shall furnish to the Department of Resource Management a written waiver(s) from the affected adjacent property owners consenting to the turbine(s) being installed with a reduced setback on the abutting property. In the case of a reduced public road setback, the adjacent property owner is the owner of property on the opposite side of the road. The waiver shall be subject to County approval, be irrevocable, and recorded with the Solano County Recorder prior to installation of the affecting turbine.</p>	

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact LU-2: Physically Divide a Piece of Property or Established Community	Less than Significant	None Required	Less than Significant
Impact LU-3: Induce Substantial Population Growth in an Area, Either Directly or Indirectly and/or Displace Substantial Numbers of Existing Housing or Numbers of People	Less than Significant	None Required	Less than Significant
Impact LU-4: Inhibit Future Land Use of the Project Area	Potentially Significant	<p>Mitigation Measure LU-4: Guarantee Bond or Corporate Surety</p> <p>To ensure that future land uses in the Project area are not inhibited after the Project is decommissioned, the Applicant shall:</p> <ul style="list-style-type: none"> a. Set aside decommissioning funds in the form of a surety bond or other bond acceptable to the County as a specific project budget item; b. Execute the surety bond or other County-accepted bond on behalf of the Project in favor of the County, with an independent administrator of such funds, to cover all decommissioning costs in an amount approved by the County; and c. Maintain the bond for the life of the Project and through any transfer of ownership. 	Less than Significant
15 Noise			
Impact NOI-1: Short-term Increase in Noise Levels during Construction	Potentially Significant	<p>Mitigation Measures NOI-1: Reduce Construction Noise</p> <p>To reduce noise levels associated with construction of the Montezuma II project, the Applicant shall comply with the following measures:</p> <ul style="list-style-type: none"> a. Siting and Design Measures: Avoid use of the access road adjacent to residence 13 if possible. If alternate access is not possible, perform one of the following measures to reduce short term construction traffic noise at this location: <ul style="list-style-type: none"> i. Relocate the access road to at least 250 feet from the residence and reduce construction traffic speed to 10 mph within 1,000 feet of the residence. ii. Provide to the County a written waiver from the affected property owner, which shall: 1) be subject to County approval and shall specify that the property owner consents to allowing project construction activities that would place their residence in exceedance of exterior daytime noise limits (with full disclosure of the estimated levels at the residence) and waives their right to any noise mitigation by the wind 	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>energy operator during project construction and 2) be recorded with the Solano County Recorder, be binding on the property for the duration of construction, and be irrevocable.</p> <p>b. Equipment Care: Equipment engines shall be covered, and the Applicant shall ensure that mufflers are in good working condition. This measure can reduce equipment noise by 5 to 10 dBA (EPA 1971).</p> <p>c. Restricted Work Hours: Work hours shall be restricted for all noise generating construction activities from 7:00 a.m. to 7:00 p.m. Monday through Friday, and from 8:00 a.m. to 6:00 p.m. on Saturdays and Sundays.</p> <p>d. Equipment Location: All stationary equipment such as compressors and welding machines shall be shielded and located away from noise receptors to the extent practicable.</p> <p>e. Pneumatic Tools: Pneumatic tools to be used within 1,500 feet of a residence shall have an exhaust muffler on the compressed air exhaust. This shall be included in the construction specifications.</p> <p>f. Prior to issuance of any grading permit or building permit, whichever occurs first, for the Project, the Applicant shall prepare a Construction Noise Complaint Plan and submit it to the Solano County Department of Resource Management for approval. The Construction Noise Complaint Plan shall detail how the Applicant will respond to construction noise complaints, keep the County apprised of the complaints, and document the resolution of those complaints.</p>	
<p>Impact NOI-2: Long-term Increase in Noise during Operation of the Montezuma II Wind Energy Project</p>	<p>Potentially Significant</p>	<p>Mitigation Measure NOI-2a: Reduce Operational Noise</p> <p>The Applicant shall reduce or avoid impacts of operational noise by configuring the proposed Montezuma II project such that noise generated during operation of the wind turbines will be maintained at or below a CNEL of 50 dBA (or the equivalent steady A-weighted 44 dBA) at residences through implementation of the following measures:</p> <p>a. Based on implementation of the turbine configuration evaluated in Figure 15.2-1, noise is expected to exceed the equivalent steady A-weighted 44 dBA and the CNEL 50 dBA at residences 11, 12, 13, and 14. Prior to obtaining a building permit for the affecting wind turbine or otherwise as noted, the Applicant shall implement in their entirety one or more of the following actions, enumerated as subparagraphs i. thru iii., to comply</p>	<p>Less than Significant</p>

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>with County noise standards:</p> <p>i. Relocate turbines or employ noise restricted operating modes as follows:</p> <ul style="list-style-type: none"> • For residence 11, relocate turbine 1 to at least 2,600 feet from residence 11, or employ a -1 dB noise restricted mode at turbine 1. • For residence 12, relocation turbines 1 and 8 at least 2,500 feet from residence 12, or employ a -1 dB noise restricted mode at turbines 1 and 8. • For residence 13, relocate turbines 7, 13, 14, 15, 16, 20, 21, and 22 to at least 3,000 feet from residence 13, or employ a -5 dB noise restricted mode at turbines 7, 13, 14, 15, 16, 20, 21, and 22 and relocate turbines 13, 14, and 21 at least 2,000 feet from residence 13. • For residence 14, relocated turbines 14, 15, 16, and 17 at least 3,800 feet from residence 14, or employ a -3 dB noise restricted mode at turbines 14, 15, 16, and 17. <p>ii. Provide to the County additional attenuation analyses, based on terrain effects, nighttime wind speed, or other considerations, demonstrating that the proposed configuration will not exceed the 50 dBA CNEL or equivalent 44 dBA steady A-weighted noise level criteria at any residences.</p> <p>iii. Prior to the beginning construction of foundations for the affecting turbines, the Applicant shall provide the County with a written waiver from the property owner, which shall: 1) Be subject to County approval and shall specify that the property owner consents to allowing construction of one or more turbines that would place their residence in exceedance of exterior noise limits (with full disclosure of the estimated levels at the residence) and waives their right to any noise mitigation by the wind energy operator after the turbine(s) become operational; and 2) Be recorded with the Solano County Recorder, be binding on the property as long as the turbines are in operation, and shall be irrevocable.</p> <p>b. Prior to obtaining a building permit for the affecting wind turbine(s), provide the County with a plan that is subject to County approval for committing to operational limitations or adjustments (e.g., partial “feathering” of the turbine blades) during nighttime hours or other provisions that would be implemented based upon noise complaints from nearby residents. Such limitations would provide a basis for reducing the CNEL penalty imposed for nighttime noise. The plan would not be implemented</p>	

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>unless field measurements by the Applicant verify that noise from nearby turbines substantially influences noise levels at the residence and exceeds the 50 dBA CNEL (or equivalent steady A-weighted 44 dBA) criterion and the County has reviewed and approved these measures.</p> <p>c. If the Applicant modifies the turbine configuration subsequent to what has been evaluated in this EIR, there is potential for the 50 dBA CNEL noise criteria (or the equivalent steady A-weighted 44 dBA) to be exceeded at residences other than residences 11, 12, 13, and 14. In the event of the Applicant modifying the turbine configuration beyond that evaluated in this EIR, the Applicant shall, prior to obtaining a building permit for any potential affecting wind turbine(s):</p> <ul style="list-style-type: none"> i. Conduct a supplemental noise analysis and provide an acoustical report to the County that evaluates predicted noise levels under the modified configuration relative to applicable noise criteria; and ii. If noise levels at any residences are predicted to exceed the criteria, the Applicant shall implement either measure a.i, a.ii, or a.iii above. (i.e., conduct further noise analysis to demonstrate noise levels would not be exceeded, obtain a waiver from the landowner, and/or relocate the affecting turbines). <p>Mitigation Measure NOI-2b: Operational Noise Complaint Plan</p> <p>To reduce and prevent impacts associated with construction and operational noise, the Applicant shall implement the following measures:</p> <ul style="list-style-type: none"> a. Prior to issuance of a building permit for the first wind turbine in the Montezuma II project, the Applicant shall submit an Operational Noise Complaint Plan to the Solano County Department of Resource Management for approval. The plan shall detail how the Applicant will respond to operational noise complaints, keep the county apprised of the complaints, and document the resolution of those complaints. The Construction and Operational Noise Compliant Plans may be consolidated into a single plan that addresses both construction and operation. b. Upon receipt of a reasonable complaint alleging that noise from the operation of the turbines is causing noise levels at the exterior of a residence to exceed the 50 dBA CNEL or 44 dBA steady noise level, except where a noise waiver has been recorded on the affected property: <ul style="list-style-type: none"> i. The Solano County Building Official or the County Sheriff shall report the matter 	

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>to the Applicant and the Solano County Department of Resource Management.</p> <p>ii. The Solano County Department of Resource Management shall commission, at the Applicant's expense, a qualified acoustical firm to conduct a site-specific study to verify whether noise levels routinely exceed the 50 dBA CNEL criterion at the residence and whether these levels can be attributed, at least in part, to the operation of specific Montezuma II turbines. All findings shall be consolidated into a single report. The acoustical firm shall be authorized to require that the Applicant cease operation of the specified turbines at such times as may be necessary for a period not to exceed 10 days to verify that the noise levels at the residence would be noticeably reduced (3 dB decrease in sound levels) by modifications to or restrictions on the operation of the specified Montezuma II turbines. Upon verification of the complaint, the qualified firm shall identify the circumstances and measures that could be undertaken to ensure conformance with the 50 dBA CNEL (or 44 dBA equivalent) standard.</p> <p>iii. For 30 days after the receipt of the verification of the complaint and mitigation recommendations, the Applicant shall attempt in good faith to negotiate a resolution of this matter with the party making the allegation and shall report any such resolution to the Solano County Department of Resource Management in a timely manner.</p> <p>iv. If a resolution of the complaint is not achieved within 30 days, and as determined by the Solano County Department of Resource Management, the Applicant shall implement one or more of the recommendations specified in the acoustical report (Appendix F) to achieve conformance with the applicable standards, which may include turbine relocation.</p> <p>The Applicant and the County would not be responsible for responding to turbine-related noise complaints affecting a property where the property owner, at the time of project construction, recorded on the property and irrevocable noise waiver, allowing exterior noise from turbines in excess of Solano County's noise thresholds.</p>	
15 Public Services and Utilities			
Impact PSU-1: Public Services	Potentially Significant	Mitigation Measures SA-2b, SA-3 and SA-5a	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Impact PSU-2: Public Utilities	Less than Significant	None Required	Less than Significant
Impact PSU-3: Interference with Microwave Transmissions	Potentially Significant	<p>Mitigation Measure PSU-3: Notification and Siting</p> <p>In order to reduce potential impacts on microwave transmissions and radio frequency facilities, prior to construction the Applicant shall:</p> <ol style="list-style-type: none"> a. If the Applicant revises turbine locations, conduct a revised study and prepare a report on the effect upon nearby FCC licensed microwave and fixed station radio frequency facilities due to the construction of the Project. The report shall describe the results of the study and analysis to determine the locations of FCC microwave and fixed station radio frequency facilities that may be adversely impacted as a result of the construction of wind turbines in the project area. <ol style="list-style-type: none"> i. The revised study and report shall be prepared by a qualified professional telecommunications and technology design firm with experience evaluating impacts on microwave transmissions and radio frequency facilities. ii. The report shall be based on the final siting plan of the project's turbines and shall describe impact zones and recommendations concerning individual wind turbine siting to avoid impacts. iii. The study shall also evaluate the effect of proposed turbines on radio communication at Sandy Beach Park. iv. If specific turbines are found to adversely impact FCC microwave facilities, the turbines shall be re-sited to avoid impacts. v. If turbines are found to substantially degrade fixed station radio frequency facilities or radio communication at Sandy Beach Park, they shall be re-sited to ensure interference is reduced to acceptable levels. Alternatively, the Applicant shall upgrade or relocate affected radio transmitter equipment to ensure interference is reduced to acceptable levels. vi. All report results shall be submitted to Solano County at least 30 days prior to construction, and are subject to review and approval by the County. b. No turbine or meteorological tower shall be installed in any location along the major axis of an existing microwave communications link. Wind turbines and meteorological towers shall be sited outside of microwave paths to avoid potential 	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>conflict with microwave communication signals.</p> <ul style="list-style-type: none"> i. The Applicant shall confirm the geographic coordinates and heights of the microwave antennas through a land survey to confirm that all turbine locations would conform to the applicable provisions of the California Building Code with respect to WCFZ. ii. Turbines may require an adjustment in location depending upon the results of the land survey. Prior to construction, the Applicant shall submit a report by a licensed engineer based on the revised turbine locations to the County verifying that no turbines would be located within an existing microwave path. iii. No turbine or meteorological tower shall be installed in any location where its proximity with other fixed broadcast, retransmission or reception antenna for radio, television, internet service, wireless phone, or other communications systems would produce EMI with the signal transmission or reception of such facilities. <p>c. Prior to the issuance of building permits, the Applicant shall:</p> <ul style="list-style-type: none"> i. Provide notification of proposed locations and heights of turbine and meteorological towers to all owners of frequency-based communication stations, towers, and microwave station owners as recorded by the FCC, television and radio station owners, and owners of any other unrecorded but physically observed cellular, PCS, or other mobile communications service antennas within 2 miles of the Project. ii. Notify all land mobile licensees identified in the microwave study by letter and describe the specific turbine locations and the estimated project impact. iii. Search all cellular and PCS antennas on site since their locations may not be tabulated in the available FCC records. iv. The Applicant shall resolve any anomalies identified by receiving equipment modifications or installation of satellite dishes in appropriate cases. Additional options for resolution include installation of a higher-gain outside antenna to increase the strength of the direct wave. <p>d. In the event that a complaint is received regarding microwave or land mobile pathway interference, the Applicant shall appropriately and satisfactorily resolve receiver interference through coordination with owners of frequency-based communication</p>	

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		stations and towers and is responsible for any remediation necessary to restore the affected communication signal at a minimum to pre-turbine or meteorological tower installed levels. Possible actions include installation of high-performance antennas at nearby microwave sites, if required.	
Impact PSU-4: Interference with Television or Radio Reception	Potentially Significant	Mitigation Measure PSU-3	Less than Significant
Impact PSU-5: Navigational Systems Interference	Less than Significant	None Required	Less than Significant
17 Recreation			
Impact Rec-1: Impacts on the Quality of Recreational Experience	Less than Significant	None Required	Less than Significant
Impact Rec-2: The Montezuma II Wind Energy Project Could Conflict with Future Plans for a Regional Park near the Western Railway Museum	Less than Significant	None Required	Less than Significant
18 Safety			
Impact SA-1: Blade or Blade Fragment Throw and Tower Failure	Potentially Significant	<p>Mitigation Measure SA-1a: Wind Turbine Design and Safety Mechanisms</p> <p>To prevent rotor and tower failure and avoid potential impacts, the Applicant shall incorporate the following measures into the project design:</p> <ol style="list-style-type: none"> Turbines shall conform to international standards for wind turbine generating systems, including IEC 61400-1: Wind Turbine Generator Systems – Part I: Safety Requirements (1999) and shall be certified according to these requirements, to assure that the static, dynamic, and defined life fatigue stresses of the blade would not be exceeded under the combined load expected in the Montezuma II Wind Project Area. The Applicant shall adhere to state and local building codes during turbine installation on the foundations, which would also minimize the risk of rotor and tower failure. To prevent safety hazards due to over-speed, the Applicant shall install a comprehensive protection system on each turbine to prevent excess rotor speed and turbine and tower failures, such as rotor speed controlled by a redundant pitch control system and a backup disk brake system. 	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>d. To prevent safety hazards due to tower failure, the Applicant shall:</p> <ul style="list-style-type: none"> i. Design the turbine towers and foundation to withstand wind speed of 100 miles per hour at the standard height of 30 feet; ii. Engineer the turbines according to California Building Code Earthquake Standards; and iii. Ensure that all installed equipment shall meet the standards of NEMA, ANSI, and Cal-OSHA. <p>e. To prevent safety hazards due to electrical failure, electrical systems and the substation shall:</p> <ul style="list-style-type: none"> i. Be designed by California-registered electrical engineers; and ii. Meet the latest editions of national electrical safety codes and other national standards, including NEMA, ANSI, and Cal-OSHA standards and the California Electrical Code. <p>f. The Applicant shall provide the County with manufacturer's specifications for the wind turbines, specifying that all turbines are equipped with a braking system, blade pitch control, and/or other mechanism for rotor control and shall have both manual and automatic over-speed controls.</p> <p>Mitigation Measure SA-1b: Project Turbine Siting</p> <p>To reduce potential impacts associated with turbine failure, the Applicant shall site turbines and meteorological towers an appropriate distance from public roads, railroads, transmission facilities, property lines, and residences to protect the public should a turbine or meteorological tower fail as follows:</p> <ul style="list-style-type: none"> a. Prior to construction of the turbine or meteorological foundation, the Applicant shall furnish the Solano County Department of Resource Management with the final planned location and elevations of turbines and meteorological towers and the adjacent public roads, railroads, property lines, residences, and above ground electrical transmission facilities to review conformance with Solano County's setback requirements. b. Wind turbines and meteorological towers shall be located as follows: <ul style="list-style-type: none"> i. 1,285 feet, based on three times (3x) the total turbine height from property lines and residences, and from public roads, railroads, and above ground transmission facilities, as measured to their right-of-way or easement, as applicable, unless a reduced setback 	

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>is otherwise allowed by the General Plan;</p> <p>ii. At least one turbine blade length plus 10 feet from any other structure on the property; and</p> <p>iii. Meteorological towers shall be setback a minimum of 1.25 times (1.25x) the maximum height of the tower (i.e., the height of the tower plus 25%) from property lines and residences, and from public roads, railroads, and above ground electrical transmission facilities as measured to their right-of-way or easement, as applicable.</p> <p>c. Where a reduced turbine setback is allowed as prescribed in paragraph b.i., above, the Applicant shall comply with the alternative minimum setback requirements prescribed in Mitigation Measure LU-1.</p>	
<p>Impact SA-2: Electrical Shock and Accidents</p>	<p>Potentially Significant</p>	<p>Mitigation Measure SA-2a: Install Grounding and Shut-off Mechanisms on Project Facilities</p> <p>To protect workers from electrical shock and other work-related accidents the following measures shall be implemented:</p> <p>a. Grounding shall be designed and implemented to the standards of the Institute of Electrical and Electronics Engineers.</p> <p>b. All turbines and utility lines shall be equipped with automatic and manual-disconnect mechanisms.</p> <p>c. Two circuit breakers that can be both manually and automatically operated shall be provided between each turbine and the connection to the electrical grid.</p> <p>d. The electrical systems and substations shall be designed by California-registered electrical engineers and shall meet the latest editions of national electrical safety codes and other national standards, including NEMA, ANSI, and Cal-OSHA standards and the California Electrical Code.</p> <p>e. These mechanisms shall be installed and tested before interconnection.</p> <p>Mitigation Measure SA-2b: Health and Safety Plan</p> <p>Prior to construction, the Applicant shall develop a project-specific Health and Safety Plan for implementation during construction and operation to minimize the potential for work-related accidents. The Health and Safety Plan shall include emergency contacts, location of the nearest hospital, and proper emergency protocol. The plan shall also include a section</p>	<p>Less than Significant</p>

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		that outlines the Applicant training procedures for its operations personnel. The Applicant shall be responsible for ensuring that all personnel receive adequate training and that new employees receive supervision by trained personnel.	
Impact SA-3: Accidents Involving the General Public (Other Than Turbine Failure)	Potentially Significant	<p>Mitigation Measure SA-3: Limit Public Access to the Project Area</p> <p>The Applicant shall minimize accidents involving the public and impacts on the public by limiting access to the project area. The Applicant shall limit access to the project area by:</p> <ul style="list-style-type: none"> a. Installing locking gates where new access roads constructed within the project area connects to existing public access roads. To further limit access from public roads the Applicant shall: <ul style="list-style-type: none"> i. Only provide keys to authorized personnel and landowners, thereby preventing access by the public; ii. Post and maintain no-trespassing signs at the entrance gates; and iii. Post and maintain signs at the entrance gates noting the existence of high-voltage and underground cable on the site and warning people of electrocution hazards; b. Installing locks on the turbine towers and the substation, and the Applicant shall: <ul style="list-style-type: none"> i. Only provide keys to authorized personnel, thereby preventing access by the public; ii. Install a sign with high-voltage warning at the substation; c. Ensuring that all facilities in a. and b. above are maintained, locked, and/or otherwise secured at all times to discourage unauthorized access; d. In addition to existing agricultural fencing that is already in place, installing additional fencing as requested by the landowner and agreed to in landowner agreements, which will further inhibit public access; e. Providing training for project personnel to monitor for unauthorized individuals and activities during construction activities and throughout operation and to report such observations to the project superintendent on duty; f. During operation of the Project, long-term staff shall conduct periodic surveillance of the project area to identify access or signs of access (e.g., vandalism) by unauthorized individuals and shall report such incidents to the project superintendent on duty. The Applicant shall rectify such incidents (e.g., installing additional locks or increasing intervals of surveillance) and, as necessary, work with Solano County and local 	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		enforcement agencies in doing so; and g. Ensuring that all tower-climbing apparatus and blade tips of the wind turbines shall be no closer than fifteen feet from ground level unless enclosed by a 6-foot fence.	
Impact SA-4: Impacts from Shadow Flicker	Less than Significant	None Required	Less than Significant
Impact SA-5: Impacts From Wildfires	Potentially Significant	<p>Mitigation Measure SA-5a: Wind Project Grass Fire Control Plan</p> <p>To minimize the potential for grass fires, the following shall be required:</p> <p>a. Prior to commencing construction, the Applicant shall develop and implement a Grass Fire Control Plan for use during construction and operation. The Grass Fire Control Plan shall include notification procedures and emergency fire precautions.</p> <p>b. During project construction, the Applicant shall comply with the following:</p> <ul style="list-style-type: none"> i. All internal combustion engines, stationary and mobile, shall be equipped with spark arresters; ii. Spark arresters shall be in good working order; iii. Light trucks and cars with factory-installed (type) mufflers, in good condition, may be used on roads where the roadway is cleared of vegetation; iv. No smoking signs and fire rules shall be posted on the project bulletin board at the contractor's field office and in areas visible to employees during the fire season; and v. Equipment parking areas and small stationary engine sites shall be cleared of all extraneous flammable materials. <p>c. During project operation, the Applicant shall comply with the following:</p> <ul style="list-style-type: none"> i. Warning signs for high-voltage equipment shall be posted; ii. Brush and other dried vegetation around pad-mount transformers and riser poles shall be cleared annually; iii. Employees shall be trained in using extinguishers and communicating with the Montezuma Fire Protection District; and iv. Accommodate inspections by the Montezuma Fire Protection District. <p>d. The Grass Fire Control Plan shall be submitted to the County for approval. The Applicant shall not commence construction activities until the County has approved the</p>	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>plan.</p> <p>e. The Applicant shall provide a copy of the Grass Fire Control Plan, along with maps of the Montezuma II Wind Energy Project Area and roads, to the Montezuma Fire Protection District for their approval.</p> <p>f. The Applicant shall provide the Montezuma Fire Protection District access to its water storage tanks, if needed.</p> <p>Mitigation Measure SA-5b: Comply with Fire Codes Requirements for Access Roads.</p> <p>In order to provide safe access for fire apparatus in the event of fire, and reduce potential fire impacts to a less than significant level, the Applicant shall design and construct access roads within the project boundaries in compliance with applicable Fire Code standards as determined by the Montezuma Fire Protection District. Prior to construction, the Applicant shall submit project plans to the Montezuma Fire Protection District for review and approval. No grading permit shall be issued until such time as the County has received written approval of the Project, including access road plans, from the Fire District.</p>	
Impact SA-6: Safety Impacts Related to Accidentally Damaging or Uncovering Gas Storage Wells in the Project Area	Potentially Significant	Mitigation Measure HAZ-2	Less than Significant
19 Transportation			
Impact TRA-1: Temporary Increase in Traffic during Construction	Potentially Significant	<p>Mitigation Measure TRA-1: Develop a Traffic Control Plan and Transportation Plan for the Project</p> <p>The Applicant shall develop a Traffic Control Plan and Transportation Plan for the project as follows:</p> <p>a. The Traffic Control Plan shall be based on the project's final engineering design, be prepared by a registered professional engineer, and be submitted for review and approval to the Solano County Public Works Engineering Division (for affected County roads) and to Caltrans (for affected state highways) at least 45 days prior to construction. The Traffic Control Plan shall:</p> <p>i. Describe the location, schedule, and safety procedures for lane and road closures as well as the hours, routes, and safety and management requirements;</p>	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<ul style="list-style-type: none"> ii. Describe how the applicant shall implement the following measures: <ul style="list-style-type: none"> a) Traffic safety measures, such as warning signs on approaches to areas with construction activity (i.e., “Construction Traffic Ahead” or equivalent) to prevent hazards to motorists, bicyclists, and pedestrians; b) Scheduling of construction traffic to avoid peak traffic hours; c) Procedures for coordination with local jurisdictions to notify residents of alternate traffic routes and provide other notifications, as required by Solano County or other transportation agencies (e.g., Caltrans); d) Best Management Practices to reduce traffic impacts (e.g., identifying parking areas to be located in approved work areas) and to minimize trips on local roads. For example, construction equipment would be delivered directly to the construction location rather than to the staging area and carpooling would be promoted; e) Ensuring access for emergency vehicles at all times; f) Providing temporary access to businesses, residences, and/or pedestrians during construction; g) Opening lanes as soon as possible to restore normal traffic patterns; h) During the design phase, coordination by the applicant with other utilities service providers to ensure conflicts with other utilities are minimized; i) Designing and constructing new roads to accommodate traffic and minimize the potential for accidents, in accordance with all applicable Caltrans and Solano County specifications, including appropriate slopes, sufficient turning radii, and appropriate roadway depth; and j) After construction, restoring the routes to original conditions; b. The applicant shall also develop, provide to Solano County Public Works, Engineering Division, and adhere to a Transportation Plan that addresses the following issues: <ul style="list-style-type: none"> i. Describe the location, schedule, and safety procedures for lane and road closures as well as the hours, routes, and safety management requirements. ii. Transport of all equipment to the site; iii. Transport of all equipment during equipment removal; iv. Transport of all building materials; 	

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<ul style="list-style-type: none"> v. Circulation, itemizing how many of each vehicle type shall use which roads; vi. Responsibilities; vii. Security bonding; viii. Vehicular traffic types and amounts necessary; ix. Extra-legal loads; x. Signage; xi. Road Maintenance; and xii. Obtaining required grading, transportation, and encroachment permits from Solano County and Caltrans. 	
Impact TRA-2: Temporary Disruptions to Traffic Flow during Construction	Potentially Significant	Mitigation Measure TRA-2: Minimize Lane Closures and Provide Alternative Access for the Project To minimize impacts on traffic caused by temporary lane closures, if required, the Applicant shall: <ul style="list-style-type: none"> a. Implement the procedures identified in the Traffic Control Plan to provide alternate access to residents/businesses and emergency vehicles and reopen roads as soon as possible; b. Obtain advance approval from Solano County Public Works of any lane closure; c. Allow lane closures only during workdays (no overnight lane closures shall be allowed) and limit them to the minimum amount of time needed to complete necessary activities, with consecutive daily closure of no more than two weeks for any road, thereby preventing impacts to adjacent land uses; and d. Provide at least one access lane or alternate access at all times. 	Less than Significant
Impact TRA-3: Damage to Existing Roads Due to Construction, Maintenance, and Operation	Potentially Significant	Mitigation Measure TRA-3: Minimize Road Damage and Repair Roads To minimize damage to existing roads and access roads installed for initial Project construction, the Applicant shall: <ul style="list-style-type: none"> a. Use regulation-sized vehicles, except for specific construction equipment, which may haul oversized loads; b. Obtain local hauling permits from appropriate agencies prior to construction and adhere to any conditions in these permits; c. Apply for, secure, and abide by the conditions of an encroachment permit for any and 	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>all work within the County right-of-way, which may further define and qualify the road repair requirements of the County;</p> <p>d. Enter into a secured agreement with Solano County to ensure that any existing County roads impacted by the Project will be repaired and improved to accommodate the increased traffic from the construction, repair, replacement and long term operation of the turbines. All required repairs and improvements will be completed to the satisfaction of Solano County. The same shall be required for any road damage or modification associated with the decommissioning of wind energy project; e.</p> <p>e. Post a security bond to cover the costs of road maintenance during construction. The Applicant shall repair any damage to roads and restore roads to condition in effect prior to commencement of construction or per requirements of the state and/or Solano County. Should the Applicant not perform such repairs to Solano County's satisfaction, the County reserves the right to perform the repair work at the cost of the Applicant; and</p> <p>f. Remove or reduce new access roads installed for initial project construction to the minimum width necessary for maintenance and/or emergency access, and the disturbed areas shall be restored by the facility owner to the original preconstruction condition, as determined by Solano County. The same shall also be required for any access roads installed for the repair, replacement or decommissioning of a wind energy project.</p>	
Impact TRA-4: Operations-Related Traffic	Less than Significant	None Required	Less than Significant
Impact TRA-5: Potential Impact on Air Navigation	Potentially Significant	<p>Mitigation Measure TRA-5: Notifications and Revised Turbine Siting</p> <p>To prevent impacts on aviation patterns:</p> <p>a. The Applicant shall submit FAA Form 7460-1, Notice of Proposed Construction or Alteration, requesting that the FAA issue a Determination of No Hazard to Air Navigation for each of the Project turbines and meteorological towers.</p> <p>b. The Applicant shall submit FAA Form 7460-2, Notice of Actual Construction or Alteration, for each of the Project turbines and meteorological towers, as required by the FAA.</p> <p>c. The Applicant shall provide evidence to the Solano County Department of Resource</p>	Less than Significant

Table 2.2-1

MONTEZUMA II WIND ENERGY PROJECT SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		<p>Management that FAA Form 7460-1 has been filed pursuant paragraph a, above, including the outcome of this notification and any conditions required by the FAA, prior to the installation of each wind turbine and meteorological tower. No wind turbine or meteorological tower shall be installed without prior receipt of an FAA “No Hazard” determination.</p> <p>d. The Applicant shall provide evidence to the Solano County Department of Resource Management that FAA form 7460-2 has been filed, pursuant paragraph b, above, prior to issuance of any final certification of occupancy for the Project by the County.</p> <p>e. Should a significant revision occur to the height and/or location of a wind turbine or meteorological tower, subsequent to receipt of a No Hazard determination for the affected wind turbine or meteorological tower, the Applicant shall be required to re-notify the FAA, as determined by the Department of Resource Management. A significant revision to the height and/or location of a wind turbine or meteorological tower shall be defined as a change in location that:</p> <ul style="list-style-type: none"> i. Is 100 or more feet in any horizontal direction from the structure’s original location, as identified on submitted Form 7460-1; ii. Results in a vertical height increase of one foot or more, as compared to the structure’s original overall height as identified on submitted Form 7460-1. 	
Impact TRA-6: Potential Travis Air Force Base Radar Performance Drop	Less than Significant	None Required	Less than Significant

2.3 CUMULATIVE IMPACTS

The California Environmental Quality Act (CEQA) requires that an EIR evaluate the cumulative impacts of the proposed project. Cumulative impacts, including issues raised in response to the Notice of Preparation (NOP), are discussed in Chapter 21.

The existing wind facilities in the Montezuma Hills are High Winds, enXco V, Shiloh I, Shiloh II and Solano Wind - Phase 1 and 2. Over 800 turbines currently produce 661 megawatts (MW) of power in the area. The geographic area considered in this analysis is the approximately 42,972-acre wind resource area in the Montezuma Hills in Solano County. The Solano Land Trust manages a conservation easement on approximately 3,700 acres within the wind resource area, which is not available for commercial wind development.

The cumulative analysis is based on a list of past, present, and probable future projects in the Montezuma Hills. The cumulative list was compiled using publicly available data from past and ongoing applications with Solano County as well as through consultation with Solano County. These projects, which would result in similar impacts as the Montezuma II Wind Energy Project, were included in this analysis due to their potential to collectively contribute to significant cumulative impacts. The following cumulative analysis also includes impacts from the decommissioning of older enXco V turbines for this project and future foreseeable projects. Projects that have not submitted applications to Solano County for use permits or have not otherwise released publicly available information are not analyzed in the cumulative analysis because they are considered speculative. Table 21.1-1 lists the projects considered in this analysis, and Figure 21.1-1 depicts their locations within the wind resource area.

The Project would contribute to significant cumulative impacts in the areas of aesthetics, biological resources, and air quality.

2.4 ALTERNATIVES

2.4.1 No Project Alternative

Under the No-Project Alternative, the Project would not be constructed and significant impacts on visual/aesthetic resources, biological resources, and air quality may be avoided. Due to the uncertainty around decommissioning of the enXco V project that currently occupies part of the proposed project area, the analysis considered two No-Project Alternatives independently. In the first, the enXco V project would be removed by 2015 in compliance with current use permits and in the second, Solano County grants an extension to the use permits and the enXco project remains operational. The reduced power output of both No-Project Alternatives could result in wind facility construction at other locations or the substitution of fossil fuels, each of which could result in additional environmental impacts.

If enXco V turbines were removed and the proposed Project was not constructed, the project area would be expected to return to exclusively agricultural use. Decommissioning activities would result in temporary air quality, noise, traffic, and erosion impacts. Once the enXco V turbines are removed the significant impacts from the project on aesthetic/visual resources would no longer occur. The

potentially significant impacts from enXco V operations on land use, traffic, public services, and biology would also cease.

If the enXco V turbines remain operational in the project area, temporary impacts from both decommissioning activities and proposed project construction will be avoided. The older enXco V turbines would continue to have an impact on aesthetic/visual and biological resources, although these impacts would be less than those of the proposed Project.

While both of the No-Project Alternatives result in some reduction of significant impacts on aesthetic/visual resources, air, quality, and biological resources, both would also result in lower power outputs from the project area. The 250 million kilowatt hour (kWhr) per year that the proposed Project would provide would not be generated and utilities would need to pursue other sources of energy in order to meet demand and achieve Renewable Portfolio Standard (RPS) goals.

2.4.2 Off-Site Alternative – Cordelia Hills Wind Resource Area

The Cordelia Hills region is the only area, other than the Montezuma Hills region, that was previously evaluated as suitable for commercial wind development in Solano County, and the analysis considered it as an alternative project location for the Project. The Solano County General Plan, however, places restrictions in the Cordelia Hills region associated based on aesthetic/visual resource concerns and open space preservation goals.

The Cordelia Hills region was evaluated for wind project development; however, because of the constraints from an environmental and visual impact on residents and travelers, the area would likely result in environmental impacts greater than or equal to those of the Project. Development of this area would cause greater impacts on residents in the Cordelia Hills, where there are a greater number of sensitive receptors, than the Project area. Development of a wind farm in the Cordelia Hills would also have similar impacts on raptor species because the area has a similar ecological and biological profile as the proposed Project area. Impacts on air quality from emissions of criteria pollutants during construction would be the same as those impacts caused by construction of the proposed Project. Finally, the Cordelia Hills region does not promote agricultural uses, which are compatible with wind turbine development, resulting in a less efficient use of the land.

2.4.3 Reduced Project / Alternative Layout Alternative

The final alternative to the Project evaluated is reducing the number of turbines. A Reduced Project Alternative would involve construction of only half of the planned wind turbines and approximately two-thirds the planned length of access roads, resulting in reductions of approximately 12.6 acres of permanent impacts and 74.1 acres of temporary impacts.

Although the Reduced Project Alternative would reduce the visual impact on travelers along county roads, residents in Birds Landing, Collinsville, and rural residents, it would not reduce the Project's overall impact on visual impacts to a less than significant level. Similarly, while the Reduced Project Alternative would lessen the magnitude of impact on raptors because there would be fewer turbines to potentially be encountered, it would not reduce the impacts to less than significant levels. Reducing the number of turbines to be installed would decrease short-term impacts on air quality for PM₁₀ because less ground disturbance would occur. However, the emissions are not likely to be reduced to below a level of significance.

Fewer turbines would substantially reduce the Project's power generation capacity (approximately 50% of capacity). Therefore, this alternative would not achieve the Project objective of producing 78.2 MW of electricity or fully utilizing the wind resource area. The Reduced Project Alternative would limit the Project's contribution to California's RPS and GHG emission reduction goals and would not have as great a benefit to long-term air quality through generation of renewable energy.

2.5 KNOWN AREAS OF CONTROVERSY

To date Solano County has received 13 written comments on the Project from ten agencies and organizations. Appendix A contains copies of all written comments received. All comments have been addressed in appropriate chapter of this Draft EIR as detailed in Chapter 4, Introduction to Environmental Analysis.

The Sacramento Municipal Utility District (SMUD) initially requested a three times (3x) the total turbine height setback from its 21.6 kV aboveground electrical lines within the project area, which SMUD identified as transmission lines. According to CPUC regulations (General Order 131-D), however, the SMUD collector lines are not transmission lines but rather distribution lines, the lowest of three electrical line categories established by the CPUC, because they are designed to operate under 50kV. Although not required by County regulations, the Applicant proposed a 678-foot turbine setback which is based on maximum turbine blade throw distance plus an added safety factor, as discussed in Chapter 18, Safety. On February 23, 2011, SMUD formally withdrew its comments on the NOP.

The applicant had pre-consultation meetings with the US Fish and Wildlife Service (USFWS) in regards to the single vernal pool located in the project area. The USFWS stated that the proposed avoidance measures associated with the vernal pool, including maintaining a distance of 100 feet between the pool and project activities, are sufficient to avoid impacts to listed species by the project.

2.6 ISSUES TO BE RESOLVED

The Applicant has not yet determined whether or not it can reuse approximately 4.1 miles of the existing enXco V access road system for the Montezuma II project. Re-use of the existing access roads would reduce the amount of earthmoving needed for the Montezuma II project but would also require that the County modify the current decommissioning requirements for enXco V.

Whether or not the Applicant decides to use the existing roads would depend on the size of the Montezuma II project components, the grade of the roads, radius of corners, and other turbine delivery constraints. In the event that the applicant were to reuse the existing enXco V project roads, these would need to be temporarily widened to 35 feet to accommodate the proposed construction activities and otherwise improved to accommodate long-term operations and maintenance.

Given this uncertainty, this EIR describes and assesses the worst-case scenario in which all new access roads will need to be constructed to accommodate the project.

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