



ALAMEDA COUNTY COMMUNITY DEVELOPMENT AGENCY

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September 25, 2021

Agenda Item# 6
October 7, 2021

Honorable Board of Supervisors
County of Alameda
1221 Oak Street, Suite 536
Oakland, CA 94612 Dear Board Members:

SUBJECT: MULQUEENEY WIND ENERGY LLC, CONDITIONAL USE PERMIT PLN2019-00226 - APPEAL BY AUDUBON CALIFORNIA ET AL. FROM THE DECISION OF THE EAST COUNTY BOARD OF ZONING ADJUSTMENTS TO:

- a. Certify the Final Subsequent Environmental Impact Report (FSEIR), describing the environmental impacts of the proposed project; and
- b. Approve Conditional Use Permit PLN2019-00226 to allow the project to be constructed as follows:

Repowering of an estimated 518 previously existing wind energy turbine sites with 24 new turbines with a maximum production capacity of 80.0 megawatts (MW), using turbines rated between 2.2 to 4.2 MW per turbine, sited and operated to conform to the Reduced Project Alternative as defined in the Subsequent Environmental Impact Report for the Project, on 29 parcels or parts of parcels, extending over roughly 4,600 acres within the southeastern quadrant of the Alameda County portion of the Altamont Pass Wind Resource Area.

RECOMMENDATIONS:

East County Board of Zoning Adjustments (EBZA): On April 22, 2021, the EBZA certified the FSEIR and approved the project, Conditional Use Permit 2019-00226, respectively by Resolutions 21-13 and 21-14. The EBZA approval was for the Reduced Project Alternative as described in the SEIR.

Planning Staff: That the Board of Supervisors deny the appeal and uphold the certification of the FSEIR and approve the project in the form of the Reduced Project Alternative as defined in the SEIR (the Environmentally Superior Alternative) with conditions of approval.

BACKGROUND:

The project as proposed is to replace a total of 518 old generation wind turbine sites that were fully decommissioned in 2016 and install 24 new wind turbines with a range of energy production capacities, between 2.2 and 4.2 MWs each. The project as approved by the EBZA is the Reduced Project Alternative in the Draft Subsequent EIR (reduced from 36 to 24 turbines), capable of producing up to 80 MW of wind energy to sell through a long-term power purchase agreement. Correspondence indicates the energy produced by this project will be sold to East Bay Community Energy. The large site (4,600 acres) has held wind turbines for nearly 40 years; the last major CUP was granted in 2004 for several hundred turbines generating 70

MW of power. In addition to installing new turbine foundations, the project will entail extensive grading and construction of new or expanded roads (using existing road networks as much as possible), erecting the turbine towers and installing the generators and rotor blades, 300' of new overhead high-voltage transmission lines, and installing pad-mounted transformers and the power collection system. The turbines would be connected to a new substation that would be constructed adjacent to PG&E's Tesla substation, where the project output would connect to the regional electrical grid.

The applicant has received project approval from the EBZA in the form of the Reduced Project Alternative, which is recognized as the environmentally superior alternative among those that serve the fundamental objectives of the project and would consist of a maximum of 24 turbine locations within the project site. At this point in the project review no other alternatives identified in the SEIR are being considered. Staff recommends that your Board of Supervisors approve the project, with the identified permitting requirements, conditions of approval and oversight from the Altamont Technical Advisory Committee.

Programmatic EIR and Current Project Tiering

A Programmatic Environmental Impact Report (PEIR), certified by the County in November 2014, anticipated approval of new CUPs to allow replacement of old generation wind turbines with current generation turbines in the Alameda County portion of the APWRA on a program level for the entire area. This is the replacement process referred to as "Repowering". The certified PEIR allows for subsequent specific project applications to 'tier' from the PEIR, to the extent that the subsequent projects lie within the scope of the PEIR, and do not introduce new or substantially different significant impacts. While the current Project's scope was described generally as part of the 2014 PEIR, the Project proposes individual turbines with a higher nameplate capacity and longer rotor blades, such that the potential or likely effect would be increased avian and bat mortality on a per turbine basis, which supports the County's decision to prepare a subsequent EIR (SEIR). In addition to examining potentially more severe impacts due to larger capacity turbines, more recent monitoring results that have raised concerns (i.e. fatalities were not reduced as anticipated with re-powering) were able to be addressed via an SEIR. Although the 2014 PEIR did identify a repowered project of this size in its analysis (80 MW), the County is not obligated to now approve a project at that level.

BASIS OF APPEAL

The appeal letter received by Audubon makes a general statement that the Subsequent EIR is inadequate and that the project approved by the EBZA fails to adequately avoid, minimize, and mitigate the impacts on bird and bats as required under CEQA and the County's 2014 Program Environmental Impact Report (PEIR). More specifically, the appeal makes seven points which are discussed below:

Appeal Point #1

The SEIR inadequately describes the current environmental setting and established baseline of mortality for affected volant species.

Response: The appellant is referring to current bird and bat fatality monitoring results from another project (Golden Hills and Golden Hills North) which became available since the certification of the Program EIR in 2014, as well as other literature, studies, and analysis regarding regional impacts on avian and bat populations. As noted by the County in the SEIR, the Golden Hills and Golden Hills North projects, "...employed different methods to improve fatality detection and thus provide critically important information to consider in determining potential avian and bat impacts for future repowering projects in the APWRA" (DSEIR pg 1-5). Also, the SEIR acknowledges the current avian and bat mortality information as one of the primary factors requiring the preparation of a Subsequent EIR. The

document contains updated baseline information as well as updated impact estimates for all avian and bat species, consistent with the latest monitoring results.

Appeal Point #2

The SEIR fails to include an adequate project description and improperly defines the Project objectives, which improperly constrains the analysis of alternatives and avoidance and mitigation measures.

Response: Chapter 2 of the DSEIR adequately describes the project, including information on the site and its history, project design, construction, operation, maintenance, and post-project decommissioning. It's clear from page 2-5 of the DSEIR what the project goals are, and they are described in enough detail to provide a reasonable range of alternatives as required by CEQA. Given the language that describes the project objectives in relation to its secondary objectives (or competing objectives), the project description is adequate in that it describes the end goal of the project, which is to strike a balance between generating renewable energy and avoiding/minimizing impacts on natural communities, including birds and bats. The alternatives described in chapter 4 of the DSEIR should be viewed in this light, i.e., the alternatives provide a reasonable range of choices for the County's decisionmakers to consider when reviewing a project. Staff believes the project description is adequate to both inform the alternatives, as well as develop avoidance and mitigation measures.

Appeal Point #3

The SEIR inadequately discloses significant impacts, including impacts to listed, fully-protected, otherwise legally-protected, and other sensitive species and their habitats in or near the Project area.

Response: The SEIR adequately discloses significant impacts to special-status species, based on the current and best available science. Chapter 3.4, *Biological Resources*, of the SEIR clearly lists and assesses all federally or state listed and other special-status species potentially affected by the project. Incidental Take Permit (ITP) coverage from resource agencies provides oversight for impacts to protected species, and the applicant has applied for ITP from both state and federal agencies, including coverage for plant and animal communities. Staff believes that the extensive mitigation required in the SEIR for impacts to birds and bats, as well as other listed, fully-protected, and other special-status species, will reduce the potential for impacts and compensate for impacts. Additionally, the County determined that three impacts (operational impacts avian species, operational impacts on bat species, and impacts on the movement of native species) would be significant even after the implementation of mitigation, and an adaptive management framework is proposed in the event impacts continue to be substantial. Consequently, Staff believes the SEIR includes a robust impact analysis and the impacts described in the SEIR are accurate. There are also several 2020 updated PEIR mitigation measures that place additional emphasis on significant impact reduction.

Appeal Point #4

The SEIR fails to identify and assess all reasonable and feasible mitigation measures and alternatives to avoid and reduce the Project's significant environmental effects on birds and bats.

Response: Mitigation measures relating to birds and bats are extensive in the SEIR and are designed to bring impacts to a less-than-significant level. Staff believes some of the mitigation measures in the SEIR require a higher level of effort from the applicant and would result in a larger reduction in impact. As an example, staff would cite Mitigation Measures BIO-11a and 11b, which require, respectively, an avian protection plan and micro-siting of turbines — two measures that could result in additional curtailment, loss of megawatt project output or even loss of the total number of turbines, all in service of mitigating impacts. There are post-construction mitigation measures as well (BIO-11h) to address impacts that are identified after the required three-year monitoring phase takes place, which would require the implementation of an avian adaptive management plan to address and reduce impacts as necessary to

achieve reductions below baseline fatality rates. If there are other mitigation measures the appellant believes would reduce impacts, i.e., specific actions that can be taken by the applicant or the County through its CUP process, they have not been provided to staff.

The SEIR also goes above and beyond the PEIR in requiring changes to several PEIR measures to bring them up to date with the most current available science, as well as new mitigation for bat impacts (page 3.4-136 of the SEIR) requiring seasonal cut in speed increases (curtailment of turbine operations by requiring higher winds before the turbine blades start rotating).

Appeal Point #5

The SEIR fails to adequately assess a reduced megawatt alternative that would more effectively and feasibly reduce significant and unavoidable environmental impacts of the Project.,

Response: The SEIR considered a reduced megawatt alternative. The Final SEIR, page 4-4, clarified that the County evaluated but dismissed a “Reduced Megawatt Alternative”. As described in the SEIR, the County determined that this alternative “was inconsistent with the project’s fundamental objective to install new wind turbines that will produce and deliver 80 MW....”. Consequently, this alternative was not evaluated further.

Appeal Point #6

The SEIR inaccurately analyzes the increased impacts of the project from those described in the PEIR in light of significant and new information and changed circumstances since the PEIR was certified.

Response: The appellant is again referencing new information that was provided by recent bird and bat fatality monitoring results for the Vasco Wind project and Golden Hills/Golden Hills North projects, which became available since the certification of the Program EIR in 2014. The SEIR analyzes this new information in Section 3.4, *Biological Resources*, providing updated impact estimates for various species, consistent with the latest monitoring results. In several cases, the SEIR finds that impacts to some avian species may increase, some may stay similar to those described in the PEIR, and some may decrease from those described in the PEIR. Regardless of the potential increase or decrease in fatality rates for individual species, the SEIR appropriately notes that there is a “high level of uncertainty associated with attempting to predict fatality rates at a new site compared to a group of only five different known sites.” Consequently, acknowledging this uncertainty, the overall analysis in the SEIR finds that impacts to avian species are significant and unavoidable. The SEIR presents extensive mitigation measures noting that they would reduce significant impacts, but not to a less than significant level. As mentioned above, Incidental Take Permit coverage will be applied to this project, with oversight from the appropriate State and Federal Resource agencies. Staff believes the extensive mitigation required in the SEIR for impacts to birds and bats will help to significantly reduce and compensate for these unavoidable impacts.

Appeal Point #7

The SEIR fails to adequately analyze the cumulative impacts of the Project.

Response: The SEIR adequately analyzes the cumulative impacts of the project and takes into account the large area that may contain protected species, especially volant species. As noted in the SEIR, “Since certification of the PEIR, changed understanding about the population status of avian and bat resources now enables a more precise definition of the geographic scope for the analysis.” Chapter 5 of the SEIR (Section 5.2 beginning on page 5-1) analyzes the cumulative impacts of the Project. Furthermore, beginning on page 5-5, the SEIR outlines the analysis considered in the PEIR and updates the analysis to consider the most current and up to date information. The cumulative analysis goes on to outline the analysis methods, which include the use of the most current avian fatality monitoring results from the

Golden Hills and Golden Hills North projects (Table 5-1 on page 5-7 of the SEIR). The detailed analysis ultimately finds that “The project would result in a significant and unavoidable cumulative impact on avian and bat mortality associated with turbine operations.” This conclusion is somewhat expected given the history of the AWPRA windfarms, and through existing County and State/Federal processes (e.g. CUP conditions of approval, TAC oversight, ITP permits) the impacts to birds and bats will be significantly reduced. Ultimately the applicant developing this project will be subject to a rigorous permitting and oversight process and will have to compensate for these cumulative unavoidable impacts.

PLANNING CONSIDERATIONS

There are no fundamental questions related to General Plan consistency or Zoning Ordinance compliance with this project. The General Plan includes goals to maximize the production of wind-generated energy within the limits of environmental constraints, and to minimize the impacts of turbine operations on birds. A private wind generation facility such as this one is a conditional use in the Agricultural Zone, and the County has approved many similar projects going back decades.

Audubon is appealing the project because they continue to be concerned about avian and bat impacts at both a project and cumulative level. The County’s role in this process is to conduct the appropriate level of CEQA and to review and approve or deny the Conditional Use Permit. The appeal asserts that the applicant has not done enough to identify and mitigate impacts, but staff believes the applicant has been proactive to the degree possible at this pre-construction stage. Anticipating that more severe impacts could be identified through the SEIR process, the applicant has included several features to the Project that should be highlighted, such as:

- Two rounds of micro-siting to place turbines in the least risky locations to protect species
- Re-sited the remaining two high risk turbines (September 2021)
- Agreed to daytime curtailment for turbines within a half mile of a golden eagle nest
- Agreed to increasing seasonal night-time cut-in speeds to reduce impacts on bats
- Agreed to incorporate new avoidance technology such as Identi-Flight in coordination with Eagle Conservation Plan (Identi-Flight is technology that attempts to sense birds flying near turbines resulting in automatic shut-off of turbine.)
- Submitted application to the U.S. Fish and Wildlife Service (FWS) for an Eagle Take Permit

While this is not a complete list of mitigations required of the project, they do demonstrate the applicant’s acknowledgment of their project’s impacts and their willingness to be proactive. As a large project its impact is likely to be greater than other smaller projects, and as a result the applicant has agreed to many up-front impact minimization measures as indicated above.

It’s important to note that the Board of Supervisors in their approval of previous projects, including approval of the 2014 PEIR, recognizes that project approvals must strike a balance between wind energy production and protecting critical habitat and their species (with a focus on birds and bats). In addition, the wind energy produced by the Mulqueeney project is planned to be sold to East Bay Community Energy and thus would provide County residents with access to locally-produced renewable energy.

The County has benefited from having an already-established framework for projects such as the Mulqueeney project to be reviewed by a panel of experts to fully examine the issues being raised in this appeal. The APWRA Technical Advisory Committee (TAC) is a committee of resource agency staff and County consultants that convene regularly to review wind projects and recommend changes, improvements and mitigation. One of the principal documents the TAC is tasked with reviewing is an Avian and Bat Protection Plan required of all projects, a document that must be approved prior to the start of commercial operations.

Although the current Project proposes turbines substantially larger in generating capacity than other wind repowering projects, the project is in most respects similar to the other repowering projects that the

County has previously approved. Since certification of the PEIR, the first repowering project, Golden Hills, was constructed and Postconstruction Fatality Monitoring Reports for the first three years of operations are now available. The SEIR notes that although the Golden Hills Wind Project mortality results do constitute new information, they do not conclusively show that avian impacts for this project will be substantially more severe than anticipated in the PEIR. This is because the PEIR conservatively assumed that, even though estimates at that time based on three repowering projects in the same region appeared to indicate considerable reductions in mortality among all focal raptor species, the PEIR acknowledged that further study could show – as in the present case – that avian impacts “could be greater than the baseline rates” and the impact would be significant and unavoidable.

As the subject matter is highly technical, staff believes the TAC should review this project as soon as possible to begin addressing some of the issues raised by this appeal such as micro-siting of high-risk turbines, determining impacts with recent data and discussing proposed monitoring. In addition, the TAC is the appropriate forum to acknowledge how the applicant has attempted to resolve concerns with avian fatalities through some of their up-front avoidance measures.

Significantly, avoidance measures alone may not reach risk-reduction levels that are needed for this project, and the applicant should be prepared for project changes that could include moving turbines to less risky locations, and even potentially removing some turbines from the project.

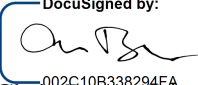
SUMMARY

The project applicant has received approval from the EBZA in the form of the Reduced Project Alternative which reduced the size of the initial project (from 36 to 24 turbines), increased turbine distance from eagle nests and eagle activity, and placed turbines in location deemed less risky as identified in two micro-siting studies. The SEIR evaluated the environmental impacts, some of which are significant and unavoidable. In addition to the County’s process, the applicant will need State and Federal permits for impacts to both volant and terrestrial animal communities. Mitigation will include complying with the attached Mitigation and Monitoring Reporting Program, Incidental Take Permits, conservation easements and compensatory mitigation — much of this required by other agencies. Oversight by the Altamont TAC provides assurances that a detailed level of analysis will occur, and that prior to commercial operations a bird and bat protection plan will be submitted by the applicant for TAC approval. Staff believes the TAC can complement the County’s role as the regulatory body with its panel of experts to review and resolve many of the concerns raised by this appeal.

CONCLUSION

The County has prepared a CEQA document that provides clear and detailed analysis of the project description and setting, and adequately discusses how impacts are measured, minimized and mitigated. The Board should receive a staff presentation, and take testimony from the appellant, the applicant and the general public. Staff recommends that your Board deny the appeal and adopt the attached resolution (with exhibits). The attached resolution contains findings to certify the SEIR and approve the Conditional Use Permit with conditions of approval as discussed herein. The exhibits to the Resolution, also listed below, include required CEQA findings, a Mitigation Monitoring Report, and a Statement of Overriding Considerations.

Very truly yours,

DocuSigned by:

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Chris Bazar, Director
Community Development Agency

ATTACHMENTS:

Appeal letter Audubon California et al.

Draft Board of Supervisors Resolution R-2021- xxxxxxxx, October 7th, 2021

Exhibit A: Written Findings of Significant Effects

Exhibit B: Mitigation Monitoring and Reporting Program

Exhibit C: Statement of Overriding Considerations

Final SEIR (not printed; document and related documents accessible from Planning Department website at: <http://www.acgov.org/cda/planning/landuseprojects/mulqueeney.htm>)

Staff report and resolutions - EBZA meeting of April 22nd, 2021

RESOLUTION NO. XXXXX

A RESOLUTION APPROVING THE MULQUEENEY RANCH WIND PROJECT CONDITIONAL USE PERMIT PLN2019-00226, ADOPTING THE FINAL SUBSEQUENT ENVIRONMENTAL IMPACT REPORT, AND DENYING THE APPEAL SUBMITTED BY AUDUBON CALIFORNIA ET AL.

WHEREAS, MULQUEENEY WIND ENERGY, LLC, a wholly-owned subsidiary of Brookfield Power US Holding America Co. (Permittee), filed an application for CONDITIONAL USE PERMIT, PLN2019-00226 (Project) in December 2019, to allow repowering of 518 existing or previously existing old generation wind turbine sites to install and operate up to 36 new turbines with a maximum production capacity of 80 megawatts (MW), using turbines rated between 2.2 to 4.2 MW per turbine, and to make improvements to related infrastructure, on twenty-nine (29) parcels in an area designated in the A (Agriculture) zone district located on roughly 4,600 acres in total area in the southeastern quadrant of the Alameda County portion of the Altamont Pass Wind Resource Area, north and south of Patterson Pass Road, between approximately one-third and four miles west of Midway Road, and between one and five miles south of Interstate 580, including the following Assessor's Parcel Numbers:

99A-1800-2-3; 99A-1800-2-4; 99B-7890-2-4; 99B-7890-2-5; 99B-7890-2-6;
99B-7890-4; 99B-7900-1-3; 99B-7900-1-4; 99B-7900-1-5; 99B-7900-1-6;
99B-7900-1-7; 99B-7900-2; 99B-7910-1-1; 99B-7910-1-2; 99B-7925-2-1;
99B-7925-2-2; 99B-7925-2-3; 99B-7925-2-4; 99B-7925-2-5; 99B-7925-3;
99B-7950-2; 99B-7975-1; 99B-7980-1; 99B-7985-1-3; 99B-7985-1-4;
99B-7985-1-5; 99B-7985-1-6; 99B-8050-1; and 99B-8100-1-1.

WHEREAS, the subject Project is part of an overall program to repower the entire Altamont Pass Wind Resource Area (APWRA) by replacing older generation turbines with newer, larger turbines that serve to improve turbine efficiency but also have the potential to substantially reduce avian mortality, especially for raptor species; and

WHEREAS, the repowering of the APWRA (hereinafter referring only to the Alameda County portion thereof) was the subject of a Program Environmental Impact Report (PEIR) which the East County Board of Zoning Adjustments certified by adoption of Resolution Z-14-40 on November 12, 2014 as being in compliance with the California Environmental Quality Act (CEQA); and

WHEREAS, Section 15162 of the CEQA Guidelines provides direction as to the circumstances in which a subsequent EIR shall be prepared including when, based on substantial evidence in light of the whole record, the lead agency determines that substantial changes are proposed in the project or program described and addressed in a prior EIR, or changes in the circumstances under which the project will be undertaken, that together would involve new significant environmental effects or more severe significant effects than previously identified, such that major revisions of the prior EIR are required; and

WHEREAS, the Project has been reviewed in accordance with the provisions of CEQA and it was determined that while the Project's scope was described generally as part of

the 2014 PEIR, the Project proposes individual turbines with a higher nameplate capacity and longer rotor blades, such that the potential or likely effect would be increased avian and bat mortality on a per turbine basis, which supports the County’s decision to prepare a subsequent EIR; and

WHEREAS, the Project is proposed in the context of new information including additional monitoring reports from similar repowering projects in both Alameda and Contra Costa Counties and further information regarding bat mortality, that combined with the physically larger turbines with a greater MW output together support the County’s decision to prepare a subsequent EIR; and

WHEREAS, a Notice of Preparation (NOP) of a Subsequent Environmental Impact Report (DSEIR) was issued on April 6, 2020 soliciting public input regarding the environmental analysis of the repowering Project; and

WHEREAS the Draft Mulqueeney Ranch Project Subsequent Environmental Impact Report (DSEIR) was prepared and circulated for public comment between November 6, 2020 and December 21, 2020, and then extended for comment through January 8, 2021; and

WHEREAS, in compliance with Sections 15091 and 15093, respectively, of the CEQA Guidelines, the Planning Department has prepared Written Findings of Significant Effects (Exhibit A), a Mitigation Monitoring and Reporting Program (Exhibit B), and a Statement of Overriding Considerations (Exhibit C); and

WHEREAS, on April 22, 2021, the East County Board of Zoning Adjustments held a virtual public hearing on the Conditional Use Permit application and the Final Subsequent Environmental Impact Report (SEIR), and adopted Resolutions Z-21-13 and Z-21-14 which certified the Final SEIR for the Mulqueeney Ranch Wind Repowering Project and approved Conditional Use Permit 2019-00226; and

WHEREAS, on April 29th, 2021 a timely appeal letter was filed by Audubon California et al. challenging the decisions of the East County Board of Zoning Adjustments and asserting that the SEIR is inadequate under the California Environmental Quality Act (CEQA), and that the terms of the CUP fail to adequately consider, avoid, minimize, and mitigate impacts on birds and bats as required under CEQA and the County’s 2014 Program Environmental Impact Report (PEIR) for repowering turbines in the Altamont Pass; and

WHEREAS, attempts to resolve the concerns raised in the appeal letter were not successful through various contacts and meetings held with the interested parties; and

WHEREAS, preventative avoidance measures have been added as conditions of approval such as additional micro-siting to minimize raptor fatalities, increasing seasonal evening cut-in speeds to benefit nocturnal bat activity, and potentially using the “IdentiFlight” technology if feasible address the core concerns presented in the appeal; and

WHEREAS, oversight of the project through incidental take permit applications from State and Federal Agencies will minimize risk to avian populations and require additional mitigation that could include both changes to the project size and compensation for “take” of

protected species; and

WHEREAS, the inclusion of conditions of approval requiring the Permittee to participate in the APWRA Technical Advisory Committee (TAC) to complete a micro-siting analysis, and a review of the project’s Avian and Bat Protection Plan prior to commercial operation provides a level of oversight that adequately addresses many of the appellant’s concerns; and

WHEREAS, continued review of the project’s monitoring reports and adaptive management at the Technical Advisory Committee is an iterative process to develop best practices that can be reproduced for other windfarms in the County; and

WHEREAS, the East County Board of Zoning Adjustments determined that approval of the Project as conditioned herein, including the implementation of the Mitigation Monitoring and Reporting Program attached herein as Exhibit B, would eliminate or substantially lessen significant effects on the environment where feasible, as indicated in the Written Findings of Significant Effects, attached herein as Exhibit A, and that there are certain significant effects on the environment found to be unavoidable which are acceptable due to overriding concerns as indicated in the Statement of Overriding Considerations attached herein as Exhibit C; and

WHEREAS the Board of Supervisors did hear and consider all reports, recommendations and testimony as hereinabove set forth and asserts the information contained in the attached Exhibits reflects the independent judgment and analysis of the Board;

NOW THEREFORE

BE IT RESOLVED that the Board of Supervisors finds that:

1. The Board certifies that the above recitals are true and correct.
2. The Board certifies that it has been presented with all the information described in the above recitals and has reviewed and considered this information and the Final Subsequent EIR prior to adopting this Resolution and considering approval of the Project.
3. The Board certifies that the Final Subsequent EIR reflects the County’s independent judgment and analysis and has been completed in compliance with CEQA.
4. Notice of the Board’s hearings on the Draft Subsequent EIR and Final Subsequent EIR have been given as required by law and the actions were conducted pursuant to the State Planning and Zoning Law, CEQA, the State CEQA Guidelines and the County’s CEQA Guidelines.
5. All individuals, groups and agencies desiring to comment were given adequate opportunity to submit oral and written comments on the Final Subsequent EIR which met or exceeded CEQA requirements, and which comments were responded to adequately in the Final Subsequent EIR.

BE IT FURTHER RESOLVED that the Board of Supervisors finds that:

1. The use is required by the public need in that wind energy production in the Altamont Pass Wind Resource Area (APWRA) represents a major source of renewable energy. The Project

would generate and supply 100% locally sourced and emissions-free electricity to California, would support California's renewable energy goals, and would help reduce dependence on fossil fuels, a primary factor in global warming or climate change. The Project's energy is to be sold to Alameda County's Community Choice Aggregator (East Bay Community Energy) through a power purchase agreement, which improves County residents' access to locally-produced renewable energy.

2. The use will be properly related to other land uses and transportation and service facilities in the vicinity in that as an existing wind farm, the Project site is well- suited from a planning and practical perspective for continued use as a windfarm. The Project parcels have been developed with wind power project uses for over 30 years and are located a substantial distance away from substantial residential, commercial and industrial uses. Existing supporting facilities will continue to be utilized to transmit the power generated to satisfy the electricity needs of Alameda County and California as a whole.
3. The use, if permitted, under all the circumstances and conditions of this particular case, will not materially affect adversely the health or safety of persons residing or working in the vicinity, or be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood. The project would serve goals and objectives of the East County Area Plan and County economic development and environmental objectives, would have limited impacts on County services and infrastructure, and as mitigated with the measures to be adopted under the Mitigation Monitoring and Reporting Program attached herein as Exhibit B and the conditions of approval, would not negatively impact the surrounding community.

Furthermore: a) as approved and subject to further TAC input, the subject turbines would be sited and operated in a manner that reduces risks to avian and bat species and according to specified minimum setbacks to reduce any health, safety or aesthetic concerns to any residents in close proximity; b) proper maintenance and operation efforts would be in effect to ensure the safe operation of the turbines; c) fire prevention and security measures would be in place to protect the public and local property; d) construction activities will be conducted in a manner that reduces potential health, safety and environmental concerns; e) the proposed use would not substantially hinder the continued use of the Project sites and surrounding land for cattle grazing as the primary property use; f) any access roads improved for the proposed use would provide improved access to the grazing lands; g) land owners would benefit from the lease payments made by the Permittee, which further supports grazing operations; and h) other improvements, such as roadways, railroads, electrical substations and landfills are not adversely affected by the presence of wind turbines and their associated infrastructure because the proposed Project would replace and/or continue to use existing facilities.

4. The use will not be contrary to the specific intent clauses or performance standards established for the District in which it is to be considered in that the proposed Project is located in the A (Agriculture) zoning district, which has as its stated intent: "to promote implementation of General Plan land use policies for agriculture and other nonurban uses; to conserve and protect existing agricultural uses; and to provide space for and encourage such uses in places where more intensive development is not desirable or necessary for the general welfare." The proposed Project would be consistent with this intent because the development of wind power projects is both allowed and encouraged in the APWRA by the East County Area Plan, the Project removes minimal land from agricultural production, and the use is appropriately located in non-urban

areas and serves the public welfare.

BE IT FURTHER RESOLVED that the Board adopts the Written Findings of Significant Effects contained in Exhibit A of this Resolution, the Mitigation Monitoring and Reporting Program contained in Exhibit B of this Resolution; and the Statement of Overriding Considerations contained in Exhibit C of this Resolution, which Exhibits are incorporated herein as if fully set forth.

BE IT FURTHER RESOLVED that the Board of Supervisors does hereby approve said application in the form of the **Reduced Project Alternative** as defined in the Project Final SEIR including Figure 4-2, Reduced Project Alternative Conceptual Site Plan, on file with the Alameda County Community Development Agency, Planning Department, 224 West Winton, Rm. 111, Hayward, CA, 94544), subject to the following **conditions of approval**:

AUTHORIZATION

1. Approval. Approval of this Permit authorizes Mulqueeney Wind Energy, LLC (Mulqueeney Wind), a subsidiary of Brookfield Power US Holding America Co. (Permittee), to replace 518 old generation wind turbine sites previously removed from the subject parcels and to install and operate up to 24 new turbines with a maximum production capacity of 80 megawatts (MW), using turbines rated between 2.2 to 4.2 MW per turbine, sited and operated to conform to the Reduced Project Alternative as defined in the Subsequent Environmental Impact Report for the Project, on 29 parcels or parts of parcels, extending over roughly 4,600 acres within the southeastern quadrant of the Alameda County portion of the Altamont Pass Wind Resource Area, north and south of Patterson Pass Road, between approximately one-third and four miles west of Midway Road, and between one and five miles south of Interstate 580, including the following Assessor Parcel Numbers:

99A-1800-2-3; 99A-1800-2-4; 99B-7890-2-4; 99B-7890-2-5; 99B-7890-2-6;
99B-7890-4; 99B-7900-1-3; 99B-7900-1-4; 99B-7900-1-5; 99B-7900-1-6;
99B-7900-1-7; 99B-7900-2; 99B-7910-1-1; 99B-7910-1-2; 99B-7925-2-1;
99B-7925-2-2; 99B-7925-2-3; 99B-7925-2-4; 99B-7925-2-5; 99B-7925-3;
99B-7950-2; 99B-7975-1; 99B-7980-1; 99B-7985-1-3; 99B-7985-1-4;
99B-7985-1-5; 99B-7985-1-6; 99B-8050-1; and 99B-8100-1-1.

In the event that larger, 4.2 MW turbines are available to and selected by the project proponent at the time suited for ordering turbines to be delivered, the proponent shall reduce the total number of turbines to nineteen (19) turbines only. Final site location and capacity shall be subject to Planning Director approval and recommendations of the County's avian protection Technical Advisory Committee (TAC; see Condition 95).

2. Compliance and Conditions. Permittee agrees to comply with all applicable laws, regulations, rules and requirements of the County of Alameda and its Agencies, all subdivisions and departments of such agencies, and applicable local districts, and to comply with specific conditions of approval described herein by the representatives of said agencies, including but not limited to:
 - a. Community Development Agency, Planning Department

- b. Public Works Agency, Building Inspection Department
- c. Public Works Agency, Land Development Department
- d. Public Works Agency, Grading Division
- e. Alameda County Fire Department
- f. County Sheriff
- g. Health Services Agency, Environmental Health Department

Failure to act in compliance with the conditions herein will be construed as a violation of Zoning and enforcement proceedings shall commence as provided for by Section 17.58 of the Alameda County Zoning Ordinance.

Permittee further agrees to comply with all applicable regulations, rules, requirements and laws of the State of California and United States and their agencies, including but not limited to the following:

- h. California Public Utilities Commission
 - i. California State Department of Fish and Wildlife
 - j. California State Water Quality and Control Board - San Francisco and Central Valley
 - k. California Energy Commission
 - l. Bay Area Air Quality Management District
 - m. United States Fish and Wildlife Service
 - n. Federal Aviation Administration
3. Insurance: A Comprehensive General Liability insurance policy in the minimum amount of \$1,000,000 and in the form prescribed in the document "INSURANCE REQUIREMENTS, ALAMEDA COUNTY PLANNING DEPARTMENT, November 12, 2014," in addition to insurance requirements of other agencies listed in Condition 2 shall be provided to the County within 20 business days following approval of this Conditional Use Permit and provided again within 20 business days of each annual anniversary thereof.
4. Utility Tax Compliance. Within 60 days of this approval, the Permittee shall submit to the Alameda County Planning Department evidence of business registration with the Alameda County Business Tax Unit in the form of a valid business certificate to ensure compliance with the County's utility tax regulations.
5. Liability. By exercise of this Conditional Use Permit, the Permittee agrees to defend, indemnify and hold harmless the County of Alameda, its officers, employees, agents and servants for any and all liability caused by the negligence or wrongful act of the Permittee arising out of the exercise of this Conditional Use Permit, and to pay all claims,

damages, judgments, legal costs, adjuster fees, and attorney fees related thereto.

6. Indemnification. The Permittee shall defend, indemnify, and hold harmless the County of Alameda and its agents, officers, and employees from any claim, action, or proceeding against the County of Alameda or its agents, officers or employees to attack, set aside, void, or annul Conditional Use Permit, PLN2019-00226, the associated Subsequent Environmental Impact Report (SEIR), California Environmental Quality Act findings, determination of significant impacts, statement of overriding considerations, Mitigation Monitoring and Reporting Program (MMRP), or any combination thereof. Such indemnification shall include, but not be limited to, an award of costs and attorney's fees incurred by Alameda County in its defense. The County shall promptly notify Permittee of any such challenge.
7. Planning Review and Permit Administration Costs. The Permittee shall be responsible for payment of all additional Planning Department and Public Works Agency staff and material costs for completing these agencies' reviews up to the time of this approval, including costs billed against the original application deposit, costs which exceeded the deposit and for a deposit of an additional \$2,000.00 for similar costs associated with administration and enforcement of the conditions herein, independently of Inspection Costs as required below (Condition 8). If all or any part of said cash deposit is depleted by such administration activities, the Permittee shall restore the balance of the deposit to the original \$2,000.00.

The Permittee shall compensate the County for expenditures to retain a biological and avian resource consultant necessary to monitor implementation of these conditions and the Project MMRP during Planning Department review of the building permit, during construction, not to exceed \$15,000 for the Project plus \$100.00 per proposed MW.

The Permittee shall compensate the County for expenditures to retain a County technical representative to the Technical Advisory Committee, as necessary to review monitoring reports and advise the County regarding implementation of these conditions and the Project MMRP during each year of post-construction monitoring as specified in Conditions 92, 93 and 94 (Mitigation Measures BIO-11g, BIO-14b and BIO-14c). Such compensation shall be paid annually in proportion to the installed or rated MW capacity of the facility (as a proportional percentage of all wind Alameda County APWRA repowering projects, which may be prorated on a monthly basis), not to exceed \$15,000 for all repowering projects (adjusted annually for inflation).

8. Inspections and Cost Recovery. The Permittee shall allow staff of the Alameda County Planning Department, Alameda County Public Works Agency, the California Department of Fish & Wildlife, and any other responsible agency to conduct site inspections during construction and operation of the Project in order to ensure compliance with approved permits, plans, and conditions of approval. Inspections shall be conducted at the discretion of said agencies. Discovery of noncompliance may be cause for commencement of proceedings to revoke this Conditional Use Permit, and for payment of applicable bonds. Public Works Agency staff is also authorized to inspect structural and pavement conditions of County roads serving the construction site prior to and after construction to

identify needed repairs and to assess cost recovery requirements.

The Permittee or its successors shall be responsible for payment of all reasonable costs associated with necessary inspections of the facility, including costs incurred by the Planning Department, the County Fire Department, the Building Inspection Division, the Public Works Agency or any other applicable Federal, State or County department or agency. Each County Agency shall have the authority to require deposits of \$4,000.00 prior to plan review, for plan review, inspections or other necessary costs. State and federal agencies shall be responsible for collecting established fees and related compensation where required by statute.

9. Bonds. Application for Building Permits to implement any portion of this Conditional Use Permit shall be accompanied by the following bonds:
 - a. A \$2,000.00 cash bond shall be deposited to be used in the investigation and evaluation of a noise complaint as provided in Condition 88 herein below. If all or any part of said cash bond is depleted by such activities, the Permittee shall restore the balance of the bond to the original \$2,000.00.
 - b. A security bond or other acceptable instrument shall be recorded with the Director of Public Works to guarantee repair and restoration of roads serving the Project area that may be damaged in the course of construction of the Project, consistent with the requirements of the Traffic Control Plan as set forth in Condition 48 below.
 - c. A surety bond or other acceptable security instrument shall be recorded with the Director of Public Works to guarantee implementation of the restoration and reclamation plan as required by Conditions 11 and 12 below.
10. Mitigation Monitoring and Reporting Program. The Permittee shall implement all applicable mitigation measures identified in the Mitigation Monitoring and Reporting Program (MMRP) attached herein as Exhibit B, and as specified individually herein. These conditions of approval incorporate the individual mitigation measures and present them either in summarized form or by reference only, and in certain cases provide additional clarification and guidance on the manner, timing and responsibility for implementation of the mitigation measures. The incorporation of the mitigation measures into the conditions of approval (i.e., their replication and representation herein) is not intended to revise, modify or add to any mitigation measure, or add any new obligation to the Permittee under CEQA, but only to augment the understanding of how each mitigation measure shall be implemented. Each mitigation measure is presented within the applicable phase of Project development used herein, beginning with design, and continuing through permit applications, pre-construction tasks, obligations during construction, performance during operation, and for periodic review through the life of the permit.

These conditions of approval are intended to and shall be interpreted by reading Exhibit B and the enumerated conditions together, as a whole, in a manner that gives the maximum effect to both and, to the extent necessary, harmonizes them to avoid any inconsistencies or superfluous terms. If the Permittee, the County or other public agency responsible for implementation of a mitigation measure finds any discrepancy between

Exhibit B and these conditions, Exhibit B shall be relied upon unless the conditions herein provide greater clarification of the time or performance or the manner of implementation of the MMRP, when determined to be necessary for the effective implementation of the MMRP. Any remaining questions of interpretation shall be resolved by the Planning Director.

11. Restoration and Reclamation Plan: Prior to issuance of building permits the Permittee shall submit for review and approval by the County Planning Director and the Director of Public Works, a reclamation plan for removal at the end of this permit term (or by project cessation as described below) of all wind turbines, foundations and ground equipment to a depth of three feet below finished grade. Roads and above-ground facilities installed pursuant to this permit shall also be removed unless the property owner has requested in writing as part of the reclamation plan that they be left in place, subject to approval of the Planning Director. The reclamation plan shall include provisions for:
- Removal of roads and staging areas within the subject property or properties not needed for maintenance and operations or for other allowed property uses by the property owner;
 - Re-grading and re-vegetation to return the subject property or properties to rangeland or pre-windfarm use conditions, with site-specific characteristics of topography, vegetation, drainage and other unique environmental features, subject to approval of the California Department of Fish and Wildlife;
 - Repair of County roadways from damage that may result from off-haul of materials, movement of oversized loading or heavy-haul vehicle, traffic management and a substantial increase in volume of vehicle trips;
 - A traffic control plan for conveyance of oversize turbine components.

The reclamation plan shall include a cost estimate of labor and material costs, prepared by a licensed contractor to implement the proposed reclamation plan, and the Planning Director shall have the authority to request additional details of specific cost elements. The reclamation plan shall include a guarantee by the Permittee to carry out the reclamation plan upon determination by the Planning Director and Director of Public Works that the permitted wind farm operations have been abandoned or have produced less than 5 percent of the rated output of the wind farm in one year (considered project cessation).

The Planning Director and Director of Public Works may instead make a determination that more than 50% of the turbines are in disrepair and there is no other demonstrated plan, satisfactory to the Planning Director, to restore the equipment to a productive operating condition (considered project cessation). Under such circumstances the Planning Director may order the Permittee or property owners to execute the reclamation plan.

12. Restoration and Reclamation Bond. Prior to issuance of building permits, and based on County approval of the reclamation plan as above, the Permittee shall post a security in the form of a surety bond. The security shall remain with the County for the life of the Project, except upon replacement as provided below and upon replacement shall be

adjusted for inflation using the appropriate construction price index, as determined by the Director of the Public Works Agency. In the event ownership of the turbines changes from the current Permittee to another person or entity, the new owner shall replace the surety bond of the original Permittee with a surety bond in the name of the new owner within 30 days of the change of ownership.

13. Changes to Power Purchase Agreements. Permittee agrees that, at least six (6) months prior to the expiration, renewal or extension of any Power Purchase Agreements (PPA) made by the Permittee, the Permittee shall inform the Planning Director of such changes and provide the County of Alameda and any Community Choice Aggregation joint powers authority or equivalent program (CCA) in which the County participates, a right of first offer to establish a PPA between the Permittee and the County or the CCA.
14. Ten Year Review. No more than ninety (90) calendar days after the tenth anniversary of the initial approval and within ninety (90) days of the subsequent twentieth anniversary, the Planning Director shall, after notice as provided for in the initial hearing and except as provided for under Conditions 88 and 101 below, set this matter for public hearing by the East County Board of Zoning Adjustments for the purpose of reviewing and verifying compliance with the conditions of approval so as to validate the findings of this conditional use permit.
15. Post-Construction Monitoring Review. Upon completion of the post-construction avian fatality monitoring program required by Mitigation Measures 11g, the post-construction bat fatality monitoring program required by Mitigation Measures 14b, and if required, after implementation of adaptive management program review required by Mitigation Measure BIO-11i, this matter may be set by the Planning Director for a public hearing, after notice as provided for in the initial hearing, for the purpose of assessing the effectiveness of avian protection plans, adaptive management measures, conservation or other strategies to improve or mitigate avian species safety concerns raised in the Program Environmental Impact Report (PEIR). This review may allow the Planning Director to modify conditions previously imposed or add conditions directly related to the results of the post-construction avian fatality monitoring program (Mitigation Measure BIO-11g) and the recommendations of the Technical Advisory Committee.
16. Commencement Date. Pursuant to Section 17.52.050, building permits shall be obtained and construction activity commenced within 3 years of approval or this permit shall be of no force or effect.

PRIOR TO DESIGN SUBMITTAL

17. Preconstruction Surveys for Special- Status Plant Species (MM BIO- 1a). As required by Mitigation Measure BIO-1a in the MMRP, no more than 3 years prior to ground-disturbing repowering activities, and during the appropriate identification periods for special-status plants as specified in the MMRP and the PEIR, the Permittee shall have a qualified biologist (as determined by the Alameda County Planning Director) conduct field surveys to identify special- status plant species within and adjacent to the Project site. The Permittee shall submit a report documenting the survey results to the Planning Director for review and approval, meeting the requirements of Mitigation Measure BIO-1a, prior to

ground disturbing activities and before issuance of building permits.

18. Preconstruction Surveys for Habitat for Special-Status Wildlife Species (MM BIO-3a). As required by Mitigation Measure BIO-3a in the MMRP, no more than 3 years prior to ground-disturbing repowering activities, the Permittee shall have a qualified biologist (as determined by Alameda County) conduct field surveys within decommissioning, repowering, and restoration work areas and their immediate surroundings to determine the presence of habitat for special-status wildlife species. The Permittee shall submit a report documenting the survey results and meeting the requirements of Mitigation Measure BIO-3a to the Planning Director for review and approval, prior to conducting any ground-disturbing repowering activities and before issuance of building permits.
19. Preconstruction Bat Roost Surveys (MM BIO-12a). As required by Mitigation Measure BIO-12a in the MMRP, prior to any ground-disturbing activity the Permittee shall have a roost habitat assessment prepared by a qualified bat biologist to identify potential colonial roost sites of special-status and common bat species within 750 feet of the construction area. If suitable roost sites are to be removed or otherwise significantly affected by the proposed Project, the bat biologist will conduct targeted roost surveys of all identified sites that would be affected. Surveys shall conform to the protocols and guidelines set forth in Mitigation Measure BIO-12a in the MMRP, and a report shall be submitted to the Planning Director following such surveys as specified by Mitigation Measure BIO-12a of the MMRP and prior to issuance of building permits.
20. Avoid Loss of Historic Resources and Record if Necessary (MMs CUL-1a and -1b). As required by Mitigation Measure CUL-1a in the MMRP, the Permittee shall avoid historic resources in the design and layout of the Project wherever feasible. As required by Mitigation Measure CUL-1b, if avoidance of resources in accordance with Mitigation Measure CUL-1a is determined to be infeasible, the significantly affected historic resource shall be recorded prior to site disturbance and before issuance of building permits, consistent with Mitigation Measure CUL-1b requirements.
21. Preconstruction Survey and Planning for Cultural Resources (MMs CUL-2a and CUL-2b). As required by Mitigation Measure CUL-2a in the MMRP, prior to ground-disturbing activities and issuance of the building permit, the Permittee shall have qualified personnel conduct an archaeological field survey of the Project area to determine whether significant cultural resources exist within the Project area. Documentation of the field survey results shall comply with Mitigation Measure CUL-2a.

As required by Mitigation Measure CUL-2b, if any significant resources are identified through the preconstruction survey, a treatment plan with measures that could include site avoidance, capping, or data recovery will be developed and implemented by the Permittee and approved by the Planning Director subject to applicable requirements.
22. Environmental Site Assessment to Identify Possible Site Contamination (MM HAZ-4). As required by mitigation measure HAZ-4 in the MMRP, the Permittee shall have a Phase I Environmental Site Assessment (ESA) prepared for any Project area proposed for

ground-disturbing activities and submit it to the Alameda County Health Services Agency – Environmental Health Department, as the authorized regulatory oversight agency. The Phase I ESA shall be in conformance with the minimum requirements described in Mitigation Measure HAZ-4 in the MMRP.

If the Phase I ESA indicates likely soil contamination a Phase II ESA shall be prepared by a qualified environmental professional under a work plan approved by the Environmental Health Director, including proposed soil sampling, remediation and disposal of contaminants if necessary. The Phase II ESA shall include the components outlined in Mitigation Measure HAZ-4, and shall be provided to the Planning Director and Environmental Health Director, the latter of which may require remediation of soil or groundwater or disposal of hazardous building materials subject to a work plan approved by the Environmental Health Director. Review of a work plan and Phase II ESA will require a deposit of \$6,000.00 (as of this approval date) with the County Health Services Agency – Environmental Health Department, and may require opening a Site Cleanup Program (SCP) file. Any contaminated soil identified on a Project site must be properly disposed of in accordance with the State Department of Toxic Substance Control (DTSC) regulations in effect at the time the Phase II ESA is submitted to the Environmental Health Director.

23. Preconstruction Noise Studies (MM NOI-1). As required by Mitigation Measure NOI-1 in the MMRP, if any turbine is proposed to be located within 2,000 feet of a noise sensitive receptor, such as a residence, school, church or public recreational trail, the Permittee shall have a qualified acoustic engineering consultant prepare a report to evaluate the Project-specific noise impacts associated with operation of the proposed wind turbine(s). This evaluation shall conform to the requirements of mitigation measure NOI-1. If operation of the turbine(s) is predicted to result in noise level of 55 dBA (Ldn) or greater where noise is currently less than 55 dBA (Ldn) or result in a 5 decibel (dB) increase where noise is currently greater than 55 dBA (Ldn), the Permittee shall modify the Project to select new specific installation sites or turbine designs within the Project boundary to ensure that these performance standards will not be exceeded.

Other methods that can be used to ensure compliance with these performance standards include but are not limited to increasing the distance between proposed turbines and noise sensitive uses, or use of alternative turbine operational modes to reduce noise. Upon completion of the noise study, the Permittee shall submit a report to the Alameda County Planning Director demonstrating how the Project will comply with these performance standards. After review and approval of the report by the Planning Director, the Permittee shall incorporate measures as necessary into the Project design to ensure compliance with these performance standards.

24. Safety Setbacks. New wind turbines shall have a minimum setback from other land uses as stated below.
- a. From a parcel boundary on which a separate windfarm operation is proposed or approved: 1.1 times (or 110% of) the rotor length.
 - b. From a parcel boundary on which no windfarm operation is proposed or approved: 1.25 times (or 125% of) the total turbine height.
 - c. From a Dwelling Unit: three times (or 300% of) the total turbine height.
 - d. From a public road, interstate highway, public trail, commercial or residential zoning: 2.5 times (or 250% of) the total turbine height.
 - e. From a recreation area or property approved for an outdoor recreation use: 1.25 times (or 125% of) the total turbine height.
 - f. From a high-tension electrical transmission line: 2 times (or 200% of) the total turbine height.

The setbacks specified above shall be increased by one (1) percent of the total turbine height (to the top of the rotor blade at the 12:00 o'clock position) per ten (10) feet of elevation that the turbine's ground elevation is above the ground elevation of the affected parcel or use, specifically the nearest affected parcel boundary, recreation area or property, dwelling unit, road or highway right-of-way, trail, commercial or residential zone district boundary, or the center of a transmission or conductor line. The setback may be decreased by one (1) percent of such total turbine height per ten (10) feet of elevation that the turbine's ground elevation is below the ground elevation of affected parcels or uses.

Furthermore, the setbacks specified above, as adjusted according to turbine elevation above or below an affected parcel or use, may be reduced by 50% to an alternative minimum (i.e., to one-half the resulting setback), if a notarized agreement or a recorded easement from the affected property owner (except in the case of setbacks from a public road, interstate highway or transmission line) is approved by the Planning Director, with the following exceptions and conditions:

- i. The setback from a parcel on which no windfarm operation is proposed or approved may be reduced to no less than 1.1 times (or 110% of) the rotor length.
- ii. The setback from a recreation area or property approved for an outdoor recreation use shall not be reduced to less than 1.0 times (100% of) the total turbine height.
- iii. The setback from a public road, interstate highway, public trail, commercial or residential zoning, or high-tension transmission line shall only be reduced to such minimum with the submittal of a report by a qualified professional, to be approved by the Planning Director with substantial evidence that public safety will not be compromised, and property owner agreement or easements shall be required only from private properties with commercial or residential zoning.

Adjustments based on the ground elevation of a turbine shall be limited to whole ten-foot increments, disregarding any smaller portion. Total turbine height shall always be measured from ground elevation to the top of the rotor at the 12:00 o'clock position (i.e., at the furthest upward reach of the rotor blade). For adjoining parcels under the same windfarm use permit, no setback is required. Knowledge of existing, proposed or approved windfarm use permits on adjacent parcels shall be based on the best available information at the time of the subject application. The Planning Director shall reserve the right to reject all or part of an alternative minimum setback based on substantial evidence that a wind turbine will have adverse noise, safety or visual impacts on a dwelling unit that have not been previously disclosed publicly, or that a required report requires additional information before such a minimum is approved.

25. Safety Setbacks for Meteorological Towers. New temporary and permanent meteorological towers (met towers) shall have a minimum setback from the exterior Project boundary shown in the permit application, equal to the total height of the met tower plus 25 feet.
26. Undergrounding of Utility Lines. All electrical utility collection and distribution connection lines shall be installed underground, except as required by the utility company for final connections to major substations.
27. Site Development Review for Previously Undeveloped Ridgelines (MM AES- 2a). Site Development Review pursuant to Section 17.54.230 et. seq. of the County Zoning Ordinance shall be required for new turbines proposed on a ridgeline or hilltop which has not previously been developed with commercial-scale wind turbines (over 25 kW rated capacity). Such Site Development Review shall not be approved unless the Planning Director determines that the visual effects will be substantially avoided by distance from public view points (e.g., over 2,000 feet), intervening terrain, screening landscaping, or compensatory improvements to equivalent and nearby (radius of 1 mile) scenic features, as approved by the Planning Director.
28. Analyze Shadow Flicker Distance and Mitigate Effects (MM AES-5). Where shadow flicker could result from the installation of wind turbines near residences (i.e., within 500 meters or about 1,600 feet in a broadly easterly or westerly direction, accounting for all seasons of the year), the Permittee shall prepare a graphic model and study to evaluate the potential for shadow flicker impacts on residences for review and acceptance by the Planning Director. No shadow flicker in excess of 30 minutes in a given day or 30 hours (net or total) in a given year will be permitted unless it has been mitigated subject to the approval of the Planning Director.

If any residence is nonetheless affected by shadow flicker within the 30-minute/30-hour thresholds, the Permittee shall implement one or more measures to avoid or minimize the effect, such as providing opaque window coverings, window awnings, landscape buffers or a combination of these features to reduce flicker to acceptable limits for the affected receptor, or shutting down the turbine during the period shadow flicker would occur.

Such measures shall be undertaken in consultation with the owner of the affected residence, and may be confirmed by preparation of a shadow flicker study at the Permittee's expense. If the shadow flicker study indicates that any given turbine would result in shadow flicker exceeding the 30-minute/30-hour thresholds and the affected property owner is not amenable to window coverings, window awnings, or landscaping and the turbine cannot be shut down during the period of shadow flicker, then the turbine operations would be set back or limited to avoid shadow flicker to the satisfaction of the affected owner of the residence.

29. Color Treatment. All wind turbines, blades, towers and structures shall be treated and maintained with a generally uniform off-white paint scheme in order to blend with the surroundings and minimize adverse visual effect. Exceptions may include experimental measures if recommended by the avian protection Technical Advisory Committee (TAC, as described in Condition 95) and approved by the Planning Director to allow any turbine to be painted as a mitigation for bird collisions.
30. Lighting Guidelines. Lighting design for turbine tower entries, substations and permanent operations and maintenance buildings shall be submitted for review and approval by the Planning Director and included in the building permit application. New lighting shall be downward casting and shielded, utilizing motion detection systems if appropriate and shall not unnecessarily "wash out" into surrounding areas. Lenses and bulbs shall not protrude from light fixtures. Fixtures intended to be lit for long periods of time shall utilize low-pressure sodium lamps or devices with similar properties (i.e., long-lasting and energy efficient). Fixtures shall be mounted at the lowest feasible height. If industrial design standards or Federal Aviation Administration (FAA) safety protocols require lighting designs that conflict with the requirements of this condition, such standards and protocols shall take precedence subject to approval by the Planning Director and Building Official with respect to other applicable conditions and mitigation measures.

Lighting required by FAA shall be shrouded, directed upward, or utilize other technology to minimize lighting at ground level. If FAA safety protocols require lighting designs that conflict with the requirements of this condition, such protocols shall take precedence subject to approval by the Planning Director and Building Official with respect to other applicable conditions and mitigation measures.
31. Tower Access. Each wind turbine tower shall be fully enclosed with interior access controlled by the Permittee with security measures approved by the Building Official, and ladder or lift safety measures.
32. Operational Safety. Each turbine generator shall be equipped with both manual and automatic controls to limit the rotational speed of the blade within the design limits of the overall turbine. Generators shall be designed, installed and operated to prevent emissions of electromagnetic interference that are disruptive to adjacent land uses.

33. Meteorological Tower Design Standards. Temporary meteorological towers (met towers) shall be shown on site plans submitted for building permits, and may be guyed (supported by guy-wires) with colored avian marker balls or spirals at appropriate intervals. Met towers installed for operation of more than two years (24 months) shall be free-standing and not supported by guy-wires. Permanent or temporary met towers in excess of 200 feet (or 60 meters) shall be referred to the FAA for consideration of lighting requirements and paint treatment (e.g., aviation orange). Lighting required by FAA shall be shrouded, directed upward, or utilize other technology to minimize lighting at ground level. If FAA safety protocols require lighting designs that conflict with the requirements of this condition, such protocols shall take precedence subject to approval by the Planning Director and Building Official with respect to other applicable conditions and mitigation measures.
34. Permanent Signage. Permittee shall provide signage on the entry gates to the subject property(ies) providing basic contact information for use in case of an emergency, including the name of the Project, names, titles, and phone numbers of individuals responsible for operations, non-emergency phone numbers, and the Planning Department general contact information. The turbine towers, rotors, cabinets, or mountings shall not be used for advertising.
- 35a. Turbine and Infrastructure Design and Siting to Reduce Avian Mortality (MMs BIO-11b, BIO-11c and BIO-11d). As required by Mitigation Measures BIO-11b, BIO-11c and BIO-11d in the MMRP, the Permittee shall utilize a siting process and prepare a siting analysis, using analyses of landscape features and location-specific bird use and behavior data to determine the specific turbine site locations with the potential to reduce avian collision risk and fatalities and otherwise minimize potential impacts on bird and bat species. Permittee shall utilize existing data as well as collect new site-specific data as part of the siting analysis. Permittee shall implement Mitigation Measure BIO-11b as set forth in the Project MMRP.

Permittee shall use turbines with certain characteristics recognized to reduce the collision risk for avian species. Permittee shall implement the design-related measures set forth by Mitigation Measure BIO-11c as set forth in the Project MMRP. Permittee shall also apply specific measures outlined in Mitigation Measure 11d when designing and siting turbine-related infrastructure in order to reduce the risk of bird electrocution and collision.

Upon determining that the information in the siting analysis is sufficiently detailed for Technical Advisory Committee (TAC) consideration and recommendations, the Planning Director shall schedule a meeting for TAC review of the Project’s compliance with mitigation measures BIO-11a and BIO-11b.
- 35b. Project-Specific Conditions Agreed to by the Permittee. When the project is scheduled for TAC consideration as outlined in condition 35a, the Permittee shall also provide for the County’s review and TAC consideration, confirmation that the project contains the following operational features:

1. Daytime curtailment for eagles (i.e. cut-in speed of 4.5 m/s during the day to reduce daylight operational hours by 50%)

2. Seasonal nighttime curtailment for bats (i.e. cut-in speed of 5.0 m/s from sunset to sunrise from August 1st through October 31st)
 3. Regular updates on Resource Agency Incidental Take Permit process, including any implementation of the “IdentiFlight” technology (or its equivalent), nesting surveys, conservation easements, compensatory mitigation, and other State/Federal requirements related to avian mortality reduction efforts.
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36. Retrofit Existing Infrastructure to Minimize Risk to Raptors (MM BIO-11e). As required by Mitigation Measure BIO-11e, the Permittee shall have any existing power lines in its Project area, that are owned or operated by the Permittee and that are associated with electrocution of an eagle or other raptor retrofitted within 30 days of any recorded electrocution, or prior to the start of commercial operation, to make them raptor-safe according to Avian Power Line Interaction Committee guidelines. All other existing structures to remain in a Project area during repowering will be retrofitted, as feasible, according to specifications of Condition 35 and Mitigation Measure BIO-11c prior to repowered turbine operation.
 37. Site Management to Discourage Prey for Raptors (MM BIO-11f). As required by Mitigation Measure BIO-11f in the MMRP, the Permittee shall prevent the use of rodenticides, allow rock piles only over 500 meters from any new turbine, and use gravel around turbine foundations, when designing and siting turbine-related infrastructure and other site improvements, and operating the wind turbines, in order to minimize opportunities for fossorial mammals to become established and thereby create a prey base that could become an attractant for raptors.
 38. Turbine Siting and Selection to Minimize Potential Bat Mortality (BIO-14a). Permittee shall use the best information available to site turbines and to select from turbine models in such a manner as to reduce bat collision risk. The siting and selection process will take into account bat use of the area and landscape features known to increase collision risk (trees, edge habitats, riparian areas, water bodies, and wetlands). Measures include but are not limited to siting turbines the greatest distance feasible up to 500 meters (1,640 feet) from still or flowing bodies of water, riparian habitat, known roosts, and tree stands. Permittee shall implement Measure BIO-14a as set forth in the Project MMRP.
 39. Design of Circuit Breakers to Minimize Sulfur Hexafluoride (SF₆) Leakage (MM GHG-2b). The Permittee shall ensure that any new circuit breaker installed at a substation has a guaranteed Sulfur Hexafluoride (SF₆) leak rate of 0.5% by volume or less. The Permittee shall provide the Building Official with documentation of compliance, such as specification sheets, prior to installation of the circuit breaker. In addition, the Permittee shall monitor SF₆-containing circuit breakers at the substation consistent with the California Air Resources Board’s Scoping Plan Measure H-6 for the detection and repair of leaks.

CONSTRUCTION PERMIT REQUIREMENTS

40. Building Permit Application Requirements (including MM GHG-2d). The Permittee shall apply for and obtain approval for separate building permits for the removal and demolition of existing turbines and associated facilities, and the construction of new

turbines, and shall conform to the following requirements.

- a. Soils report and/or geological/geotechnical study will be required.
 - b. Comply with building codes and submittal requirements in effect at the time of submitting for building permits.
 - c. A California licensed architect or engineer shall be designated as the design professional responsible and in charge of the Project submittal. Submittal documents may be signed and sealed by multiple licensed architects or engineers.
 - d. The Permittee's designated California-licensed land surveyor shall be responsible for the property information filed with the Building Permit application.
 - e. The demolition and construction debris diversion plan shall comply with applicable policies of the Public Works Agency's Construction & Demolition Debris Management Program. In particular, the Permittee shall implement Mitigation Measure GHG-2d as set forth in the MMRP, to comply with the County's revised Green Building Ordinance regarding construction and demolition debris to achieve the following minimum standards: 1) 100% of inert waste and 50% wood/vegetative/scrap metal not including Alternative Daily Cover (ADC) and unsalvageable material will be put to other beneficial uses at landfills; and 2) 100% of inert materials (concrete and asphalt) will be recycled or put to beneficial reuse.
 - f. Plans filed for the Building Permit application shall obtain Zoning Approval (i.e., Planning Department approval for consistency determination that the plans are consistent with this permit), and shall be drawn to scale, indicating the location of each wind turbine, the location and function of all structures within 1,000 feet of any wind turbine, as well as all trailers and major ground equipment to be put in place for use during construction.
 - g. Evidence of a proposed interconnection agreement and any technical requirements and specifications required by the interconnection authority.
 - h. Evidence of filing a notice of proposed construction with the FAA and the required referral to the Alameda County Airport Land Use Commission.
41. Use of Recycled Content in New Building Materials (MM GHG-2c). The Permittee shall require the construction of all new substation and other permanent buildings to incorporate materials for which the sum of post-consumer recycled content plus one-half of the post-industrial content constitutes at least 10% of the total value of the materials in the Project.
42. Fire Department Approval Requirements. Permittee shall contact the Alameda County Fire Department, Fire Prevention Bureau, to obtain a fire clearance certificate. The Bureau may be reached by telephone at (510) 670-5853. The Permittee shall install a Knox Box at all entry gates, provide an emergency contact to the Department, and maintain a fire extinguisher in each ground equipment area. Water tanks meeting NFPA 1142 standards shall be provided at each construction staging area and shown on Building Permit application site plans. Permittee shall be responsible for compliance with the Altamont Pass Windfarms Fire Requirements dated September 22, 2005 adopted by Alameda County and which were reviewed and re-adopted on November 12, 2014.

43. Grading Permit Application and Geotechnical Investigation Requirements (MM GEO-1). Prior to any grading, ground-disturbing or construction activities on the Project site, the Permittee shall submit a preliminary grading plan and a site-specific geotechnical investigation to the County Grading Department. The geotechnical investigation/report shall be prepared by a qualified geotechnical firm in conformance with Chapter 15.36.320 and subsequent applicable sections of the Alameda County Grading Ordinance, for review by the County for the purpose of obtaining a grading permit in accordance with the provisions of the Grading Ordinance and the following requirements.
- a. The site-specific geotechnical/geologic report shall be prepared by a licensed geotechnical engineer or engineering geologist with local expertise in geotechnical investigation and design, based on data collected from subsurface exploration, laboratory testing of samples, and surface mapping. The report shall contain all of the elements listed under the Alameda County Grading Ordinance Chapter 15.36.350, as required, and address the following and any additional issues as required by the Director of Public Works.
 - Potential for surface fault rupture and turbine site location: The geotechnical report will investigate the Greenville, Corral Hollow-Carnegie, and the Midway faults (as appropriate to the location) and determine whether they pose a risk of surface rupture. Turbine foundations and power collection systems will be sited according to recommendations in this report.
 - Strong ground shaking: The geotechnical report will analyze the potential for strong ground shaking at the project site and provide turbine foundation design recommendations, as well as recommendations for power collection systems.
 - Slope failure: The geotechnical report will investigate the potential for slope failure (both seismically and nonseismically induced) and develop site-specific turbine foundation and power collection system plans engineered for the terrain, rock and soil types, and other conditions present at the project site in order to provide long-term stability.
 - Expansive soils: The geotechnical report will assess the soil types at the project site and determine the best engineering designs to accommodate the soil conditions.
 - b. Unstable cut or fill slopes: The geotechnical report will address geologic hazards related to the potential for grading to create unstable cut or fill slopes and make site-specific recommendations related to design and engineering. The geotechnical/geologic report may be subject to a professional review by the County's consulting geotechnical engineer/geologist. It shall be the Permittee's responsibility to provide sufficient funds to the County for this professional review service if required.
 - c. Permittee shall implement the design recommendations in the geotechnical report, including revised recommendations resulting from the professional review, if such a review is required.
 - d. No grading work will be allowed during the rainy season, from October 1 to April 30, except upon a clear demonstration, to the satisfaction of the Director of the Public

Works Agency, that at no stage of the work will there be any substantial risk of increased sediment discharge from the site.

- e. Any proposal for grading work associated with fire access roads must be reviewed and approved by the Alameda County Fire Department prior to issuance of a grading permit.
 - f. The grading permit shall be subject to approval of the Alameda County Flood Control and Water Conservation District.
44. Stormwater Control Plan. Permittee shall prepare a Stormwater Control Plan (SCP) in compliance with the technical requirements of Provisions C.3 and C.6 of the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (Municipal Regional Permit, or MRP) and the County Building and Stormwater Management and Discharge Control Ordinances for the purpose of long-term (post-construction) stormwater control. The SCP shall be submitted to the Director of Public Works for approval prior to issuance of a County Stormwater Permit. The SCP shall include:
- a. Plan drawings showing the locations, sizing and Drainage Management Areas discharging to the proposed stormwater treatment system(s), the planned site design and source control measures, and any required hydromodification management (HM) facilities or devices.
 - b. A preliminary written plan that describes the operation and maintenance (O&M) (including inspection) of all installed stormwater treatment systems and HM controls both during construction and following construction.
 - c. A draft of a statement from the Permittee and property owner accepting long-term responsibility for the O&M of the installed stormwater treatment systems and HM controls, along with continuing upkeep of any required source control and site design measures, until such responsibility is legally transferred to another entity.
 - d. A draft of an agreement to include written conditions in any sales or lease agreements or deed for the Project that requires a buyer or lessee to assume long-term responsibility for the O&M of the installed stormwater treatment systems and HM controls, and the upkeep of the source control and site design measures, until such responsibility is legally transferred to another entity.
 - e. A signed statement from the Permittee and property owner(s) granting site access to all representatives of the County, local mosquito and vector control agency staff, and Water Board staff, for the sole purpose of performing O&M inspections of the installed stormwater protection systems (treatment systems, HM controls, source controls and site design measures).
 - f. A written statement from the Permittee and property owner(s) and successors acknowledging that the County may conduct annual inspections of all installed stormwater protection systems and that the Permittee agrees to pay for those inspection costs on a time and materials basis.

- g. The plan shall specify that all new or modified drainage facilities shall be designed to ensure no net increase in stormwater discharge rates, flow velocities, or sediment transport would result from Project implementation.
- h. Discharges from these facilities shall be designed so as to avoid concentration of flow and subsequent downstream scouring or sedimentation in natural creek beds.
- i. Proposed roadways shall be designed so as to ensure that potential for slope failure and erosion is minimized.
- j. The Stormwater Control Plan shall be incorporated into all design drawings and specifications as appropriate, and shall meet the following standards:
 - i. The Permittee shall design and construct all storm drainage facilities in compliance with the County Public Works Design Standards.
 - ii. The Permittee shall prevent storm drainage from draining across driveway(s) or onto adjacent properties in a concentrated manner.
 - iii. The Permittee shall obtain a drainage permit under applicable County Ordinances for the installation of new drainage culverts.

A Stormwater Control Plan, Waste Discharge Identification (WDID) Number, Notice of Intent (NOI) and a Storm Water Pollution Prevention Plan (SWPPP) must be submitted to the Public Works Agency prior to issuance of the County Grading and Stormwater Permits.

45. NPDES Permit Requirements to Prevent Stormwater Pollution During Construction (MM WQ- 1). As required by Mitigation Measure WQ-1 in the MMRP, the Permittee shall submit a Notice of Intent (NOI) and obtain coverage under the Construction General Permit (CGP) authority of the National Pollutant Discharge Elimination System (NPDES) for both the Central Valley and San Francisco Bay Regional Water Boards, before the onset of any construction activities for the purpose of preventing stormwater pollution during construction. The Permittee shall have a specific Project Storm Water Pollution Prevention Plan (SWPPP) prepared by a Qualified SWPPP Developer and ready for implementation prior to construction. This SWPPP shall be kept onsite during construction activity and provided upon request to representatives of the County and Water Board staffs.

Permittee shall apply for a County Stormwater Permit prior to the start of any construction; this application shall include proof of coverage under the CGP and a copy of the Project SWPPP. This SWPPP must provide for the implementation of pollutant discharge controls that utilize Best Management Practices (BMPs) and technology to reduce erosion, sedimentation, and other discharges to the water quality standards of the CGP and the County Stormwater Permit. BMPs may consist of a wide variety of protective measures taken to reduce pollutants in stormwater and other nonpoint- source runoff, including but not limited to, the following practices:

- a. Installation of temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) to control erosion and sedimentation from disturbed areas.
- b. Construction of dry detention basins (typically dry except after a major rainstorm, when it will temporarily fill with stormwater), designed to decrease runoff from the work site during storm events and to prevent flooding of the construction areas. Basin BMPs must include maintenance schedules for the periodic removal of sediments, excessive vegetation, and debris that may clog basin inlets and outlets.
- c. The application of covers or nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more) that could contribute sediment to waterways.
- d. The enclosure and coverage of exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways.
- e. The control of run-on that could deposit sediment or other materials from areas adjacent to the work site.
- f. The assurance that no earth or organic material will be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water.
- g. The application of controls that would preclude the following types of materials from being rinsed or washed into the County stormdrain system, the “waters of the United States,” or adjacent properties: concrete, concrete wash, solvents and adhesives, thinners, paints, fuels, sawdust, dirt, gasoline, asphalt and concrete saw slurry, and heavily chlorinated water.
- h. The establishment of grass or other vegetative cover on the construction site as soon as possible after disturbance.

The Permittee (and the selected contractor) shall select a combination of appropriate BMPs, consistent with the above and with the requirements of the CGP and the County Stormwater Permit, which is expected to minimize runoff and remove contaminants from stormwater discharges. The final selection of BMPs will be subject to approval by the County and by the San Francisco Bay Regional Water Board or the Central Valley Water Board.

The Permittee (and the selected contractor) shall verify that a Notice of Intent (NOI) has been filed with the appropriate State Water Board having jurisdiction, that the said Water Board has issued a Waste Discharge Identification (WDID) Number, that a project SWPPP has been prepared, and that a County Stormwater Permit has been issued before allowing construction to begin. The selected contractor shall perform regular inspections of the construction area, to verify that the BMPs specified in the SWPPP are properly implemented and maintained. The contractor will notify the appropriate Regional Water

Board and the County immediately if there is a noncompliance issue. If necessary, the contractor shall require that additional BMPs be designed and implemented if those originally constructed do not achieve the identified performance standard of the CGP or the County Permit.

46. Roadway Encroachment Permit. Permittee shall apply to the Public Works Agency for separate roadway encroachment permits for temporary and permanent access and facilities. Improvement plans shall be prepared by a registered Civil Engineer for approval by the Director of Public Works, accompanied by the required review and inspection fees, as well as insurance and security deposits if required by the Public Works Agency.
47. Gate Entries. The Permittee shall provide designs to the Director of Public Works for roadway widening, pavement transitions, shoulder widening, necessary longitudinal and transverse drainage, and any driveway profile adjustments in conformance with County Roadway Standards. The new pavement section shall match, at a minimum, the full roadway section of each affected County roadway. No gates or fences shall be located within any County road right-of-way, and gates shall not swing out towards the public road.
48. Construction Traffic Control Plan (MM TRA-1). Prior to starting construction-related activities, the Permittee shall prepare and implement a Traffic Control Plan (TCP) that will reduce or eliminate impacts associated with the proposed project. The TCP shall adhere to Alameda County, San Joaquin County, and Caltrans requirements, and must be submitted for review and approval of the County Public Works Department prior to implementation. The TCP shall include the following elements. The County and Caltrans may require additional elements to be identified during their review and approval of the TCP.
 - Schedule construction hours to minimize concentrations of construction workers commuting to/from the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.).
 - Limit truck access to the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.).
 - Require that written notification be provided to contractors regarding appropriate haul routes to and from the project site, as well as the weight and speed limits on local county roads used to access the project site.
 - Provide access for emergency vehicles to and through the project site at all times.
 - When lane/road closures occur during delivery of oversized loads, provide advance notice to local fire, police, and emergency service providers to ensure that alternative evacuation and emergency routes are designated to maintain service response times.
 - Provide adequate onsite parking for construction trucks and worker vehicles.
 - Require suitable public safety measures in the project site and at the entrance roads, including fences, barriers, lights, flagging, guards, and signs, to give adequate

warning to the public of the construction and of any dangerous conditions that could be encountered as a result thereof.

- Complete road repairs on local public roads as needed during construction to prevent excessive deterioration. This work may include construction of temporary roadway shoulders to support any necessary detour lanes.
- Repair or restore the road right-of-way to its original condition or better upon completion of the work.

Coordinate project-related construction activities, including schedule, truck traffic, haul routes, and the delivery of oversized or overweight materials, with Alameda County, Caltrans, and affected cities and counties to identify and minimize overlap with other area construction projects.

49. Watercourse Protection Ordinance. If any ground disturbing work is proposed within or near a watercourse, a watercourse encroachment permit or a grading permit shall be secured from the Public Works Agency in accordance with the Alameda County Watercourse Protection Ordinance. Watercourse setbacks shall be delineated on the exhibit plan per the provisions of Article V of the Watercourse Ordinance. The Ordinance establishes a setback of 20 feet from the top of the creek bank. However, for existing bank slopes at 2 horizontal to 1 vertical, or steeper, establish the setback by drawing a line on a cross-section at a 2 horizontal to 1 vertical slope from the toe of the existing bank to a point where it intercepts the ground surface and then add 20 feet. As provided by the Watercourse Protection Ordinance (Section 13.12.310, item G), the Director of Public Works shall make the determination as to setback limits and any permitted development within a setback.
50. Other Watercourse Requirements. The Permittee shall be responsible, prior to any work near or within a recognized watercourse, for securing other permits (e.g., Streambed Alteration Agreement) or other approvals required for work which is regulated by any other public agency (i.e., the California Department of Fish and Wildlife, Army Corp of Engineers, etc.).
51. Project-Specific Avian Protection Plan (BIO-11a). The Permittee shall prepare a Project-specific Avian Protection Plan (APP) as required by Mitigation Measure BIO-11a in the MMRP to specify measures and protocols consistent with the program-level mitigation measures that address avian mortality. The Project-specific APP will include, at a minimum, the following components.
 - a. Information and methods used to site turbines to minimize risk.
 - b. Documentation that appropriate turbine designs are being used.
 - c. Documentation that avian-safe practices are being implemented on Project infrastructure.
 - d. Methods used to discourage prey for raptors.

- e. A detailed description of the postconstruction avian fatality monitoring methods to be used (consistent with the minimum requirements outlined in Mitigation Measure BIO-11g).
- f. Methods used to compensate for the loss of raptors (consistent with the requirements of Mitigation Measure BIO-11h).

The Permittee shall prepare and submit a draft Project-specific APP to the County within 10 days of submitting the Building Permit application. The draft APP will be reviewed by the TAC for consistency and the inclusion of appropriate mitigation measures that are consistent with the PEIR and recommended for approval by the County. The Permittee must obtain approval from the Planning Director of the draft APP prior to commercial operation, and obtain recommendations from the TAC for preparation of the Final APP within six months of commercial operations. The Final APP shall be subject to approval by the Planning Director.

52. Stop Work Procedures for Encounters With Cultural Resources, Human Remains and Paleontological Resources During Ground-Disturbing Activities (MMs CUL-2d, CUL-3 and GEO-7c). Permittee shall ensure that construction specifications include a stop-work order if paleontological, prehistoric, or historic-era cultural resources, or human remains are unearthed during ground-disturbing activities. Specific procedures are set forth in Conditions 69, 70 and 71.

PRIOR TO ISSUING BUILDING PERMIT

53. Implement Best Management Practices (BMPs) to Avoid and Minimize Impacts on Special-Status Plant and Animal Species (MMs BIO- 1b, BIO-5a and BIO-7a). The Permittee shall ensure that the BMPs described in Mitigation Measures BIO-1b, BIO-5a, and BIO-7a, in accordance with practices established in the East Alameda County Conservation Strategy (EACCS), will be incorporated into the Project design and construction documents.
54. Measures to Avoid, Minimize and Mitigate Impacts On Special-Status Wildlife Species (MMs BIO-3b, BIO-4a, BIO-5a, BIO-6, BIO-7a, BIO-8a, BIO-8b, BIO-9 and BIO-10a). The Permittee shall implement Mitigation Measures BIO-3b, BIO-4a, BIO-5a, BIO-6, BIO-7a, BIO-8a, BIO-9 and BIO-10a, as identified in the Project MMRP to address special-status invertebrates, amphibians, reptiles, nesting birds and mammals, which are based on the EACCS and which have been modified and supplemented in the Project MMRP. The MMRP measures shall address the following species:

a. Vernal pool branchiopods (invertebrates, including longhorn fairy shrimp, vernal pool fairy shrimp and vernal pool tadpole shrimp)	
b. Curved-footed hygrotus diving beetle	c. Valley elderberry longhorn beetle
d. California tiger salamander	e. Western spadefoot
f. California red-legged frog	g. Foothill yellow-legged frog

h. Western pond turtle	i. Blainville's horned lizard
j. Alameda whipsnake	k. San Joaquin coachwhip
l. Western burrowing owl	m. Tri-colored blackbird Other non-special-status migratory birds
n. San Joaquin kit fox	o. American badger

Where impacts cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements provided in the EACCS (Appendix C2 in the Final PEIR). In the event that an incidental take permit is obtained, compensatory mitigation will be undertaken in accordance with the terms of the permit in consultation with United States Fish and Wildlife Service (USFWS).

Implementation of some Mitigation Measures identified in the MMRP will require that the Permittee obtain incidental take permits from USFWS and CDFW (e.g., Alameda whipsnake) before construction begins. Additional conservation measures may be required in applicable Project permits (i.e., ESA incidental take permit).

55. Implement Best Available Control Technology for Heavy-Duty Vehicles (MM GHG-2a). The Permittee shall require existing trucks/trailers to be retrofitted with the best available technology and/or ARB-approved technology and/or CARB- approved technology consistent with the CARB Truck and Bus Regulation (California Air Resources Board 2019). The CARB Truck and Bus Regulation applies to all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. The Permittee shall comply with the specific requirements of Mitigation Measure GHG-2a as set forth in the MMRP to mitigate for potentially significant cumulative construction and operations and maintenance contributions to greenhouse gas emissions.

PRIOR TO GROUND-DISTURBING ACTIVITIES

56. Establish Activity Exclusion Zones for Special- Status Plant Species (BIO- 1c). As required by Mitigation Measure BIO-1c in the MMRP, where pre-construction surveys determine that a special- status plant species is present in or adjacent to a Project area, the Permittee shall establish activity exclusion zones to avoid direct and indirect impacts of the Project on such species. No ground- disturbing activities shall take place within these designated activity exclusion zones, including construction of new facilities, construction staging, or other temporary work areas. Activity exclusion zones for special- status plant species will be established around each occupied habitat site, the boundaries of which will be clearly marked with standard orange plastic construction exclusion fencing or its equivalent. The establishment of activity exclusion zones will not be required if no construction- related disturbances will occur within 250 feet of the occupied habitat. The size of activity exclusion zones may be reduced through consultation with a qualified biologist and with concurrence from CDFW based on site- specific conditions.
57. Best Management Practices to Avoid and Minimize Effects on Special-Status Amphibians (MM BIO-5a). The Permittee shall implement BMPs and other appropriate

measures consistent with Mitigation Measure BIO-5a in the Project MMRP to address special-status amphibians and shall ensure that, in accordance with measures developed for the EACCS, such BMPs are incorporated into the appropriate design and construction documents. Implementation of some of these measures will require that the Project proponent obtain incidental take permits from USFWS (e.g., California red-legged frog and California tiger salamander) and from CDFW (California tiger salamander only) before construction begins. Additional conservation measures or conditions of approval may be required in applicable Project permits (e.g., ESA or CESA incidental take authorization). Permittee shall comply with the specific requirements of Mitigation Measure BIO-5a in the MMRP to mitigate for effects on amphibians, including, but not limited to limits on the season in which ground-disturbing activities may occur, installation of barrier fencing, identifying appropriate relocation areas and preparing a relocation plan.

Permittee shall have a qualified biologist conduct preconstruction surveys immediately prior to ground-disturbing activities (including equipment staging, vegetation removal, grading). The biologist will survey the work area and all suitable habitats within 300 feet of the work area. If individuals (including adults, juveniles, larvae, or eggs) are found, work will not begin until USFWS and/or CDFW is contacted to determine if moving these life-stages is appropriate. If relocation is deemed necessary, it will be conducted in accordance with the relocation plan. Incidental take permits are required for relocation of California tiger salamander (USFWS and CDFW) and California red-legged frog (USFWS). Relocation of western spadefoot and foothill yellow-legged frog normally requires a letter from CDFW authorizing this activity; however, a biologist with a specific authorization (i.e., scientific collecting permit or MOU from CDFW) will be accepted for this purpose.

58. Preconstruction Surveys for Western Pond Turtle and Monitoring of Construction Activities (BIO-6). If determined as a result of pre-construction surveys pursuant to Mitigation Measure BIO-3a, that suitable aquatic or upland habitat for western pond turtle is identified within proposed work areas, Permittee shall implement Mitigation Measure BIO-6 as set forth in the Project MMRP, consistent with measures developed for the EACCS, to ensure that the proposed Project does not have a significant impact on western pond turtle. The mitigation includes but is not limited to surveys conducted both one week before and immediately before (within 24 hours) of work activity, use of a biological monitor if needed, and approval by CDFW for any required relocation of turtles.
59. Plan for Restoration of Disturbed Annual Grasslands (BIO-5c). Within 30 days prior to any ground disturbance, Permittee shall have a qualified biologist prepare a Grassland Restoration Plan in coordination with CDFW and subject to CDFW approval, to ensure that temporarily disturbed annual grasslands and areas planned for the removal of permanent roads and turbine pad areas are restored to pre-Project conditions. The Grassland Restoration Plan shall conform to the requirements of Mitigation Measure BIO-5c in the MMRP.

The Grassland Restoration Plan shall include a requirement to monitor restoration areas annually (between March and October) for up to three years following the year of restoration. The restoration will be considered successful when the percent cover for restored areas is 70% absolute cover of the planted/seeded species compared to the percent absolute cover of nearby reference sites.

The Permittee shall provide evidence to the Planning Director that CDFW has reviewed and approved the Grassland Restoration Plan. Additionally, the Permittee shall provide annual monitoring reports to the County by January 31 for three years or until restoration is deemed successful by the CDFW, summarizing the monitoring results and any remedial measures implemented (if any are necessary) during the previous year.

60. Pre-Construction Worker-Awareness Training for Archaeological Resources (MM CUL-2c). The Permittee shall provide for training overseen by a qualified professional archaeologist prior to the initiation of any site preparation and/or the start of construction. The Permittee shall ensure that all construction workers receive adequate training, and to ensure that forepersons and field supervisors can recognize archaeological resources (e.g., areas of shellfish remains, chipped stone or groundstone, historic debris, building foundations, human bone) in the event that any are discovered during construction.

DURING CONSTRUCTION

61. Implement Applicable BAAQMD Basic Construction Mitigation Measures (MM AQ-2a). The project proponents shall require all contractors to comply with the following requirements for all areas with active construction activities.
- a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day.
 - b. All haul trucks transporting soil, sand, or other loose material offsite will be covered.
 - c. All visible mud or dirt tracked out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
 - d. All vehicle speeds on unpaved roads will be limited to 15 mph.
 - e. All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
 - f. Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points.

- g. All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified visible emissions evaluator.
 - h. Post a publicly visible sign with the telephone number and person to contact representing the Permittee regarding dust complaints. This person will respond and take corrective action within 48 hours. The Air District and County Building Official's phone numbers will also be visible to ensure compliance with applicable regulations.
62. Implement Applicable BAAQMD's Additional Construction Mitigation Measures (MM AQ- 2b). The project proponents shall require all contractors and subcontractors to comply with the following requirements for all areas with active construction activities.
- a. During construction activities, all exposed surfaces will be watered at a frequency adequate to meet and maintain fugitive dust control requirements of the relevant air quality management entities.
 - b. All excavation, grading, and/or demolition activities will be suspended when average wind speeds exceed 20 mph, as measured at the Livermore Municipal Airport.
 - c. Wind breaks (e.g., trees, fences) will be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50% air porosity.
 - d. Vegetative ground cover (e.g., fast- germinating native grass seed) will be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
 - e. If feasible and practicable, the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time will be limited.
 - f. Construction vehicles and machinery, including their tires, will be cleaned prior to leaving the construction area to remove vegetation and soil. Cleaning stations will be established at the perimeter of the construction area.
 - g. Site accesses to a distance of 100 feet from the paved road will be treated with a 6 to 12-inch compacted layer of wood chips, mulch, or gravel.
 - h. Sandbags or other erosion control measures will be installed to prevent silt runoff to public roadways from sites with a slope greater than 1%.
 - i. The idling time of diesel-powered construction equipment will be minimized to 2

minutes.

- j. The project will develop a plan demonstrating that the offroad equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20% NOX reduction and 45% PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
 - k. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings).
 - l. All construction equipment, diesel trucks, and generators will be equipped with BACT for emission reductions of NOX and PM.
 - m. All construction equipment shall meet ARB's most recent certification standard for offroad heavy duty diesel engines.
63. Reduce construction-related air pollutant emissions to below BAAQMD NOx thresholds (MM AQ- 2c). The project proponents will ensure construction-related emissions do not exceed BAAQMD's construction NOX threshold of 54 pounds per day. In addition to implementing PEIR Mitigation Measures AQ-2a and AQ-2b, the project proponents will coordinate with BAAQMD (or the Clean Air Foundation) to purchase NOX credits to offset remaining NOX construction and operations emissions exceeding BAAQMD thresholds.

The project proponents will track construction activity, estimate emissions, and enter into a construction mitigation contract with BAAQMD to offset NOX emissions that exceed BAAQMD NOX maximum daily threshold of 54 pounds per day.

The maximum daily emissions will be calculated on a daily basis by determining total construction-related NOX emissions for each calendar day. BAAQMD will use the mitigation fees provided by the project proponents to implement emissions reduction efforts that offset project NOX emissions that exceed the BAAQMD threshold.

This mitigation includes the following specific requirements:

- a. The project proponents will require construction contractors to provide daily construction activity monitoring data for all construction activities associated with the project to estimate actual construction emissions, including the effect of equipment emissions reduction measures. The project proponents will submit the daily construction activity monitoring data and an estimate of actual daily construction emissions to the lead agency and BAAQMD for review by the 15th day of each month for the prior construction month. The lead agency will examine the construction and operational activity monitoring to ensure it is representative, and BAAQMD will examine the emissions estimate to ensure it is calculated properly.

- b. After acceptance of the emissions estimates by BAAQMD for the prior month, the project proponents will submit mitigation fees to BAAQMD to fund offsets for the portion of daily emissions that exceed the maximum daily NOX threshold. The mitigation fees will be based on the mitigation contract with BAAQMD (see discussion below) but will not exceed the emissions-reduction project cost-effectiveness limit set for the Carl Moyer Program for the year in which mitigation fees are paid. The current Carl Moyer Program cost-effectiveness limit is \$30,000 per weighted ton of criteria pollutants (NOX + ROG + [20*PM]). An administrative fee of 5% will be paid by the project proponents to BAAQMD to implement the program.
 - c. The mitigation fees will be used by BAAQMD to fund projects that are eligible for funding under the Carl Moyer Program guidelines or other BAAQMD emissions-reduction incentive programs that meet the Carl Moyer Program cost-effectiveness threshold and are real, surplus, quantifiable, and enforceable.
 - d. The project proponents will enter into a mitigation contract with BAAQMD for the emissions-reduction incentive program. The mitigation contract will include the following:
 - a. Identification of appropriate offsite mitigation fees required for the project.
 - b. Timing for submission of mitigation fees.
 - c. Processing of mitigation fees paid by the project proponents.
 - d. Verification of emissions estimates submitted by the project proponents.
 - e. Verification that offsite fees are applied to appropriate mitigation programs within the San Francisco Bay Area Air Basin (SFBAAB).
 - e. The mitigation fees will be submitted within 4 weeks of BAAQMD acceptance of an emissions estimate provided by the project proponents showing that the maximum daily NOX threshold was exceeded (when measured on a daily basis).
64. Compliance with NPDES Storm Water Requirements (MM WQ-1). Permittee shall implement the Storm Water Pollution Prevention Plan (SWPPP) required by Condition 45 and as required by Mitigation Measure WQ-1 in the MMRP, maintain compliance with the other requirements of the CGP and the County C.6 Stormwater Permit (inspection, sampling, reporting, etc.) and construct the stormwater treatment system(s) per the Stormwater Control Plan (SCP). The SCP, SWPPP, and the CGP and County Stormwater Permit inspection, sampling and reporting documentation shall be kept onsite during construction activity and shall be made available upon request to representatives of the County and Water Board staff.
65. Prevent Introduction, Spread, and Establishment of Invasive Plant Species (MM BIO-2).
- The Permittee shall implement Mitigation Measure BIO-2 as set forth in the MMRP, in order to avoid and minimize the introduction and spread of invasive nonnative plant species, including the following BMPs, and the other requirements of Mitigation Measure BIO-2.

- a. Construction vehicles and machinery will be cleaned prior to entering the construction area. Cleaning stations will be established at the perimeter of the construction area along all construction routes or immediately offsite.
- b. Vehicles will be cleaned only at approved areas. No cleaning of vehicles will occur at job sites.
- c. To discourage the introduction and establishment of invasive plant species, seed mixtures and straw used within natural vegetation will be either rice straw or weed-free straw, as allowed by state and federal regulation of stormwater runoff.

In addition, the project proponent will prepare and implement erosion and sediment control plans to control short-term and long-term erosion and sedimentation effects and to restore soils and vegetation in areas affected by construction activities (2020 Updated PEIR Mitigation Measure BIO-1b). Prior to initiating any construction activities that will result in temporary impacts on natural communities, a restoration and monitoring plan will be developed for temporarily affected habitats in each project area (PEIR Mitigation Measure BIO-5c). Restoration and monitoring plans will be submitted to the County and CDFW for approval. These plans will include methods for restoring soil conditions and revegetating disturbed areas, seed mixes, monitoring and maintenance schedules, adaptive management strategies, reporting requirements, and success criteria. Following completion of project construction, the project proponents will implement the revegetation plans to restore areas disturbed by project activities to a condition of equal or greater habitat function than occurred prior to the disturbance.

66. Retain a Biological Monitor During Ground- Disturbing Activities in Environmentally-Sensitive Areas (BIO- 1e). As required by Mitigation Measure BIO-1e, the Permittee shall have a qualified biologist (as determined by the Alameda County Planning Director) conduct periodic monitoring of decommissioning, repowering, and reclamation activities that occur adjacent to sensitive biological resources (e.g., special- status species, sensitive vegetation communities, wetlands, etc.). Monitoring shall occur during initial ground disturbance where sensitive biological resources are present and weekly thereafter or as determined by the County in coordination with a qualified biologist. The biologist will assist the crew, as needed, to comply with all Project implementation restrictions and guidelines. In addition, the biologist will be responsible for ensuring that the Permittee or its contractors maintain exclusion areas adjacent to sensitive biological resources, and for documenting compliance with all biological resources–related mitigation measures.
67. Protection of Valley Elderberry Longhorn Beetle Habitat (MM BIO-4a). Where pre-construction surveys completed pursuant to Condition 18 (Mitigation Measure BIO-3a) indicate valley elderberry longhorn beetle habitat is present within proposed work areas or within 100 feet of these areas, the Permittee shall implement Mitigation Measure BIO-4a in the MMRP related to avoiding removal of elderberry shrubs, protecting elderberry

shrubs/clusters near construction areas, providing buffer areas approved by USFWS, fencing and monitoring.

Biological inspection reports on the presence and protective actions taken regarding valley elderberry longhorn beetle habitat will be provided to the Permittee, the County and USFWS.

68. Stop Work Procedures for Encounters With Hazardous Materials or Soil or Groundwater Contamination (MM HAZ-4). As required in part by Mitigation Measure HAZ-4 as set forth in the MMRP, the Permittee shall initiate stop-work procedures upon encounters with hazardous materials or soil or groundwater contamination during construction, demolition or reclamation activities, and implement appropriate health and safety procedures, including the use of appropriate personal protective equipment (e.g., respiratory protection, protective clothing, helmets and goggles). Any such discovery shall be reported immediately to the Alameda County Health Services Agency – Environmental Health Department, and complete procedures outlined in Mitigation Measure HAZ-4 in the MMRP and as described in Condition 22.
69. Stop Work Procedures for Encounters With Cultural Resources During Ground-Disturbing Activities (MM CUL-2d). As required by Mitigation Measure CUL-2d as set forth in the MMRP, the Permittee shall, in addition to providing construction specifications requiring stop-work procedures upon encounters with cultural resources during grading or other ground-disturbing activity (as required by Condition 52), the Permittee and any related contractor shall immediately halt all activity within 100 feet of the find until a qualified archaeologist can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil (“midden”) containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If the find is determined to be potentially significant, the archaeologist, in consultation with the Native American representative (if appropriate), will develop a treatment plan that could include site avoidance, capping, or data recovery.
70. Stop Work Procedures for Encounters With Human Remains During Ground-Disturbing Activities (MM CUL-3). In addition to providing construction specifications requiring stop-work procedures upon encounters with cultural resources during grading or other ground-disturbing activity, the Permittee shall ensure the construction specifications include a stop-work order if human remains are discovered during construction or demolition. There will be no further excavation or disturbance of the site within a 100-foot radius of the location of such discovery, or any nearby area reasonably suspected to overlie adjacent remains. The Alameda County Coroner will be notified and will make a determination as to whether the remains are Native American. If the Coroner determines

that the remains are not subject to his authority, he will notify the Native American Heritage Commission, who will attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this state law, then the landowner will re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. A final report will be submitted to Alameda County. This report will contain a description of the mitigation program and its results, including a description of the monitoring and testing resources analysis methodology and conclusions and a description of the disposition/curation of the resources.

71. Procedures and Preparation for Encounters with Paleontological Resources During Major Excavation (MMs GEO-7a, GEO-7b and GEO-7c). As required by Mitigation Measures GEO-7a, GEO-7b and GEO-7c in the MMRP, the Permittee shall retain a qualified professional paleontologist to monitor activities with the potential to disturb sensitive paleontological resources, and to determine if, on the basis of data gathered during detailed project design, where monitoring by a paleontologist during ground-disturbing activities will require monitoring. The Permittee shall implement Mitigation Measures GEO-7a, GEO-7b and GEO-7c as set forth in the MMRP related to paleontological resources.

The Permittee will ensure that all construction workers receive adequate training provided by a qualified professional paleontologist, and to ensure that forepersons and field supervisors can recognize fossil materials in the event any are discovered during construction.

If substantial fossil remains (particularly vertebrate remains) are discovered during earth disturbing activities, activities within 100 feet of the find will stop immediately until a state-registered professional geologist or qualified professional paleontologist can assess the nature and importance of the find and a qualified professional paleontologist can recommend appropriate treatment. Subsequent procedures are described in detail in the MMRP for Mitigation Measures GEO-7c.

72. Construction Signage. Permittee shall provide signage as required by the permitting authority (e.g. Fire Department, Building Department) including phone numbers of the facility operator for use in case of an emergency. The name of the Project and the names, titles, and phone numbers of individuals responsible for control of construction-related noise, dust, and traffic shall be maintained on all signage during construction. A 24-hour emergency number shall also be provided on all signage. The sign shall be kept up-to-date at all times.
73. Limit Construction to Daylight Hours MM AES-1). As require by Mitigation Measure AES-1, major construction activities shall not be undertaken between sunset and sunrise or on weekends. Construction activity is specifically prohibited from using high-wattage lighting sources to illuminate work sites after sunset or before sunrise, with the exception of nighttime deliveries under the approved traffic control plan or other construction activities that require nighttime work for safety considerations. For the purpose of this condition and Mitigation Measure AES-1, major construction activities shall be defined as those which are visibly obtrusive from residences and public recreational trails, based

on the finding of significant impacts in the PEIR.

74. Noise-Reduction Practices During Construction (MM NOI-2). The Permittee shall employ noise-reducing practices during decommissioning and new turbine construction so that resulting noise does not exceed Alameda County noise ordinance standards. Measures to limit noise may include the following:
- a. Prohibit noise-generating activities before 7 a.m. and after 7 p.m. on any day except Saturday or Sunday, and before 8 a.m. and after 5 p.m. on Saturday or Sunday.
 - b. Locate equipment as far as practical from noise sensitive uses.
 - c. Require that all construction equipment powered by gasoline or diesel engines have sound-control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation.
 - d. Use noise-reducing enclosures around noise-generating equipment where practicable.
 - e. Implement other measures with demonstrated practicability in reducing equipment noise upon prior approval by the County.

In no case will the Permittee be allowed to use gasoline or diesel engines without muffled exhausts.

PRIOR TO DATE OF COMMERCIAL OPERATION

75. Remove Derelict Facilities and Restore Abandoned Roadways (MM AES- 2b). As required by Mitigation Measure AES-2b as set forth in the MMRP, the Permittee shall clear the Project site of all derelict equipment, wind turbine components not required for the Project, and litter and debris from old turbine operations. Such litter and debris may include derelict turbines, obsolete anemometers, unused electrical poles and broken turbine blades. In addition, abandoned roads that are no longer in use on such parcels shall be restored and hydroseeded to reclaim the sites and remove visual traces from the viewscape, except in cases where state or federal resource agencies (i.e., USFWS and/or CDFW) recommend that the features be left in place for habitat purposes, or as specified by local landowners to facilitate continued ranching operations. All parcels with new turbines will be maintained in such a manner through the life of Project operations and until the parcels are reclaimed in accordance with the approved reclamation plan.
76. Compensate for Impacts on Special- Status Plant Species (BIO- 1d). The project proponent will avoid or minimize temporary and permanent impacts on special-status plants that occur on the project site and will compensate for impacts on special-status plant species.

Although all impacts on large-flowered fiddleneck, diamond-petaled California poppy, and caper-fruited tropidocarpum will be avoided, impacts on other special-status plant species will be avoided to the extent feasible, and any unavoidable impacts will be addressed through compensatory mitigation.

Where avoidance of impacts on a special-status plant species is infeasible, loss of individuals or occupied habitat of a special-status plant species occurrence will be

compensated for through the acquisition, protection, and subsequent management in perpetuity of other existing occurrences at a minimum 2:1 ratio (occurrences preserved:occurrences impacted). For focal species identified in the EACCS (San Joaquin spearscale, big tarplant, Congdon's tarplant, palmate-bracted bird's-beak, Livermore Valley tarplant, and recurved larkspur), loss of individuals and occupied habitat will be compensated at 5:1, consistent with the EACCS. The project proponent will provide detailed information to the County and CDFW on the location of the preserved occurrences, quality of the preserved habitat, feasibility of protecting and managing the areas in-perpetuity, responsible parties, and other pertinent information. The preserved habitat will be confirmed to support populations of the impacted species and will be preserved in perpetuity via deed restriction, establishment of a conservation easement, or similar preservation mechanism. A qualified botanist or plant ecologist will prepare a preservation plan or long-term management plan for the site containing at a minimum: a monitoring plan and performance criteria for the preserved plant population; a description of remedial measures to be performed in the event that performance criteria are not met; a description of maintenance activities to be conducted on the site, including weed control, trash removal, irrigation, and control of herbivory by livestock and wildlife; and an adequate funding mechanism to ensure long-term management of the preserved habitat. If suitable occurrences of a special-status plant species are not available for preservation, then the project will be redesigned to remove features that would result in impacts on that species.

77. Conservation Measures to Compensate for Avian Mortality (BIO-11h). The Permittee shall provide a plan for compensation for impacts on avian species, including raptors as well as smaller birds, employing one or more of the options set forth in Mitigation Measure BIO-11h in the MMRP. The objective is to provide or improve habitat for raptors and avian species within the APWRA on a long-term basis, or in ten-year increments, to be adjusted on the basis of avian monitoring results only every ten years or once within each ten-year period. An avian conservation strategy, to be outlined in the draft APP required by Mitigation Measure 11a, shall be implemented within one year of the commercial operations date (or of 75 percent of the turbine capacity if construction is staged), unless compliance with the conservation strategy includes complying with compensatory mitigation measures in an Eagle Take Permit (ETP) from the USFWS, in which case compensation shall be provided according to terms of the eagle permit. Strategic measures may include retrofitting of high-risk electrical infrastructure; measures outlined in an approved Eagle Conservation Plan and Bird and Bat Conservation Strategy; contributions to avian conservation efforts such as those undertaken by the California Raptor Center or the East Bay Regional Park District; contributions to regional conservation of avian habitat; contribution to efforts benefitting eagles and other raptors; and other conservation measures to be identified in the future by USFWS and non-governmental organizations. If the ETP results in retrofitting of high-risk power poles outside of the APWRA, it will be accepted as compensatory mitigation only if required by an ETP from the USFWS, or if other compensatory mitigation measures causes a delay to the Project or results in a greater cost than would be incurred by high-risk power pole retrofits.
78. Compensate for Direct and Indirect Effects on Valley Elderberry Longhorn Beetle (BIO-4b). If elderberry shrubs cannot be avoided and protected as outlined in Mitigation Measure BIO-4a, the Permittee shall obtain an incidental take permit from USFWS

and compensate for the loss of any elderberry shrubs. Surveys of elderberry shrubs to be transplanted will be conducted by a qualified biologist prior to transplantation. Surveys will be conducted in accordance with the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (U.S. Fish and Wildlife Service 1999). Permittee shall comply with the specific requirements of Mitigation Measure BIO-4b of the MMRP to mitigate for effects on valley elderberry longhorn beetle.

The Project proponent will be responsible for funding and providing monitoring reports to USFWS in each of the years in which a monitoring report is required. As specified in the *Conservation Guidelines*, the report will include information on timing and rate of irrigation, growth rates, and survival rates and mortality.

79. Compensate for Loss of Habitat for Special-Status Amphibians, Reptiles, Western Burrowing Owl, San Joaquin Kit Fox and American Badger (MMs BIO-5b, BIO-7b, BIO-9 and BIO-10b). Where impacts on aquatic and upland habitat for special-status amphibians, reptiles special-status and non-special-status tree/shrub- and ground-nesting birds and burrowing owls, cannot be avoided or minimized, Permittee shall provide compensatory mitigation in accordance with mitigation ratios and requirements developed under the EACCS (Appendix C). In the event that take authorization is required, compensatory mitigation will be undertaken in accordance with the terms of the authorization in consultation with USFWS and/or CDFW.
80. Compensate for the Loss of Riparian Habitat, Wetlands and Streams (MMs BIO-15, BIO-16 and BIO-18; if applicable). If wetlands or streams are filled or disturbed as part of the repowering Project, the Permittee shall compensate for the loss of this habitat to ensure no net loss of habitat functions and values. Compensation ratios will be based on site-specific information and determined through coordination with state and federal agencies (CDFW, USFWS, United States Army Corps of Engineers, or USACE). Unless specified otherwise by a resource agency, the compensation will be at a minimum 1:1 ratio (1 acre restored or created for every 1 acre filled) and may be a combination of onsite restoration/ creation, offsite restoration, and mitigation credits. A restoration and monitoring plan will be developed and implemented. The plan will describe how alkali meadow habitat, riparian habitat or wetlands will be created and monitored.
81. Conduct Preconstruction Surveys and Implement Protection Measures for Western Bumble Bee (MMs BIO-22a and BIO-22b). As required by MM BIO-22a, prior to the start of construction, qualified biologist(s) will conduct botanical surveys in late spring/early summer to identify and map concentrations of flowering plants that provide food resources for western bumble bee. If moderate to high quality foraging habitat for western bumble bee is identified in the project area based on the habitat assessment, these areas will be surveyed by qualified invertebrate biologist(s) (with experience conducting bumble bee surveys) within 1 year prior to the start of construction. If western bumble bee is determined not to be present at the project site or a qualified invertebrate biologist (experienced with bumble bees) concludes that there is a very low likelihood that the species is present, then no additional mitigation is required. If western bumble bees are determined to be present at the project site, then the project proponent will implement MM BIO-22b.

As required by MM BIO-22b, the following is required if western bumble bees are present on the Project site:

- The project biologist would conduct additional preconstruction surveys within the project disturbance footprint for active bee nest colonies and associated floral resources (i.e., flowering vegetation on which bees from the colony are observed foraging) no more than 30 days prior to any ground disturbance between March and September.
- To minimize temporary disturbance of suitable foraging and nesting habitat for western bumble bee, ground disturbance within suitable annual grassland habitat will be restricted to the minimum area necessary to perform construction activities.
- To encourage growth of additional nectar and pollen producing plants at the project site, disturbed grasslands that are revegetated in accordance with PEIR Mitigation Measure BIO-5c will use a seed mix combination that includes nectar and pollen producing plants commonly used as a food source by western bumble bee.
- To minimize impacts on bees from herbicide drift, herbicide application around tower foundations will be performed using handheld equipment and will be restricted to a 20- foot radius buffer area around the tower foundations.

Additional conservation measures or conditions of approval may be required in applicable project permits.

82. Evidence of Compliance with the Federal Aviation Administration (FAA). Prior to the date of commercial operation, the Permittee shall provide a copy of the FAA Determination of No Hazard to the Alameda County Planning Director for a hearing by the Alameda County Airport Land Use Commission.

PERFORMANCE STANDARDS

83. Windfarm Fire Requirements. To provide a reasonable level of fire protection and safety for ongoing windfarm operations, the Permittee shall be responsible for compliance with the Altamont Pass Windfarms Fire Requirements dated September 22, 2005 adopted by Alameda County and which were reviewed and re-adopted on November 12, 2014. In addition, the Permittee shall make a reasonable attempt to maintain the telephone numbers of the inhabitants of all adjacent properties and give timely notification to same in the event of an on-site fire.
84. Safety Reporting. Permittee shall notify the County Building Official and Planning Director of any tower collapse, blade throw, fire, or injury to worker within five (5) days of any such occurrence.
85. Screen Surplus Parts and Materials (MM AES- 2c). As required by Mitigation Measure AES-2c, the Permittee shall have surplus parts and materials that are kept onsite maintained in a neat and orderly fashion and screened from view, which may be accomplished by using a weatherproof camouflage material that can be draped over surplus parts and materials stockpiles. Draping materials shall be changed at least twice per year from green to brown and back again according to the season so that stockpiles

are effectively camouflaged to match the predominant color of surrounding grass areas.

86. Site Maintenance. Litter and debris shall be contained in appropriate receptacles and shall be disposed of promptly. All construction trailers, construction materials and construction related debris shall be removed following cessation of construction activity, or within 30 days of authorization of commercial operation.
87. Removal of Inoperative Equipment. Any inoperative turbine, windfarm or windfarm site that is determined by the Planning Director to be substantially inoperative shall be restored or reclaimed consistent with the approved *Restoration and Reclamation Plan* (Condition 11), under the following procedures:
- a) The Planning Director and Director of Public Works make a determination that the permitted wind farm operations have been abandoned or have produced less than 5 percent of the rated output of the wind farm in one year, verified by the annual status reports and there is no demonstrated plan provided by the Permittee or property owner, satisfactory to the Planning Director, to restore the equipment to a productive operating condition.
 - b) The Planning Director and Director of Public Works may instead make a determination that more than 50% of the turbines are actively being replaced or are in disrepair and there is no demonstrated plan, satisfactory to the Planning Director, to restore the equipment to a productive operating condition.

Upon determination by the Planning Director that either of the above criteria is present on the property, the Planning Director shall give notice to the property owner/wind operator of the following requirements:

- a. Within 30 days from the date of the notice by the Planning Director, the Permittee shall secure a building permit to inspect all inoperable or abandoned wind turbines; and
 - b. The application for a building permit shall be accompanied by a cash performance deposit to restore the site subject to the approved *Restoration and Reclamation Plan*.
88. Noise Standards. In the event a reasonable complaint is received by the Environmental Health Director alleging the presence of sound levels from one or more wind turbines exceeding the levels described in the application, or exceeding 55 dBA (Ldn) as measured at the exterior of any dwelling unit:
- a. The Environmental Health Director shall report this matter to the Permittee and to the Planning Director and upon receipt of such report, this matter shall be brought to hearing pursuant to Section 17.54.030.
 - b. Upon receipt of the report from the Environmental Health Director, the Planning Director shall require the Permittee to have a qualified firm furnish a site specific study with recommendations on the circumstances, if any, which would render the Project in conformance with all applicable noise conditions; the report shall also include a recommendation to the Planning Director who will make the final determination as to whether subsection (d) shall be imposed.
 - c. For a minimum 30 day period from the date of notification from the Environmental

Health Director, at the time and place as may be agreed upon by the parties involved, Permittee shall attempt in good faith to negotiate a resolution of this matter with the party making the allegation; the results of such negotiation shall be reported to the Planning Director in a timely manner.

- d. Following the review period as provided under subsection (c) and until the conclusion of the revocation procedures as provided by Section 17.54.030, one or more wind turbines authorized by this permit to be constructed or maintained that are in closest proximity to the dwelling or building site of the party making the allegation, may be required to be made inoperative.

The measurement standard for the A-weighted scale shall be adjusted by the Planning Director to allow any sound device that is installed on or around the turbine as a mitigation for bird collisions.

Methods for measuring and reporting acoustic emissions from wind turbines and wind- farms shall be equal to or exceed the minimum standards for precision described by the International Electrotechnical Commission (IEC) in its 61400 series – Standards and Technical Specifications – *IEC 61400-11: Acoustic Noise Measurement Techniques*.

The Planning Director, in consultation with the Alameda County Environmental Health Services, shall establish criterion for noise samples and measurement parameters such as the duration of data collection, time of day, wind speed, and atmospheric conditions.

89. Electromagnetic Interference. If it has been demonstrated to the Planning Director that the turbine is causing disruptive electromagnetic interference, the Permittee shall promptly mitigate the disruptive interference, which may include discontinued operation of one or more turbines.

MONITORING AND SUBSEQUENT REVIEW

90. Initial Status Report. Six months from the issuance of grading and/or building permits, the Permittee shall submit to the Planning Director a status report describing compliance with conditions of the permit.
91. Annual Status Report. Following commercial operation date (COD), and on each annual anniversary of said commencement, Permittee shall submit to the Planning Director a brief status report containing the following information: description and rated capacity of all equipment installed, relevant meteorological data collected, and actual MW electric power generated to date broken down into appropriate time categories.
92. Post-Construction Avian Fatality Monitoring (MM BIO-11g). As required by Mitigation Measure BIO-11g as set forth in the MMRP, the Permittee shall provide for a post-construction monitoring program to be conducted for the Project for a minimum of three (3) years beginning on the COD. Monitoring may continue beyond 3 years if construction is completed in phases. Moreover, if the results of the first 3 years indicate that baseline fatality rates (i.e., non-repowered fatality rates) are exceeded, monitoring will be extended until the average annual fatality rate has dropped below baseline fatality rates

for 2 years, and to assess the effectiveness of adaptive management measures specified in Mitigation Measure BIO- 11i. An additional 2 years of monitoring will be implemented at year 10 (i.e., the tenth anniversary of the COD). Project proponents will provide access to qualified third parties authorized by the County to conduct any additional monitoring after the initial 3- year monitoring period has expired and before and after the additional 2- year monitoring period, provided that such additional monitoring utilizes scientifically valid monitoring protocols. Monitoring shall be in conformance with the protocols and specifications of Mitigation Measure BIO-11g, including the formation of a technical advisory committee (TAC) to oversee the monitoring program and to advise the County on implementation of adaptive management measures.

93. Post-Construction Bat Fatality Monitoring (MM BIO-14b). As required by Mitigation Measure 14b in the MMRP, the Permittee shall implement a scientifically defensible, post-construction bat fatality monitoring program that is consistent with the protocols and sample size established and recognized by bat biologists in the APWRA, to estimate actual bat fatalities and determine if additional mitigation is required. Such monitoring shall take place concurrent with the 3-year post-construction monitoring program required by Mitigation Measure BIO-11g, developed in accordance with California Energy Commission and California Department of Fish and Game (2007), and shall incorporate bat-specific components and protocols as specified by Mitigation Measure 14b in the MMRP, including having at least one biologist with significant experience in bat research on the TAC, performing post-construction bat fatality monitoring using trained dogs with handlers, and conducting bat acoustic surveys concurrently with fatality monitoring at the Project site. If recommended by the TAC, such a monitoring program shall recommence for two (2) years beginning on the tenth anniversary of the COD.
94. Annual Monitoring Reports on Bat Use and Fatalities (MM BIO-14c). The Permittee shall have annual reports of bat use results and fatality monitoring prepared by a qualified biologist within 3 months of the end of the last day of each year's fatality monitoring as required by Mitigation Measure BIO-14b, and submit such reports to the TAC and Planning Director. Special-status bat species records will be reported to the California Natural Diversity Data Base (CNDDB).
95. Technical Advisory Committee (MM BIO-11g). The County shall convene a Technical Advisory Committee (TAC) to oversee the post-construction monitoring program as required by Mitigation Measure BIO-11g and Condition 92 and to advise the County on adaptive management measures required by Mitigation Measure BIO-11i and Condition 96. The roles and responsibilities of the TAC membership shall be established by the Planning Director. The TAC shall include representatives from the County (including one or more technical consultants, such as a biostatistician, an avian biologist, and a bat biologist), and wildlife agencies (CDFW, USFWS) and as determined following the above-mentioned consultation. The TAC will have a standing meeting, which shall be open to the public, every 6 months to review monitoring reports produced pursuant to Mitigation Measure BIO-11g and Condition 92. Formation and operation of the TAC shall otherwise be consistent with Mitigation Measure BIO-11g.

The TAC may be the same TAC as may be formed and meeting for the purpose of prior repowering projects, such as Golden Hills—Phase 1; no new TAC is either

required or encouraged. An adjunct or auxiliary advisory committee for the TAC composed of landowners, special district representatives, environmental advocacy groups and other stakeholders shall be convened by the Planning Director to confer with the ‘core’ TAC members on an as-needed basis, particularly on issues of establishing conservation easements and providing for landscape-scale mitigation as required by Condition 76.

The Permittee shall collaborate with the County and the TAC over the twelve-month period following approval to evaluate whether or not additional new technology for active curtailment (e.g., IdentiFlight) to reduce raptor collisions is feasible for the Project, and if there is agreement, can be implemented thereafter in a reasonable period of time.

96. Implement an Avian Adaptive Management Program (MM BIO-11i). If fatality monitoring described in Mitigation Measure BIO-11g results in an estimate that exceeds the preconstruction baseline fatality estimates (i.e., estimates at the non-repowered turbines as described in the PEIR) for any focal species or species group (i.e., individual focal species, all focal species, all raptors, all non-raptors, all birds combined), the Permittee shall prepare a Project-specific adaptive management plan within 2 months following the availability of the fatality monitoring results. The County shall review and approve such plan in consultation with the TAC and it shall be implemented within 2 months of such approval. Follow-up monitoring will be required to determine if specific measures shall be sustained, revised or replaced with other measures. Measures, as outlined in Mitigation Measure BIO-11i, include but are not limited to visual modifications, anti-perching measures, prey-reduction strategies, use of experimental technologies, turbine curtailment (including real-time curtailment), cut-in speed adjustments based on a focused study of such a strategy, or condor evaluation and curtailment strategies.
97. Develop and Implement a Bat Adaptive Management Plan (MM BIO-14d). The Permittee shall develop adaptive management plans to reduce bat mortality, in concert with Mitigation Measure BIO-14b, using appropriate feasible measures, and using both currently available and emerging information. The goals of the adaptive management plans are to ensure that the best available science and emerging technologies are used to assess impacts on bats, and that impacts are minimized to the greatest extent possible while maintaining energy production. Specific bat-related measures shall conform to the guidelines set forth in Mitigation Measure BIO-14d in the MMRP, including identified adaptive management measures.
98. Injured Bat Rehabilitation Compensation (MM BIO-14e). Project proponent shall pay in full the cost of reasonable, licensed rehabilitation efforts for any injured bats taken to wildlife care facilities from the Project area.
99. Stormwater Control Plan: Permittee shall carry out the operation and maintenance (O&M) of all installed stormwater protective system(s) as directed in the approved Stormwater Control Plan (SCP) and in compliance with Provision C.3 of the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (MRP) and with the terms and conditions of the County Stormwater Permit, as required by Condition 45.

100. Monitor Substation Circuit Breakers for SF₆ Leakage. (MM GHG-2b). Permittee shall ensure that any new circuit breaker installed at a substation has a guaranteed SF₆ leak rate of 0.5% by volume or less. The Permittee will provide Alameda County with documentation of compliance, such as specification sheets, prior to installation of the circuit breaker. In addition, the Permittee will monitor the SF₆-containing circuit breakers at the substation consistent with Scoping Plan Measure H-6 for the detection and repair of leaks.
101. Optional Review/Revocation/Revision. At any time during the term of this permit and after notice as provided for in the initial hearing, this matter may be set for rehearing if the Planning Director has made an initial determination based on substantial evidence that the use of the site for generation of electrical energy from wind turbine operations has ceased for a period of six months, or has produced less than 5 percent of the rated output of the wind farm in one year, and if therefore the permit should be revoked. In addition, pursuant to Section 17.54.030, the permit may be revoked if the permit has otherwise been exercised unlawfully or contrary to any condition or limitation of its issuance. As part of such rehearing, and/or reconsideration for the permit, the Board may determine that conditions previously imposed should be modified or new conditions should be added to assure continued affirmative findings for this permit. This reconsideration may include imposition of other requirements, treatments and measures to ensure public safety and compliance with applicable policies of the East County Area Plan. Any condition modified or added shall have the same force and effect as if originally imposed.
102. Transfer of Operations. Any entity that has acquired the facilities as authorized under this permit may maintain the benefits of the existing use permit provided that a letter of notification is submitted to the Planning Department within six months after such transaction, and all conditions of approval for the subject facility are carried out by the new operator/Permittee.
103. Site Restoration. Permittee shall provide written notification to the Planning Director upon cessation of operations on the site by the Permittee. During operation of the Project, no abandoned turbine tower, rotor, ground or other equipment components shall be stored onsite outside designated storage areas. A wind turbine shall be deemed abandoned for the purposes of this Resolution if it has not produced electricity for one year or has produced less than 5 percent of the rated output of the wind farm in one year.

If all operations have been terminated, the Permittee and/or property owner shall be required to remove all improvements authorized under this permit from the site and the property shall be returned within twelve months of cessation to a condition with no wind facilities, subject to the requirements of the County.

104. Termination. Said Conditional Use Permit shall terminate after 30 years, on the 30th anniversary of the date of approval of this application, and shall remain revocable for cause in accordance with Section 17.54.030 of the Alameda County Zoning Ordinance. Permittee shall either remove the turbines and improvements approved herein in accordance with the approved reclamation plan or shall obtain a new use conditional permit in accordance with Section 17.54.130 of the Zoning Ordinance.

THE FOREGOING was PASSED and ADOPTED by a majority vote of the Board of Supervisors of the County of Alameda this 7th day of October, 2021, pursuant to the following vote:

AYES:

NOES:

EXCUSED:

ABSTAINED:

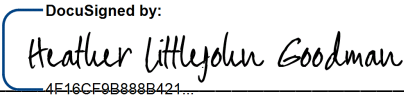
PRESIDENT, BOARD OF SUPERVISORS

ATTEST:

Anika Campbell-Belton, Clerk
Board of Supervisors

By: _____
Deputy

Approved as to form
DONNA R. ZIEGLER,
COUNTY COUNSEL

By:  _____
Heather Littlejohn Goodman,
Deputy County Counsel



Mt. Diablo
Audubon Society



Ohlone
Audubon
Society

April 29, 2021

VIA Email¹ and Federal Express

Mr. Albert Lopez, Director
Alameda County Planning Department
Mr. Chris Bazar, Director
Alameda County Community Development Agency
Alameda County Planning Department
224 W. Winton Avenue, Room 110
Hayward, CA 94544

Re: Appeal of Board of Zoning Adjustment's April 22, 2021 Resolution to Certify the Subsequent Environmental Impact Report and Approve Conditional Use Permit Application No. PLN2019-00226

Dear Mr. Lopez:

On behalf of Audubon California, Golden Gate Audubon Society, Mount Diablo Audubon Society, Ohlone Audubon Society, and Santa Clara Valley Audubon Society (collectively "Audubon"), please accept this appeal pursuant to Alameda County Municipal Code Section 17.54.670 of the East County Board of Zoning Adjustments (EBZA) decision on April 22, 2021 to approve: (1) Resolution No. Z-21-13, Certifying the Subsequent Environmental Impact Report (SEIR) for the Brookfield Renewable Energy Partners, Conditional Use Permit (CUP) Application No. PLN2019-00226, Mulqueeney Ranch Wind Repowering Project ("Mulqueeney Ranch Project" or "the Project"); and (2) Resolution No. Z-21-14 approving the associated CUP. We will submit the \$250 fee with the hard copy of this letter.

Our reasons for this appeal include, among other reasons, that the SEIR is inadequate under the California Environmental Quality Act (CEQA), and that the terms of the CUP fail to adequately consider, avoid, minimize, and mitigate the impacts the proposed project on bird and bats as required under CEQA and the County's 2014 Program Environmental Impact Report (PEIR) for repowering turbines in the Altamont Pass.

¹ Submitted via email to c/o: Maria Palmera, Administrative Assistant (maria.palmera@acgov.org), Mr. Bazar (chris.bazar@acgov.org), Mr. Lopez (albert.lopez@acgov.org), Sandra Rivera (sandra.rivera@acgov.org), and Andrew Young (andrew.young@acgov.org).

More specific reasons for this appeal include, but are not limited to, that the SEIR

- Inadequately describes the current environmental setting and established baseline of mortality for affected volant species,
- Fails to include an adequate project description and improperly defines the Project objectives, which improperly constrains the analysis of alternatives and avoidance and mitigation measures,
- Inadequately discloses significant impacts, including impacts to listed, fully-protected, otherwise legally-protected, and other sensitive species and their habitats in or near the Project area,
- Fails to identify and assess all reasonable and feasible mitigation measures and alternatives to avoid and reduce the Project's significant environmental effects on birds and bats,
- Fails to adequately assess a reduced megawatt alternative that would more effectively and feasibly reduce significant and unavoidable environmental impacts of the Project,
- Inaccurately analyzes the increased impacts of the project from those described in the PEIR in light of significant and new information and changed circumstances since the PEIR was certified, and
- Fails to adequately analyze the cumulative impacts of the Project.

The reasons for our appeal are further laid out in the public record, including the public comments made by our organizations and other entities at the EBZA hearing on April 22, 2021, and documents in the record, including submissions and attachments thereto from the following, which are incorporated into our appeal through the record and this reference:

- California Attorney General Office's (Jan. 14, 2021),
- Alameda Citizens for Responsible Wind Development (Jan. 8, 2021),
- Golden Gate Audubon Society (Jan. 8, 2021),
- U.S. Fish & Wildlife Service (Jan. 7, 2021),
- East Bay Regional Parks District (Jan. 8, 2021), and
- California Dept. of Fish & Wildlife (Jan. 8, 2021).

Our organizations are willing to meet with the County and the project proponent to further discuss these matters. Please contact us through Mike Lynes, Director of Public Policy, Audubon California, at mike.lynes@audubon.org, or at (415) 505-9743.

Respectfully submitted,

Michael Lynes
Director of Public Policy
Audubon California

Glenn Phillips
Executive Director
Golden Gate Audubon

Juan Pablo Galván Martínez
Conservation Chair
Mount Diablo Audubon Society

William Hoppe
President
Ohlone Audubon Society

Shani Kleinhaus
Environmental Advocate
Santa Clara Valley Audubon Society

Exhibit A

Mulqueeney Ranch Wind Repowering Project Written Findings of Significant Effects

The California Environmental Quality Act (CEQA) Public Resources Code Sections 21000 et seq., state that if a project would result in significant environmental impacts it may be approved, if feasible mitigation measures or feasible alternatives can avoid or substantially lessen the impact or if there are specific economic, social, or other considerations which make it infeasible to substantially lessen or avoid the impacts. Therefore, when an environmental impact report ("EIR") has been completed which identifies one or more potentially significant environmental impacts, the approving agency must make one or more of the following findings for each identified significant impact:

- a) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
- b) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- c) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

In accordance with CEQA Guidelines Section 15091, the following findings and supporting facts summarize each significant environmental impact and the mitigation measures adopted to avoid or substantially reduce the magnitude of the effect, as identified in the Final Supplemental EIR (SEIR) prepared pursuant to CEQA Guidelines Section 15162 as a supplement to the Altamont Pass Wind Resource Area Repowering Program EIR (PEIR), which the County of Alameda (County) certified in November 2014. Also set forth in these Findings are those impacts that the County, as the Lead Agency, finds cannot with certainty be avoided or reduced to a less-than-significant level even with the adoption of all feasible mitigation measures proposed in the SEIR. In adopting these findings and mitigation measures, the County also adopts a Statement of Overriding Considerations. The Statement of Overriding Considerations describes the economic, social, and other benefits of the Project that will render these significant unavoidable environmental impacts acceptable.

The findings described below are organized by resource issue, in the same order as the effects are discussed in the SEIR. The Lead Agency's findings regarding the Project follow the individual effect findings. The findings reference the final SEIR (part of the record upon which the East County Board of Zoning Adjustments [EBZA] bases its decision on the project) and mitigation measures in support of the findings. For specific resource mitigation measures, the section number where the full text of the mitigation measure occurs is noted in the finding.

Introduction

The Project area is located in the Altamont Hills of eastern Alameda County near the San Joaquin County line, north and south of Interstate (I-) 580 and approximately 56 miles east of San Francisco.

The Altamont Hills are at the geographical interface between the Coast Ranges and the Central Valley. Existing predominant uses of the area are windfarms and cattle grazing.

The proposed project would entail installation of up to 36 new wind turbines, replacing the 518 old generation wind turbines that were removed from the project site in 2016. The new turbines would have individual generating capacities between 2.2 and 4.2 MW and would have a combined maximum generating capacity of 80 MW. The exact turbine model is still being evaluated but would be selected based on project economics and energy cost driven by site constraints, data obtained from meteorological monitoring of the wind resources, civil and electrical construction costs and turbine availability as well as environmental considerations, bird use survey results, and avian micro-siting considerations. Existing roads would be used where possible, and temporary widening and some new roads would be necessary. The project would also require installation of underground electrical lines connecting the turbines to a new substation that would be constructed adjacent to PG&E's Tesla substation where the project would connect to the grid. Given the proximity of the project substation to the Tesla substation, construction of an overhead high-voltage transmission line will not be required except for a short span (less than 300 feet) between the two substations.

The proposed project components are listed below.

- A total nameplate generation capacity of 80 MW.
- Installation of up to 36 new wind turbine generators, towers, foundations, and pad-mounted transformers.
- Development of project access roads (including the use of existing roads to the extent possible).
- Installation of a temporary construction staging area.
- Installation of up to three permanent meteorological towers.
- Installation of an underground power collection system.
- Construction of a new substation.

The SEIR is intended to identify the anticipated environmental impacts of the project that may be approved by Alameda County (County) for installation of up to 36 new wind turbines in the Alameda County portion of the APWRA.

Record of Proceedings and Custodian of Record

The record upon which all findings and determinations related to the approval of the project are based comprises the items listed below.

- The SEIR and all documents referenced in or relied upon by the SEIR.
- All information (including written evidence and testimony) provided by County staff to the EBZA relating to the SEIR, the approvals, and the project.
- All information (including written evidence and testimony) presented to the EBZA by the environmental consultants who prepared the SEIR or incorporated into reports presented to the EBZA.

- All information (including written evidence and testimony) presented to the County from other public agencies related to the project or the SEIR.
- All applications, letters, testimony, and presentations relating to the project.
- All information (including written evidence and testimony) presented at any County hearing related to the project and the SEIR.
- All County-adopted or County-prepared land use plans, ordinances, including without limitation general plans, specific plans, and ordinances, together with environmental review documents, findings, mitigation monitoring programs, and other documents relevant to land use within the area.
- The Mitigation Monitoring and Reporting Program for the project.
- All other documents composing the record pursuant to Public Resources Code Section 21167.6(e).

The custodian of the documents and other materials that constitute the record of the proceedings upon which the County's decisions are based is Andrew Young, Senior Planner, or his designee. Such documents and other material are located at 224 Winton Avenue, Room 111, Hayward, California 94544.

Consideration and Certification of the PEIR

In accordance with CEQA, the EBZA certifies that the SEIR has been completed in compliance with CEQA. The EBZA has independently reviewed the record and the SEIR prior to certifying the SEIR and approving the Project. By these findings, the EBZA confirms, ratifies, and adopts the findings and conclusions of the SEIR as supplemented and modified by these findings. The SEIR and these findings represent the independent judgment and analysis of the County and the EBZA. The EBZA recognizes that the SEIR may contain clerical errors. The EBZA reviewed the entirety of the SEIR and bases its determination on the substance of the information it contains. The EBZA certifies that the SEIR is adequate to support the approval of the action that is the subject of the Resolution to which these CEQA findings are attached.

The EBZA certifies that the SEIR is adequate to support approval of the proposed Project described in the staff report, each component and phase of the project described in the SEIR, any alternative of the project described in the PEIR, any minor modifications to the project or variants of the project described in the PEIR, and the components of the project.

Absence of Significant New Information

The EBZA recognizes that the Final SEIR incorporates information obtained and produced after the Draft SEIR was completed, and that the Final SEIR contains additions, clarifications, and modifications. The EBZA has reviewed and considered the Final SEIR and all of this information. The Final SEIR does not add significant new information to the Draft SEIR that would require recirculation of the SEIR pursuant to CEQA Guidelines Section 15088.5. More specifically, the new information added to the SEIR does not involve a new significant environmental impact, a

substantial increase in the severity of an environmental impact, or a feasible mitigation measure or alternative considerably different from others previously analyzed that the project sponsor declines to adopt and that would clearly lessen the significant environmental impacts of the project. No information indicates that the Draft SEIR was inadequate or conclusory or that the public was deprived of a meaningful opportunity to review and comment on the Draft SEIR. Thus, recirculation of the SEIR is not required. The EBZA finds that the changes and modifications made to the SEIR after the Draft SEIR was circulated for public review and comment do not individually or collectively constitute significant new information within the meaning of Public Resources Code Section 21092.1 or Section 15088.5 of the State CEQA Guidelines.

Severability

If any term, provision, or portion of these Findings or the application of these Findings to a particular situation is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions of these Findings, or their application to other actions related to the project, shall continue in full force and effect unless amended or modified by the County.

Findings and Recommendations Regarding Significant and Unavoidable Impacts

Biological Resources

Impact BIO-11: Avian mortality resulting from interaction with wind energy facilities

Potential Impact: The operation of wind energy facilities has been shown to cause avian fatalities through collisions with wind turbines and powerlines and through electrocution on powerlines. Although repowering is intended to reduce fatalities, enough uncertainty remains in light of project- and site-specific data to warrant a conservative approach in the impact analysis. Accordingly, the continued or increased loss of birds (including special-status species) at a rate exceeding the baseline rate would be a significant adverse impact.

The PEIR concluded that repowering would result in significant and unavoidable impacts associated with avian mortality, although it anticipated that overall mortality rates may decrease with the transition from old-generation to new-generation turbines. The PEIR acknowledged, however, that the avian mortality estimates were uncertain, stating that: "... while repowering is intended to reduce fatalities, enough uncertainty remains in light of project- and site-specific data to warrant a conservative approach in the impact analysis. Accordingly, the continued or increased loss of birds (including special-status species) *at a rate potentially greater than the existing baseline fatality rates* is considered a significant and unavoidable impact" [emphasis added] (Alameda County Community Development Agency 2014:3.4-103).¹

¹ Similar statements are repeated throughout the PEIR; see page 3.4-121:

As described above, for all avian focal species analyzed, a fully repowered program area would be expected to reduce estimated fatality rates. However, fatalities would still be expected to result from the operation of the repowered turbines, and uncertainty surrounding the accuracy of the estimated fatality rates and the types of species potentially affected remains. Considering this information, and despite the anticipated reductions in

While the PEIR set forth multiple measures to address avian mortality, it concluded that these measures would not reduce the impact to a less-than-significant level. This conclusion holds true for the project. The project's impact on protected and special-status avian species would be a significant and unavoidable impact.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure BIO-11a: Prepare a Project-specific avian protection plan

All project proponents will prepare a project-specific APP to specify measures and protocols consistent with the program-level mitigation measures that address avian mortality. The project-specific APPs will include, at a minimum, the following components.

- Information and methods used to site turbines to minimize risk.
- Documentation that appropriate turbine designs are being used.
- Documentation that avian-safe practices are being implemented on project infrastructure.
- Methods used to discourage prey for raptors.
- A detailed description of the postconstruction avian fatality monitoring methods to be used (consistent with the minimum requirements outlined in Mitigation Measure BIO-11g).
- Methods used to compensate for the loss of raptors (consistent with the requirements of 2020 Updated PEIR Mitigation Measure BIO-11h).

Each project applicant will prepare and submit a draft project-specific APP to the County. The draft APP will be reviewed by the TAC for consistency and the inclusion of appropriate mitigation measures that are consistent with the PEIR and recommended for approval by the County. Each project applicant must have an approved Final APP prior to commercial operation.

2020 Updated PEIR Mitigation Measure BIO-11b: Site turbines to minimize potential mortality of birds

Consistent with PEIR Mitigation Measure BIO-11b, and in recognition that focused siting of turbines using analyses of landscape features and location-specific bird use and behavior data to identify locations with reduced collision risk may result in reduced fatalities (Smallwood et al. 2009), project proponents will conduct a siting process and prepare a micro-siting analysis to select turbine locations to minimize potential impacts on bird and bat species. The proponent has utilized existing data and collected new site-specific data as part of the siting analysis.

The project proponent will utilize currently available guidelines published by the Alameda County Scientific Review Committee (SRC) for siting wind turbines (Alameda County SRC 2010)

avian impacts compared to the baseline rates, the County has determined to use a conservative approach for the impact assessment, concluding that turbine related fatalities could constitute a substantial adverse effect on avian species because the rates for some or all of the species could be greater than the baseline rates. This impact would be significant. Implementation of Mitigation Measures BIO-11a through BIO-11i would reduce this impact, but not to a less-than-significant level; accordingly, this impact is considered significant and unavoidable.

and/or other currently available research or guidelines to conduct siting analysis. Additionally, project proponents will use the results of previous siting efforts to inform the analysis and siting methods as appropriate such that the science of siting continues to be advanced. All project proponents will collect field data that identify or confirm the behavior, utilization, and distribution patterns of affected avian and bat species prior to the installation of turbines. Project proponents will collect and utilize available existing information, including but not necessarily limited to: siting reports and monitoring data from previously installed projects; published use and abundance studies and reports; topographic features known to increase collision risk (trees, riparian areas, water bodies, and wetlands); and changes to the landscape caused by grading for the placement of turbine foundations.

Project proponents will also collect and utilize additional field data as necessary to inform the siting analysis for golden eagle. As required in 2020 Updated Mitigation Measure BIO-8a, surveys will be conducted to locate golden eagle nests within 2 miles of proposed project areas. Siting of turbines within 2 miles of an active or alternative golden eagle nest or active golden eagle territory will be based on a site-specific analysis of risk based on the estimated eagle territories, conducted in consultation with USFWS.

Project proponents will utilize methods (i.e., computer models) to identify dangerous locations for birds and bats based on site-specific risk factors informed by the information discussed above. The project proponents will compile the results of the siting analyses for each turbine and document these in the project-level APP, along with the specific location of each turbine. Consistent with past practice for previously approved repowering projects, the proponent shall submit the siting analysis for review and recommendations to the Alameda County Wind Repowering/Avian Protection Technical Advisory Committee, which includes representatives of the CDFW and the USFWS, prior to applying for any building or grading permit. The County planning director shall have the authority to approve or deny such permits on the basis of the siting analysis and the recommendations of the Technical Advisory Committee.

PEIR Mitigation Measure BIO-11c: Use turbine designs that reduce avian impacts

Use of turbines with certain characteristics is believed to reduce the collision risk for avian species. Project proponents will implement the design-related measures listed below.

- Turbine designs will be selected that have been shown or that are suspected to reduce avian fatalities, based on the height, color, configuration, or other features of the turbines.
- Turbine design will limit or eliminate perching opportunities. Designs will include a tubular tower with internal ladders; external catwalks, railings, or ladders will be prohibited.
- Turbine design will limit or eliminate nesting or roosting opportunities. Openings on turbines will be covered to prevent cavity-nesting species from nesting in the turbines.
- Lighting will be installed on the fewest number of turbines allowed by FAA regulations, and all pilot warning lights will fire synchronously. Turbine lighting will employ only red or dual red-and-white strobe, strobe-like, or flashing lights (U.S. Fish and Wildlife Service 2012a). All lighting on turbines will be operated at the minimum allowable intensity, flashing frequency, and quantity allowed by FAA (Gehring et al. 2009; U.S. Fish and Wildlife Service 2012a). Duration between flashes will be the longest allowable by the FAA.

PEIR Mitigation Measure BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure

The Project proponent will apply the following measures when designing and siting turbine-related infrastructure. These measures will reduce the risk of bird electrocution and collision.

- Permanent meteorological stations will avoid use of guy wires. If it is not possible to avoid using guy wires, the wires will be at least 4/0 gauge to ensure visibility and will be fitted with bird deterrent devices.
- All permanent meteorological towers will be unlit unless lighting is required by FAA. If lighting is required, it will be operated at the minimum allowable intensity, flashing frequency, and quantity allowed by FAA.
- To the extent possible, all powerlines will be placed underground. However, lines may be placed aboveground immediately prior to entering the substation. All aboveground lines will be fitted with bird flight diverters or visibility enhancement devices (e.g., spiral damping devices). When lines cannot be placed underground, appropriate avian protection designs must be employed. As a minimum requirement, the collection system will conform with the most current edition of the Avian Power Line Interaction Committee guidelines to prevent electrocutions.
- Lighting will be focused downward and minimized to limit skyward illumination. Sodium vapor lamps and spotlights will not be used at any facility (e.g., laydown areas, substations) except when emergency maintenance is needed. Lighting at collection facilities, including substations, will be minimized using downcast lighting and motion-detection devices. The use of high-intensity lighting; steady-burning or bright lights such as sodium vapor, quartz, or halogen; or other bright spotlights will be minimized. Where lighting is required it will be designed for the minimum intensity required for safe operation of the facility. Green or blue lighting will be used in place of red or white lighting.

PEIR Mitigation Measure BIO-11e: Retrofit existing infrastructure to minimize risk to raptors

Any existing power lines in a specific project area that are owned by the wind project operator and that are associated with electrocution of an eagle or other raptor will be retrofitted within 30 days to make them raptor-safe according to Avian Power Line Interaction Committee guidelines. All other existing structures to remain in a project area during repowering will be retrofitted, as feasible, according to specifications of PEIR Mitigation Measure BIO-11c prior to repowered turbine operation.

PEIR Mitigation Measure BIO-11f: Discourage prey for raptors

The Project proponent will apply the following measures when designing and siting turbine-related infrastructure. These measures are intended to minimize opportunities for fossorial mammals to become established and thereby create a prey base that could become an attractant for raptors.

- Rodenticide will not be utilized on the Project site to avoid the risk of raptors scavenging the remains of poisoned animals.

- Boulders (rocks more than 12 inches in diameter) excavated during Project construction may be placed in aboveground piles in the Project area so long as they are more than 500 meters (1,640 feet) from any turbine. Existing rock piles created during construction of first- and second-generation turbines will also be moved at least 500 meters (1,640 feet) from turbines.
- Gravel will be placed around each tower foundation to discourage small mammals from burrowing near turbines.

2020 Updated PEIR Mitigation Measure BIO-11g: Implement postconstruction avian fatality monitoring for all repowering projects

A postconstruction monitoring program will be conducted at each repowering project for a minimum of 3 years beginning on the commercial operation date (COD) of the project. Monitoring may continue beyond 3 years if construction is completed in phases. Moreover, if the results of the first 3 years indicate that baseline fatality rates (i.e., non-repowered fatality rates) are exceeded, monitoring will be extended until the average annual fatality rate has dropped below baseline fatality rates for 2 years, and to assess the effectiveness of adaptive management measures specified in Mitigation Measure BIO-11i. An additional 2 years of monitoring will be implemented at year 10 (i.e., the tenth anniversary of the COD). Project proponents will provide access to qualified third parties authorized by the County to conduct any additional monitoring after the initial 3-year monitoring period has expired and before and after the additional 2-year monitoring period, provided that such additional monitoring utilizes scientifically valid monitoring protocols.

A TAC will be formed to oversee the monitoring program and to advise the County on adaptive management measures that may be necessary if fatality rates substantially exceed those predicted for the project (as described below in Mitigation Measure BIO-11i). The TAC will have a standing meeting, which will be open to the public, every 6 months to review monitoring reports produced by operators in the program area. In these meetings, the TAC will discuss any issues raised by the monitoring reports and recommend to the County next steps to address issues, including scheduling additional meetings, if necessary.

The TAC will comprise representatives from the County (including one or more technical consultants, such as a biostatistician, an avian biologist, and a bat biologist), and wildlife agencies (CDFW, USFWS). Additional TAC members may also be considered (e.g., a representative from Audubon, a landowner in the program area, a representative of the operators) at the discretion of the County. The TAC will be a voluntary and advisory group that will provide guidance to the County Planning Department. To maintain transparency with the public, all TAC meetings will be open to the public, and notice of meetings will be given to interested parties.

The TAC will have three primary advisory roles: (1) to review and advise on project planning documents (i.e., project-specific APPs) to ensure that project-specific mitigation measures and compensatory mitigation measures described in this PEIR are appropriately and consistently applied, (2) to review and advise on monitoring documents (protocols and reporting) for consistency with the mitigation measures, and (3) to review and advise on implementation of the adaptive management plans.

Should fatality monitoring reveal that impacts exceed the baseline thresholds established in the PEIR, the TAC will advise the County on requiring implementation of adaptive management

measures as described in Mitigation Measure BIO-11i. The County will have the decision-making authority, as it is the organization issuing the CUPs. However, the TAC will collaboratively inform the decisions of the County.

Operators are required to provide for avian use surveys to be conducted within the project area boundaries for a minimum of 30 minutes duration. Surveyors will be qualified and trained and subject to approval by the County.

Carcass surveys will be conducted at every turbine for projects with 20 or fewer turbines. For projects with more than 20 turbines, such surveys will be required at a minimum of 20 turbines, and a sample of the remaining turbines may be selected for carcass searches. The operator will be required to demonstrate that the sampling scheme and sample size are statistically rigorous and defensible. Where substantial variation in terrain, land cover type, management, or other factors may contribute to significant variation in fatality rates, the sampling scheme will be stratified to account for such variation. The survey protocol for sets and subsets of turbines, as well as proposed sampling schemes that do not entail a search of all turbines, must be approved by the County in consultation with the TAC prior to the start of surveys.

The search interval will not exceed 7 days for the minimum of 20 turbines to be surveyed; however, the search interval for the additional turbines (i.e., those exceeding the 20-turbine minimum) that are to be included in the sampling scheme may be extended up to 28 days or longer if recommended by the TAC.

The estimation of detection probability is a rapidly advancing field. Carcass placement trials, broadly defined, will be conducted to estimate detection probability during each year of monitoring. Sample sizes will be large enough to potentially detect significant variation by season, carcass size, and habitat type.

Operators will be required to submit copies of all raw data forms to the County annually, will supply raw data in a readily accessible digital format to be specified by the County, and will prepare raw data for inclusion as appendices in the annual reports. The intent is to allow the County to conduct independent analyses and meta-analyses of data across the APWRA, and to supply these data to the regulatory agencies if requested.

Annual reports submitted to the County will provide a synthesis of all information collected to date. Each report will provide an introduction; descriptions of the study area, methods, and results; a discussion of the results; and any suitable recommendations. Reports will provide raw counts of fatalities, adjusted fatality rates, and estimates of project-wide fatalities on both a per MW and per turbine basis.

2020 Updated PEIR Mitigation Measure BIO-11h: Compensate for the loss of avian species, including golden eagles, by contributing to conservation efforts

Discussion

Several options to compensate for impacts on avian species, including raptors as well as smaller birds, are currently available. Some are targeted to benefit certain species, but they may also have benefits for other species. For example, USFWS's Eagle Conservation Plan (ECP) Guidelines currently outline a compensatory mitigation strategy for golden eagles using the retrofit of high-risk power poles (poles known or suspected to electrocute and kill eagles). The goal of this strategy is to eliminate hazards for golden eagles. However, because the poles are also dangerous

for other large raptors (e.g., red-tailed hawk, Swainson's hawk), retrofitting them can benefit such species as well as golden eagles.

Conversely, although the retrofitting of electrical poles may have benefits for large raptors, such an approach may provide minimal benefits for smaller birds such as American kestrel or tricolored blackbird. Consequently, additional measures would be required in an overall mitigation package to compensate for impacts on avian species in general.

The Secretary of the Interior issued Order 3330 in October 2013, outlining a "landscape-scale" approach to mitigation policies and practices of the U.S. Department of the Interior to provide for mutual benefit to multiple species when adopting strategies aimed at individual species, thereby benefitting the ecological landscape as a whole. The Order was intended for use by federal agencies, and thus the County was not required to take any particular action; however, the PEIR indicated confidence that such an approach would likely have the greatest mitigation benefits, especially when considering ongoing and long-term impacts from wind energy projects. In 2017, then Secretary of the Interior Ryan Zinke, acting on a presidential executive order, revoked Order 3330 and several other related environmental directives, primarily to ensure that federal policy did not burden the development or use of domestic oil, natural gas, coal, or nuclear energy resources. However, while the current federal administration (under Secretary of the Interior Deb Haaland) is not known to have formally reversed the 2017 revocation of Order 3330, it is expected to have effectively restored it with a shift of priorities towards protection of ecological values while also accelerating the development of renewable energy production such as from wind, solar and geothermal projects. For this reason, the County considers it to be in its interest to promote policies that benefit one species that also have high potential for benefit to additional species, or to a whole ecological system or habitat.

With Order 3330 in mind, the PEIR outlined several options that are deemed available to compensate for impacts on avian species. The options discussed below are currently considered acceptable approaches to compensation for such impacts. Although not every option is appropriate for all species, it is hoped that as time proceeds, a more comprehensive approach to mitigation will be adopted to benefit a broader suite of species than might benefit from more species-specific measures. The County recognizes that the science of wind energy impacts on avifauna is continuing to evolve and that the suite of available compensation options may consequently change during implementation of approved projects.

Conservation Measures

To promote the conservation of avian species, project proponents will compensate for avian fatalities estimated within their project areas. Mitigation will be provided in 10-year increments, with the first increment based on the estimates (fatalities/MW/year and fatalities/ha RSA/year) provided in this analysis for existing repowered projects (Table 3.4-8). Each project proponent will conduct postconstruction fatality monitoring for at least 3 years beginning at project startup (date of commercial operation) and again for 2 years at year 10, as required under Mitigation Measure BIO-11g, to estimate the average number of birds taken each year by each individual project. The project proponent will compensate for this number of birds in subsequent 10-year increments for the life of the project (i.e., three 10-year increments) as outlined below. Mitigation Measure BIO-11g also requires additional fatality monitoring at year 10 of the project. The results of the first 3 years of monitoring and/or the monitoring at year 10 may lead to revisions of the estimated average number of birds taken, and mitigation provided

may be adjusted accordingly on a one-time basis within each of the first two 10-year increments, based on the results of the monitoring required by Mitigation Measure BIO-11g, in consultation with the TAC.

Prior to the start of operations, project proponents will submit for County approval an avian conservation strategy, as part of the project-specific APP outlined in PEIR Mitigation Measure BIO-11a, outlining the estimated number of avian fatalities based on the number and type of turbines being constructed, and the type or types of compensation options to be implemented. Project proponents will use the avian conservation strategy to craft an appropriate strategy using a balanced mix of the options presented below, as well as considering new options suggested by the growing body of knowledge during the course of the project lifespan, as supported by a Resource Equivalency Analysis (REA) (see example in Appendix C4) or similar type of compensation assessment acceptable to the County that demonstrates the efficacy of proposed mitigation for impacts on avian species.

The County Planning Director, in consultation with the TAC, will consider, based on the REA, whether the proposed avian conservation strategy is adequate, including consideration of whether each avian mitigation plan incorporates a landscape-scale approach such that the conservation efforts achieve the greatest possible benefits. Compensation measures as detailed in an approved avian conservation strategy must be implemented within 1 year of the date of commercial operations. Avian conservation strategies will be reviewed and may be revised by the County every 10 years, and on a one-time basis in each of the two 10-year increments based on the monitoring required by 2020 Updated PEIR Mitigation Measure BIO-11g.

- **Retrofitting high-risk electrical infrastructure.** USFWS's ECP Guidelines outline a compensatory mitigation strategy using the retrofit of high-risk power poles (poles known or suspected to electrocute and kill eagles). USFWS has developed an REA (U.S. Fish and Wildlife Service 2013) as a tool to estimate the compensatory mitigation (number of retrofits) required for the take of eagles. The REA takes into account the current understanding of eagle life history factors, the effectiveness of retrofitting poles, the expected annual take, and the timing of implementation of the pole retrofits. The project proponents may need to contract with a utility or a third-party mitigation account (such as the National Fish and Wildlife Foundation) to retrofit the number of poles needed as demonstrated by a project-specific REA. If contracting directly, the project proponent will consult with utility companies to ensure that high-risk poles have been identified for retrofitting. Proponents will agree in writing to pay the utility owner/operator to retrofit the required number of power poles and maintain the retrofits for 10 years and will provide the County with documentation of the retrofit agreement. The first retrofits will be based on the estimated number of eagle fatalities as described above in this measure or as developed in the project-specific EIR for future projects. Subsequent numbers of retrofits required for additional 10-year durations will be based on the results of project-specific fatality monitoring as outlined in PEIR Mitigation Measure BIO-11g. If fewer eagle fatalities are identified through the monitoring, the number of future required retrofits may be reduced through a project-specific REA. Although retrofitting poles has not been identified as appropriate mitigation for other large raptors, they would likely benefit from such efforts, as they (particularly red-tailed and Swainson's hawks) constitute the largest non-eagle group to suffer electrocution on power lines (Avian Power Line Interaction Committee 2006).

- **Measures outlined in an approved Eagle Conservation Plan and Bird and Bat Conservation Strategy.** Project proponents may elect to apply for eagle incidental take permits from USFWS. The eagle incidental take permit process currently involves preparation of an ECP and a Bird and Bat Conservation Strategy (BBCS). The ECP specifies avoidance and minimization measures, advanced conservation practices, and compensatory mitigation for eagles—conditions that meet USFWS’s criteria for issuance of a permit. The BBCS outlines measures being implemented by the applicant to avoid and minimize impacts on migratory birds, including raptors. If eagle incidental take permits are obtained by project proponents, those permit terms, including the measures outlined in the approved ECP and BBCS, may constitute an appropriate conservation measure for estimated take of golden eagles and other avian species, provided such terms are deemed by the County to be comparable to or more protective of birds than the other options listed herein.
- **Contribute to avian conservation efforts.** Project proponents will contribute funds, in an amount equal to the average cost to rehabilitate one raptor at the California Raptor Center, affiliated with the UC Davis School of Veterinary Medicine—which receives more than 200 injured or ill raptors annually (Stedman pers. comm.). The funds would be paid prior to commercial operation based on the projected/anticipated, worst-case raptor fatalities indicated in Table 3.4-8a, and for this purpose defined as 95 raptors per year, in 10-year increments to local and/or regional conservation efforts designed to protect, recover, and manage lands for raptors, or to conduct research involving methods to reduce raptor fatalities or increase raptor productivity. Ten-year installments are more advantageous than more frequent installments for planning and budgeting purposes.

The funds will be contributed to an entity or entities engaged in these activities, such as the East Bay Regional Park District and the Livermore Area Regional Park District. Conservation efforts may include constructing and installing nest boxes and perches, conducting an awareness campaign to reduce the use of rodenticide, and conducting research to benefit raptors and other birds. The specific conservation effort to be pursued will be submitted to the County for approval as part of the avian conservation strategy review process. The donation receipt will be provided to the County as evidence of payment.

The first contributions for any given project will be based on the estimated number of avian fatalities as estimated in this EIR. Funds for subsequent 10-year installments will be provided on the basis of the average annual avian fatality rates determined through postconstruction monitoring efforts, allowing for a one-time adjustment within each 10-year increment after the results of the monitoring efforts are available. If fewer avian fatalities are detected through the monitoring effort, the second installment amount may be reduced to account for the difference between the first estimated numbers and the monitoring results. In the event of such an adjustment, and on each 10-year anniversary, projected costs shall be adjusted for inflation (from the base amount described above) according to the consumer price index (CPI) through the remainder of the 10-year term or the subsequent 10-year term. Review shall occur at the time that monitoring reports are accepted by the Planning Director showing a change in total avian fatalities for the project. All avian species listed in Table 3.4-4 shall be accounted for in estimating the payment.

- **Contribute to regional conservation of avian habitat.** Project proponents may address regional conservation of habitat for raptors and other birds by funding the acquisition of conservation easements within the APWRA or on lands in the same eco-region outside the APWRA, subject to County approval, for the purpose of long-term regional conservation of

raptor habitat. Lands proposed for conservation must provide habitat similar to and in area proportional to habitats on lands within the project site. Project proponents will fund the regional conservation and improvement of lands (through habitat enhancement, lead abatement activities, elimination of rodenticides, and/or other measures) using a number of acres equivalent to the conservation benefit of the avian recovery and conservation efforts described above, or as determined through a project-specific REA (see example REA in PEIR Appendix C4). The conservation lands must be provided for compensation of a minimum of 10 years of avian fatalities, as 10-year increments will minimize the transaction costs associated with the identification and conservation of lands, thereby increasing overall cost effectiveness. The conservation easements will be held by an organization whose mission is to purchase and/or otherwise conserve lands, such as The Trust for Public Lands, The Nature Conservancy, California Rangeland Trust, or the East Bay Regional Parks District. The project proponents will obtain approval from the County regarding the amount of conserved lands, any enhancements proposed to increase raptor and other avian habitat value, and the entity holding the lands and/or conservation easement.

- **Contribute to efforts benefitting eagles and other raptors.** In addition to the conservation of avian habitat, the project proponent will also contribute to additional efforts for the benefit of eagles and other raptors in an amount equal to \$12,500/MW of installed capacity. The mitigation contribution is based on the per MW amount (\$10,500/MW) established under the 2010 Settlement Agreement between NextEra Energy Resources and the California Attorney General, adjusted for inflation and rounded up to the nearest \$100 increment. The funds will be used to support efforts that USFWS accepts as mitigation for an eagle take permit for the project. Such efforts may include, but are not limited to: retrofit of high-risk power poles; efforts that contribute to the regional management of eagle and raptor habitat; efforts that support the additional conservation of lands for the benefit of eagles and other raptors; and efforts that support the reduction of rodenticide use in wildlands, which can have negative effects on raptor populations.
- **Other Conservation Measures Identified in the Future.** As noted above, additional conservation measures for raptors and other birds may become available in the future. Conservation measures for avian species are currently being developed by USFWS and nongovernmental organizations (e.g., American Wind Wildlife Institute). Additional options for conservation could include purchasing credits at an approved mitigation bank, credits for the retirement of windfarms that are particularly dangerous to birds, the curtailment of prey elimination programs (e.g., ceasing the use of rodenticide use), and hunter-education programs that remove sources of lead from the environment. Under this option, the project proponent may make alternative proposals to the County for conservation measures—based on an REA or similar compensation assessment—that the County may accept as mitigation if they are deemed by the County to be comparable to or more protective of raptor species than the other options described herein.

2020 Updated PEIR Mitigation Measure BIO-11i: Implement an avian adaptive management program

If fatality monitoring described in Mitigation Measure BIO-11g results in an estimate that exceeds the preconstruction baseline fatality estimates (i.e., estimates at the non-repowered turbines as described in this PEIR) for any focal species or species group (i.e., individual focal species, all focal species, all raptors, all non-raptors, all birds combined), project proponents will

prepare a project-specific adaptive management plan within 2 months following the availability of the fatality monitoring results. These plans will be used to adjust operation and mitigation to the results of monitoring, new technology, and new research to ensure that the best available science is used to minimize impacts to below baseline. Project-specific adaptive management plans will be reviewed by the TAC, revised by project proponents as necessary, and approved by the County. The TAC will take current research and the most effective impact reduction strategies into account when reviewing adaptive management plans and suggesting measures to reduce impacts. The project-specific adaptive management plans will be implemented within 2 months of approval by the County. The plans will include a stepped approach whereby an adaptive measure or measures are implemented, the results are monitored for success or failure for a year, and additional adaptive measures are added as necessary, followed by another year of monitoring, until the success criteria are achieved (i.e., estimated fatalities are below the baseline). Project proponents should use the best measures available when the plan is prepared in consideration of the specific adaptive management needs. For example, if only one threshold is exceeded, such as golden eagle fatalities, the plan and measures used will target that species. As set forth in other agreements in the APWRA, project proponents may also focus adaptive management measures on individual or multiple turbines if those turbines are shown to cause a significantly disproportionate number of fatalities.

In general, the following types of measures will be considered by the TAC, in the order they are presented below; however, the TAC may recommend any of these or other measures that are shown to be successful in reducing the impact.

ADMM-1: Visual Modifications. The project proponent will paint a pattern on a proportion of the turbine blades. The proportion and the pattern of the blades to be painted will be determined by the County in consultation with the TAC. Previous laboratory work has shown that painting a turbine blade may reduce *motion smear*—the blurring of turbine blades due to rapid rotation that renders them less visible and hence more perilous to birds in flight (Hodos 2003). A test of blade painting, performed in Norway, suggests that the technique can reduce avian fatalities by 70% (May et al. 2020). Suggested techniques include painting blades with staggered stripes or painting one blade black. The project proponent will conduct fatality studies on a controlled number of painted and unpainted turbines. The project proponent will coordinate with the TAC to determine the location of the painted turbines, but the intent is to implement this measure in areas that appear to be contributing most to the high number of fatalities detected.

ADMM-2: Anti-Perching Measures. The County will consult with the TAC regarding the use of anti-perching measures to discourage bird use of the area. The TAC will use the most recent research and information available to determine, on a case-by-case basis, if anti-perching measures will be an effective strategy to reduce impacts. If determined to be feasible, antiperching devices will be installed on artificial structures, excluding utility poles, within 1 mile of project facilities (with landowner permission) to discourage bird use of the area.

ADMM-3: Prey Reduction. The project proponent will implement a prey reduction program around the most hazardous turbines. Examples of prey reduction measures may include changes in grazing practices to make the area less desirable for prey species, active reduction through direct removal of prey species, or other measures provided they are consistent with management goals for threatened and endangered species.

ADMM-4: Implementation of Experimental Technologies. Project proponents can deploy experimental technologies at their facilities to test their efficacy in reducing turbine-related fatalities. Examples may include, but are not limited to, visual deterrents, noise deterrents, and active radar systems.

ADMM-5: Turbine Curtailment. If postconstruction monitoring indicates patterns of turbine-caused fatalities—such as seasonal spikes in fatalities, topographic or other environmental features associated with high numbers of fatalities, fatalities related to proximity to raptor nesting sites (nest trees, lattice towers or burrowing owl colonies), or other factors that can potentially be manipulated and that suggest that curtailment of a specific turbine's operation would result in reducing future avian fatalities—the project operator will curtail operations of the offending turbine or turbines. Curtailment restrictions would be developed in coordination with the TAC and based on currently available fatality data, use data, and research.

ADMM-6: Cut-in Speed Study. Changes in cut-in speed could be conducted to see if changing cut-in speeds from 3 meters per second to 5 meters per second (for example) would significantly reduce avian fatalities. The proponent will coordinate with the TAC in determining the feasibility of the measure for the particular species affected as well as the amount of the change in the cut-in speed.

ADMM-7: Real-Time Turbine Curtailment. The project proponent can employ a real-time turbine curtailment program designed in consultation with the TAC. The intent would be to deploy a biologist to monitor onsite conditions and issue a curtailment order when raptors are near operating turbines. Alternatively, radar, video, or other monitoring measures could be deployed in place of a biological monitor if there is evidence to indicate that such a system would be as effective and more efficient than use of a human monitor.

ADMM-8: Condor Evaluation and Curtailment. On an annual basis, the project proponent will review the known distribution of the California condor, relative to the project area, by coordinating with USFWS, CDFW, and U.S. Geological Survey regarding data tracking condor movements, and will use this data to identify all condor overflights in the project area, as well as evaluating trends in condor use of neighboring areas. The project proponent will report their findings to the County. If those data show California condors flying over the project area, the project proponent will coordinate with USFWS and CDFW regarding the risk assessment, and if necessary, measures to minimize the risk of fatalities. These measures could include the use of regional electronic monitoring to inform project operators of condors flying into the area, with responses including curtailment or implementing a visual detection system to reduce risks to condors; other effective measures may also be proposed. Measures implemented would depend on the extent of condor use in the project area and the evaluation of the risk of a condor mortality. The project proponent will inform the County of discussions with USFWS and CDFW and efforts it will undertake to reduce the risk of condor mortality, if necessary.

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR BIO-11a, 2020 Updated PEIR BIO-11b, PEIR BIO-11c, PEIR BIO-11d, PEIR BIO-11e, PEIR BIO-11f, 2020 Updated PEIR BIO-11g, 2020 Updated PEIR BIO-11h, and 2020 Updated PEIR BIO-11i will reduce the rate of avian mortality associated with the project but will not mitigate this impact to a less-than-significant level, as there is no feasible way to avoid the significant impact.

Remaining Impacts: Remaining impacts related to the project impacts on avian mortality will be significant and unavoidable.

Overriding Considerations: As more fully explained in the Statement of Overriding Considerations contained in Exhibit C to the Resolution to which these CEQA Findings are attached, the County finds that there are environmental, economic, or other benefits of the approved project that override the remaining significant and unavoidable impacts on biological resources. There are no other feasible mitigation measures, or changes to the project that would reduce this impact to a less-than-significant level.

Impact BIO-14: Turbine-related fatalities of special-status and other bats

Potential Impact: Resident and migratory bats flying in and through the project area may be killed by collision with wind turbine blades or other interaction with the wind turbine generators. Extrapolating from existing fatality data and from trends observed at other wind energy facilities where fourth-generation turbines are in operation, it appears likely that fatalities would primarily be associated with wind speeds of less than 5-6 m/s; that fatalities would occur predominantly in the late summer to mid-fall migration period; that fatalities would consist mostly of migratory bats, particularly Mexican free-tailed bat and hoary bat; that fatalities would occur sporadically at other times of year; and that fatalities of one or more other species would occur in smaller numbers. Despite the high level of uncertainty in estimates of bat fatality rates, all available data suggest that implementation of the project would result in a substantial increase in bat fatalities.

The PEIR concluded that “Insufficient data are currently available to develop accurate fatality estimates for individual bat species,” but subsequent analyses using more frequent and intensive surveys, and especially surveys using trained dogs and handlers, have produced fatality estimates that are both more confident and substantially larger; though, there are still reasons to suspect that observed fatality rates may be biased low. Overall, the PEIR found that “Despite the high level of uncertainty in estimates of bat fatality rates, all available data suggest that *repowering would result in a substantial increase in bat fatalities.*” [emphasis added] The recently available information further supports this conclusion in the PEIR and does not alter its significance with regard to the proposed project, but it does provide further insight into bat use of the APWRA. While the PEIR set forth multiple measures to address bat mortality, it concluded that these measures would not reduce the impact to a less-than-significant level. This conclusion holds true for the project, and, although it remains difficult to estimate bat mortality rates with certainty, continued monitoring using techniques that are already well established, specifically, the use of trained dogs and their handlers, would contribute to the body of knowledge informing this effort, as noted in the recent H. T. Harvey & Associates (2020) monitoring report, the study of search effectiveness presented by Smallwood and Bell (2019), and multiple additional sources cited therein.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-14a: Site and select turbines to minimize potential mortality of bats

The project proponent will use the best information available to site turbines and to select from turbine models in such a manner as to reduce bat collision risk. The siting and selection process will take into account bat use of the area (e.g., proximity to maternity colony sites, hibernacula,

and cover types that provide foraging habitat for bats). Procedures followed should be consistent with guidance provided by the California guidelines for reducing impacts on birds and bats from wind energy development (California Energy Commission and California Department of Fish and Game 2007).

To generate site-specific “best information” to inform turbine siting and operation decisions, a bat habitat assessment and roost survey will be conducted in the project area to identify and map habitat of potential significance to bats, such as potential roost sites (trees and shrubs, significant rock formations, artificial structures) and water sources. Turbine siting decisions will incorporate relevant bat use survey data and bat fatality records published by other projects in the APWRA. Roost surveys will be carried out according to the methods described in PEIR Mitigation Measure BIO-12a.

Consistent with past practice for previously approved repowering projects, the proponent shall submit the siting analysis for review and recommendations to the Alameda County Wind Repowering/Avian Protection Technical Advisory Committee, which includes representatives of the CDFW and the USFWS, prior to applying for any building or grading permit. The County planning director shall have the authority to approve or deny such permits on the basis of the siting analysis and the recommendations of the Technical Advisory Committee.

2020 Updated PEIR Mitigation Measure BIO-14b: Implement postconstruction bat fatality monitoring program for all repowering projects

A scientifically defensible, postconstruction bat fatality monitoring program will be implemented to estimate actual bat fatalities and determine if additional mitigation is required. Bat-specific modifications to the 3-year postconstruction monitoring program described in PEIR Mitigation Measure BIO-11g, developed in accordance with California Energy Commission and California Department of Fish and Game (2007) will be implemented.

In addition to the requirements outlined in 2020 Updated PEIR Mitigation Measure BIO-11g, the following three bat-specific requirements will be added.

- Include on the TAC at least one biologist with significant expertise in bat research and wind energy impacts on bats.
- Perform postconstruction bat fatality monitoring using trained dogs with handlers. In order to optimize monitoring success, these efforts should also include searching to a maximum radius around wind turbines that includes all deposited carcasses, searching along transects spaced closely together, and searching frequently. Recognizing that most bat fatalities in the APWRA are recorded from September through November, it is appropriate to concentrate search efforts during that period, while still maintaining some level of search effort throughout the year.
- Conduct bat acoustic surveys concurrently with fatality monitoring at the project site to estimate nightly, seasonal, or annual variations in relative activity and species use patterns, and to contribute to the body of knowledge on seasonal bat movements and relationships between acoustic bat activity and turbine fatality. Should emerging research support the approach, these data may be used to generate site-specific predictive models to increase the precision and effectiveness of mitigation measures (e.g., the season specific, multivariate models described by Weller and Baldwin 2011:11). Acoustic bat surveys will be designed, and data analysis conducted by qualified biologists with significant experience in acoustic

bat survey techniques. Methods will be informed by the latest available guidelines (California Energy Commission and California Department of Fish and Game 2007), except where best available science supports technological or methodological updates. High-quality, sensitive acoustic equipment will be used to produce data of sufficient quality to generate species identifications. Survey design and methods will be scientifically defensible and will include, at a minimum, the following elements:

- Acoustic detectors will be installed at multiple stations to adequately sample range of habitats at the project site for both resident and migratory bats. The number of detector arrays installed per project site will incorporate emerging research on the density of detectors required to adequately meet sampling goals and inform mitigation approaches (Weller and Baldwin 2011:10).
- Acoustic detector arrays will sample multiple airspace heights including as close to the repowered rotor swept area as possible. Vertical structures used for mounting may be preexisting or may be installed for the project (e.g., temporary or permanent meteorological towers).
- Surveys will be conducted such that data are collected continuously from early July to early November to cover the activity transition from maternity to migration season and determine if there is elevated activity during migration. Survey season may be adjusted to more accurately reflect the full extent of the local migration season and/or season(s) of greatest local bat fatality risk, if scientifically sound data support doing so.
- Anticipated adaptive management goals, such as determining justifiable timeframes to reduce required periods of cut-in speed adjustments, will be reviewed with the TAC and incorporated in designing the acoustic monitoring and data analysis program.

Modifications to the fatality search protocol will be implemented to obtain better information on the number and timing of bat fatalities (e.g., Johnston et al. 2013:85). Modifications will include decreases in the transect width and search interval for a period of time coinciding with high levels of bat mortality, i.e., the fall migration season (roughly August to early November, or as appropriate in the view of the TAC). The nature of bat-specific transect distance and search intervals will be determined in consultation with the TAC and will be guided by scientifically sound and pertinent data on rates of bat carcass detection at wind energy facilities (e.g., Johnston et al. 2013:54–55) and site-specific data from APWRA repowering project fatality monitoring programs as these data become available.

Other methods to achieve the goals of the bat fatality monitoring program while avoiding prohibitive costs may be considered subject to approval by the TAC, if these methods have been peer reviewed and evidence indicates the methods are effective. For example, if project proponents wish to have the option of altering search methodology to a newly developed method, such as searching only roads and pads, a statistically robust field study to index the results of the methodology against standard search methods will be conducted concurrently to ensure site-specific, long-term validity of the new methods.

Finally, detection probability trials will utilize bat carcasses to develop bat-specific detection probabilities. Care should be taken to avoid introducing novel disease reservoirs; such avoidance will entail using onsite fatalities or using carcasses obtained from within a reasonably anticipated flight distance for that species.

PEIR Mitigation Measure BIO-14c: Prepare and publish annual monitoring reports on the findings of bat use of the Project area and fatality monitoring results

Annual reports of bat use results and fatality monitoring will be produced within 3 months of the end of the last day of fatality monitoring. Special-status bat species records will be reported to CNDDB.

2020 Updated PEIR Mitigation Measure BIO-14d: Develop and implement a bat adaptive management plan

In concert with 2020 Updated PEIR Mitigation Measure BIO-14b, the project proponent will develop adaptive management plans to ensure appropriate, feasible, and current incorporation of emerging information. The goals of the adaptive management plans are to ensure that the best available science and emerging technologies are used to assess impacts on bats, and that impacts are minimized to the greatest extent possible while maximizing energy production.

The project-specific adaptive management plans will be used to adjust operation and mitigation to incorporate the results of project area monitoring and new technology and research results when sufficient evidence exists to support these new approaches. These plans will be reviewed by the TAC and approved by the County. All adaptive management measures (ADMMs) will be implemented within a reasonable timeframe. Based on fatality rates recorded at Golden Hills and Golden Hills North, it is reasonably certain that the threshold fatality rate identified in the PEIR of 3.207 bats/MW/year will be exceeded at the proposed project². For this reason, ADMM-7 will be implemented at the commencement of project operations. If ADMM-7 is not successful in reducing bat fatalities to below threshold levels, ADMM-8 or ADMM-9 will be implemented within a timeframe sufficient to allow the measures to take effect in the first fall migration season following the year of monitoring in which the adaptive management threshold was crossed. The ADMMs may be modified by the County in consultation with the TAC to take into account current research, site-specific data, and the most effective impact reduction strategies. ADMMs will include a scientifically defensible, controlled research component and minimum post-implementation monitoring time to evaluate the effectiveness and validity of the measures.

The TAC may also direct implementation of adaptive management measures for other appropriate reasons, such as an unexpectedly and markedly high fatality rate observed for any bat species, or special-status species being killed in unexpectedly high numbers.

ADMMs for bats may be implemented using a stepped approach until necessary fatality reductions are reached, and monitoring methods must be revised as needed to ensure accurate measurement of the effectiveness of the ADMMs. Additional ADMMs for bats should be developed as new technologies or science supports doing so.

ADMM-7: Seasonal Turbine Cut-in Speed Increase. Cut-in speed increases offer the most promising and immediately available approach to reducing bat fatalities at fourth-generation wind turbines. Reductions in fatalities of as much as 93% have been observed when increasing modern turbine cut-in speeds (Good et al. 2012:iii). A recent study in the APWRA documented significant reductions in fatalities using curtailment during the peak migration period

² The PEIR identified predicted total fatality rates of 1.679 fatalities/MW/year from the Vasco Winds repowering project. That fatality rate has been revised upwards to 3.207 fatalities/MW/year, taking into account the correction noted on page 3.4-69 of this Final SEIR.

(Smallwood and Bell 2019). Work at a site in Wisconsin has shown that a site-specific, real-time curtailment algorithm using wind speed and bat activity information (referred to as “smart-curtailment”) can yield 74-92% fatality reductions at a 3.2% cost in revenue from the turbines (Hayes et al. 2019). Other curtailment studies, also performed in sites outside the APWRA, have shown comparable effectiveness (e.g. Hein et al. 2014). The optimal cut-in speed increase is not yet well developed, and may vary between sites or regions, however most current research points to significant benefits using a cut in speed change of at least 5.0 m/s, with greater cut-in speed increases yielding improved benefit (Hayes et al. 2019).

Cut-in speed increases will be implemented as outlined below, with effectiveness assessed annually.

- Beginning with initial project operations, the project proponent will observe a cut-in speed of 5.0 m/s from sunset to sunrise from August 1 through October 31, which corresponds to the peak bat migration season in the APWRA. This measure shall apply for the first three full years of project operations.
- If, after the first three full years of project operations, fatalities are still exceeding established thresholds, the project proponent will:
 - increase the cut in speed in 0.5 m/s increments (up to a maximum of a 6.0 m/s cut in speed change), or
 - implement an additional 1-month spring cut in speed change to 5.0 m/s (with the timing to be determined based on the results of the initial 3 years of fatality monitoring), or
 - a combination of cut in speed increases and the spring cut in speed change.
- At any time following the end of the first three full years of project operations, the project proponent may request modifications to the initial operational requirements, including a changed cut-in speed or a change in the dates of curtailment, or to implement a smart-curtailment operations regime. The project proponent must present evidence in support of such changes, including evidence from fatality monitoring during the first three years of project monitoring, acoustic survey or other evidence documenting bat activity during the migration season, and such other evidence as the project proponent deems relevant. Should resource agencies and the TAC find there is sufficient evidence to authorize the proposed changes, the supporting evidence will be documented for the public record and the revised operational requirements may be implemented.
- When the project proponent requests a modification of operational requirements, the TAC shall also consider whether evidence from the APWRA or other sites supports the institution of additional requirements to further minimize bat fatalities. Such requirements may include further cut-in speed increases or changes to the timing or duration of curtailment.
- The project proponent may request exceptions to cut-in speed increases for particular weather events or wind patterns if substantial evidence is available from onsite acoustic or other monitoring to support such exceptions (i.e., all available literature and onsite surveys indicate that bat activity ceases during specific weather events or other predictable conditions).

ADMM-8: Acoustic Deterrents. The project proponent shall present to the TAC a proposal for the evaluation of acoustic deterrents to reduce bat fatalities. Any such proposal shall incorporate a paired study in which at least 12 operational turbines are subject to monitoring

under 2020 Updated PEIR Mitigation Measure BIO-14b, with half of the turbines carrying acoustic deterrents and half reserved as a control group. The study shall at a minimum include one spring and one fall migration season. The acoustic deterrents shall be of a design similar to those described by Weaver et al. (2020), who demonstrated bat fatality rate reductions of up to 78% for hoary bat, which is the second-most-commonly killed bat documented in surveys at the APWRA. Based on the results of this study the TAC may call for permanent implementation of acoustic deterrents on all project turbines.

ADMM-9: Emerging Technology as Mitigation. The project proponent may request, with consultation and approval from agencies, replacement or augmentation of cut-in speed increases with developing technology or another mitigation approach that has been proven to achieve similar bat fatality reductions.

The project proponent may also request the second tier of adaptive management to be the adoption of a promising but not fully proven technology or mitigation method. These requests are subject to review and approval by the TAC and must include a controlled research component designed by a qualified principal investigator so that the effectiveness of the method may be accurately assessed.

Some examples of such emerging technologies and research areas that could be incorporated in adaptive management plans are listed below.

- The use of altitude-specific radar, night vision and/or other technology allowing bat use monitoring and assessment of at-risk bat behavior (Johnston et al. 2013: 90-91) if research in these areas advances sufficiently to allow effective application of these technologies.
- Application of emerging peer-reviewed studies on bat biology (such as studies documenting migratory corridors or bat behavior in relation to turbines) that support specific mitigation methods.

PEIR Mitigation Measure BIO-14e: Compensate for expenses incurred by rehabilitating injured bats

The cost of reasonable, licensed rehabilitation efforts for any injured bats taken to wildlife care facilities from the program area will be assumed in full by Project proponents.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-14a, 2020 Updated PEIR BIO-14b, PEIR BIO-14c, 2020 Updated PEIR BIO-14d, and PEIR BIO-14e will reduce the rate of bat mortality associated with the project but will not mitigate this impact to a less-than-significant level, as there is no feasible way to avoid the significant impact.

Remaining Impacts: Remaining impacts related to the project impacts on bat mortality will be significant and unavoidable.

Overriding Considerations: As more fully explained in the Statement of Overriding Considerations contained in Exhibit C to the Resolution to which these CEQA Findings are attached, the County finds that there are environmental, economic, or other benefits of the approved project that override the remaining significant and unavoidable impacts on biological

resources. There are no other feasible mitigation measures, or changes to the project that would reduce this impact to a less-than-significant level.

Impact BIO-19: Potential impact on the movement of any native resident or migratory wildlife species or established native resident or migratory wildlife corridors, and the use of native wildlife nursery sites

Potential Impact: Construction activities associated with the program and fencing of work areas may temporarily impede wildlife movement through the work area or cause animals to travel longer distances to avoid the work area. This could result in higher energy expenditure and increased susceptibility to predation for some species and is a potentially significant impact. Because the construction period for the Project would be up to 7 months, it would likely encompass the movement/migration period for some species (e.g., California tiger salamander movement to/from breeding ponds). In particular, smaller animals, whose energy expenditures to travel around or avoid the area would be greater than for larger animals, could be more severely affected. The operation of wind turbines after repowering would adversely affect raptors, other birds, and bats migrating through and wintering in the program area because they could be injured or killed if they fly through the rotor plane of operating wind turbines. This would be a significant and unavoidable impact.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

The project proponent will ensure that the following BMPs, in accordance with practices established in the EACCS, will be incorporated into the final project design and construction documents.

- Employees and contractors performing ground-disturbing activities, including construction and maintenance activities will receive environmental sensitivity training. Training will include review of environmental laws, mitigation measures, permit conditions, and other requirements that must be followed by all personnel to reduce or avoid effects on special-status species and sensitive habitats during construction activities.
- Environmental tailboard trainings will take place on an as-needed basis in the field. These trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during construction and maintenance activities. Directors, managers, superintendents, and the crew leaders will be responsible for ensuring that crewmembers comply with the guidelines.
- Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.
- Off-road vehicle travel outside the project footprint will be avoided and minimized to the extent possible within the project footprint.
- Material will be stockpiled only in areas that do not support special-status species or sensitive habitats.

- Grading will be restricted to the minimum area necessary.
- Prior to ground-disturbing activities in sensitive habitats, project construction boundaries and access areas will be flagged and temporarily fenced during construction to reduce the potential for vehicles and equipment to stray into adjacent habitats.
- Vehicles or equipment will not be refueled within 100 feet of a wetland, stream, or other waterway unless a bermed and lined refueling area (i.e., a created berm made of sandbags or other removable material) is constructed.
- Erosion control measures will be implemented to reduce sedimentation in nearby aquatic habitat when activities are the source of potential erosion. Plastic monofilament netting (erosion control matting) or similar material containing netting will not be used at the project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
- Significant earth moving-activities will not be conducted in riparian areas within 24 hours of predicted storms or after major storms (defined as 1-inch of rain or more).
- The following will not be allowed at or near work sites for project activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations).

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

The project proponents will retain a qualified biologist (as determined by Alameda County) to conduct periodic monitoring of decommissioning, repowering, and reclamation activities that occur adjacent to sensitive biological resources (e.g., special-status species, sensitive vegetation communities, wetlands). Monitoring will occur during initial ground disturbance where sensitive biological resources are present and weekly thereafter or as determined by the County in coordination with a qualified biologist. The biologist will assist the crew, as needed, to comply with all project implementation restrictions and guidelines. In addition, the biologist will be responsible for ensuring that the project proponent or its contractors maintain exclusion areas adjacent to sensitive biological resources, and for documenting compliance with all biological resource-related mitigation measures.

PEIR Mitigation Measure BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species

No more than 3 years prior to ground-disturbing repowering activities, a qualified biologist (as determined by Alameda County) will conduct field surveys within decommissioning, repowering, and restoration work areas and their immediate surroundings to determine the presence of habitat for special-status wildlife species. The project proponent will submit a report documenting the survey results to Alameda County for review prior to conducting any repowering activities. The report will include the location and description of all proposed work areas, the location and description of all suitable habitat for special-status wildlife species, and the location and description of other sensitive habitats (e.g., vernal pools, wetlands, riparian areas). Additionally, the report will outline where additional species- and/or habitat-specific mitigation measures are required. This report may provide the basis for any applicable permit applications where incidental take may occur.

2020 Updated PEIR Mitigation Measure BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians

The project proponent will ensure that BMPs and other appropriate measures, in accordance with measures developed for the EACCS, be incorporated into the appropriate design and construction documents. *Implementation of some of these measures will require that the project proponent obtain incidental take permits from USFWS (California red-legged frog and California tiger salamander) and from CDFW (California tiger salamander only) before construction begins.* Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., ESA or CESA incidental take authorization). The applicant will comply with the State Water Board NPDES construction general requirements for stormwater.

- Ground-disturbing activities will be limited to dry weather between April 15 and October 31. No ground-disturbing work will occur during wet weather. Wet weather is defined as when there has been 0.25 inch of rain in a 24-hour period. Ground disturbing activities halted due to wet weather may resume when precipitation ceases and the National Weather Service 72-hour weather forecast indicates a 30% or less chance of precipitation. No ground-disturbing work will occur during a dry-out period of 48 hours after the above-referenced wet weather.
- Where applicable, barrier fencing will be installed around the worksite to prevent amphibians from entering the work area. Barrier fencing will be removed within 72 hours of completion of work. The need and location of barrier fencing will be identified by a qualified biologist in cooperation with the County and/or any applicable resource agencies with the purpose of protecting dispersing special-status amphibians.
- Before construction begins, a qualified biologist will locate appropriate relocation areas and prepare a relocation plan for special-status amphibians that may need to be moved during construction. The proponent will submit this plan to USFWS and CDFW for review a minimum of 2 weeks prior to the start of construction.
- A qualified biologist will conduct preconstruction surveys (i.e., visual surveys of the ground surface and areas within burrows visible from the surface) immediately prior to ground-disturbing activities (including equipment staging, vegetation removal, grading). The biologist will survey the work area and all suitable habitats within 300 feet of the work area. If individuals (including adults, juveniles, larvae, or eggs) are found, work will not begin until USFWS and/or CDFW is contacted to determine if moving these life-stages is appropriate. If relocation is deemed necessary, it will be conducted in accordance with the relocation plan. Incidental take permits are required for relocation of California tiger salamander (USFWS and CDFW) and California red-legged frog (USFWS). Relocation of western spadefoot toad requires a letter of permission or permit from CDFW authorizing this activity.
- No monofilament plastic will be used for erosion control.
- All project activity will terminate 30 minutes before sunset and will not resume until 30 minutes after sunrise during the migration/active season from November 1 to June 15. Sunrise and sunset times are established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area where the project is located.
- Vehicles will not exceed a speed limit of 15 mph on unpaved roads within natural land cover types, or during offroad travel.

- Trenches or holes more than 6 inches deep will be provided with one or more escape ramps constructed of earth fill or wooden planks and will be inspected by a qualified biologist prior to being filled. Any such features that are left open overnight will be searched each day prior to construction activities to ensure no covered species are trapped. Work will not continue until trapped animals have moved out of open trenches.
- Work crews or the onsite biological monitor will inspect open trenches, pits, and under construction equipment and material left onsite in the morning and evening to look for amphibians that may have become trapped or are seeking refuge.
- If special-status amphibians are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist who is USFWS and/or CDFW-approved under a biological opinion and/or incidental take permit for the specific project, will trap and move special-status amphibians in accordance with the relocation plan. Relocation of western spadefoot toad requires a separate letter of permission or permit from CDFW authorizing this activity.

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

Within 30 days prior to any ground disturbance, a qualified biologist will prepare a Grassland Restoration Plan in coordination with CDFW and subject to CDFW approval, to ensure that temporarily disturbed annual grasslands and areas planned for the removal of permanent roads and turbine pad areas are restored to preproject conditions. The Grassland Restoration Plan will include but not be limited to the following measures.

- Gravel will be removed from areas proposed for grassland restoration.
- To the maximum extent feasible, topsoil will be salvaged from within onsite work areas prior to construction. Imported fill soils will be limited to weed-free topsoil similar in texture, chemical composition, and pH to soils found at the restoration site.
- Where appropriate, restoration areas will be seeded (hydroseeding is acceptable) to ensure erosion control. Seed mixes will be tailored to closely match that of reference site(s) within the program area and should include native or naturalized, noninvasive species sourced within the project area or from the nearest available location.
- Reclaimed roads will be restored in such a way as to permanently prevent vehicular travel.

The plan will include a requirement to monitor restoration areas annually (between March and October) for up to 3 years following the year of restoration. The restoration will be considered successful when the percent cover for restored areas is 70% absolute cover of the planted/seeded species compared to the percent absolute cover of nearby reference sites. No more than 5% relative cover of the vegetation in the restoration areas will consist of invasive plant species rated as “high” in California Invasive Plant Council’s California Invasive Plant Inventory Database (<http://www.cal-ipc.org>). Remedial measures prescribed in the plan will include supplemental seeding, weed control, and other actions as determined necessary to achieve the long-term success criteria. Monitoring may be extended, if necessary, to achieve the success criteria or if drought conditions preclude restoration success. Other performance standards may also be required as they relate to special-status species habitat; these will be identified in coordination with CDFW and included in the plan. The project proponent will provide evidence that CDFW has reviewed and approved the Grassland Restoration Plan. Additionally, the project proponent will provide annual monitoring reports to the County by

January 31 of each year, summarizing the monitoring results and any remedial measures implemented (if any are necessary) during the previous year.

PEIR Mitigation Measure BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles

Where suitable habitat for Blainville's horned lizard, California glossy snake, Alameda whip-snake, or San Joaquin coachwhip is identified in proposed work areas, all project proponents will ensure that BMPs and other appropriate measures, in accordance with measures developed for the EACCS, be incorporated into the appropriate design and construction documents. Implementation of some of these measures may require that the project proponent obtain incidental take permits from USFWS and CDFW (Alameda whipsnake) before construction begins. Additional conservation measures or conditions of approval may be required in applicable project permits (i.e., ESA incidental take permit).

- A qualified biologist will conduct preconstruction surveys immediately prior to ground-disturbing activities (e.g., equipment staging, vegetation removal, grading) associated with the program. If any Blainville's horned lizards, California glossy snake, Alameda whipsnakes, or San Joaquin coachwhips are found, work will not begin until they are moved out of the work area to a USFWS- and/ or CDFW-approved relocation site. Incidental take permits from USFWS and CDFW are required for relocation of Alameda whipsnake. Relocation of Blainville's horned lizard, California glossy snake, and San Joaquin coachwhip requires a letter from CDFW authorizing this activity.
- No monofilament plastic will be used for erosion control.
- Where applicable, barrier fencing will be used to exclude Blainville's horned lizard, California glossy snake, Alameda whipsnake, and San Joaquin coachwhip. Barrier fencing will be removed within 72 hours of completion of work.
- Work crews or an onsite biological monitor will inspect open trenches and pits and under construction equipment and materials left onsite for special-status reptiles each morning and evening during construction.
- Ground disturbance in suitable habitat will be minimized.
- Vegetation within the proposed work area will be removed prior to grading. Prior to clearing and grubbing operations, a qualified biologist will clearly mark vegetation within the work area that will be avoided. Vegetation outside the work area will not be removed. Where possible hand tools (e.g., trimmer, chain saw) will be used to trim or remove vegetation. All vegetation removal will be monitored by the qualified biologist to minimize impacts on special-status reptiles.
- If special-status reptiles are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist who is USFWS- and/or CDFW-approved under an incidental take permit for the specific project will trap and move the animal(s) to a USFWS and/or CDFW approved relocation area. Incidental take permits from USFWS and CDFW are required for relocation of Alameda whipsnake. Relocation of Blainville's horned lizard, California glossy snake, and San Joaquin coachwhip requires a letter or permit from CDFW authorizing this activity.

2020 Updated PEIR Mitigation Measure BIO-8a: Implement measures to avoid and minimize potential construction-related impacts on special-status and non-special-status nesting birds

Where suitable habitat is present for raptors within 1 mile (within 2 miles for golden eagles) and for tree/shrub- and ground-nesting migratory birds (non-raptors) within 50 feet (1,300 feet for tricolored blackbird) of proposed work areas, the following measures will be implemented to ensure that the proposed project does not have a significant impact on nesting special-status and non-special-status birds.

- Remove suitable nesting habitat (shrubs and trees) during the non-breeding season (September 1–January 31) for nesting birds. .
- To the extent feasible, avoid construction activities in or near suitable or occupied nesting habitat during the breeding season of birds (generally February 1–August 31).
- If construction activities (including vegetation removal, clearing, and grading) will occur during the nesting season for migratory birds, a qualified biologist will conduct a total of three preconstruction nesting bird and raptor surveys. The construction area and a 1-mile buffer will be surveyed for tree-nesting raptors (except for golden eagles as addressed below), a 500-foot buffer will be surveyed for northern harrier, and a 1,300-foot buffer will be surveyed for tricolored blackbird if potential tricolored blackbird nesting substrates are present (i.e., flooded, thorny, or spiny vegetation such as cattails, tules, willows, blackberries, thistles, or nettles), and a 50-foot buffer will be surveyed for all other bird species. The first survey will be conducted within the areas described above between 30-60 days prior to the start of construction to identify potential nesting habitat that could be used by special-status and non-special-status birds and raptors within the survey area and to document any nesting behavior or activity. A second survey will be conducted no less than 14 days prior to starting construction to verify current occupancy status of nesting birds and raptors. A final survey will be conducted immediately prior to initiating ground-disturbing activities within disturbance areas and appropriate species buffers. The final surveys may be phased on the project site depending on which areas/components of the project would begin ground-disturbing activities, so that they are conducted immediately prior to ground disturbing activities within a specific area.
- Surveys to locate eagle nests within 2 miles of construction will be conducted during the breeding season prior to construction. A 1-mile no-disturbance buffer will be implemented for construction activities to protect nesting eagles from disturbance. Through coordination with USFWS, the no-disturbance buffer may be reduced to 0.5 mile if construction activities are not within line-of-sight of the nest.
- If an active nest (other than golden eagle) is identified near a proposed work area and work cannot be conducted outside the nesting season (February 1–August 31), a no-activity zone will be established around the nest by a qualified biologist in coordination with USFWS and/or CDFW. Fencing and/or flagging will be used to delineate the no-activity zone. To minimize the potential to affect the reproductive success of the nesting pair, the extent of the no-activity zone will be based on the distance of the activity to the nest, the type and extent of the proposed activity, the duration and timing of the activity, the sensitivity and habituation of the species, and the dissimilarity of the proposed activity to background activities. The no-activity zone will be large enough to avoid nest abandonment and will be between 50 feet and 1 mile from the nest, or as otherwise required by USFWS and/or CDFW.

2020 Updated PEIR Mitigation Measure BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl

Where suitable habitat for western burrowing owl is in or within 500 feet of proposed work areas, the following measures will be implemented to avoid or minimize potential adverse impacts on burrowing owls.

- To the maximum extent feasible (e.g., where the construction footprint can be modified), construction activities within 500 feet of active burrowing owl burrows will be avoided during the nesting season (February 1–August 31).
- A qualified biologist will conduct a total of three preconstruction take avoidance surveys for burrowing owl. The first pre-construction survey will be conducted between 30-60 days prior to the start of construction to identify potential nest sites and to determine current occupancy status. A second survey will be conducted no less than 14 days prior to starting construction to verify current occupancy status. A final survey will be conducted within 24 hours of initiating ground-disturbing activities, or phased as discussed above (2020 Updated PEIR Mitigation Measure BIO-8a). The survey area will encompass the work area and a 500-foot buffer around this area.
- If an active burrow is identified near a proposed work area and work cannot be conducted outside the nesting season (February 1–August 31), a no-activity zone will be established by a qualified biologist in coordination with CDFW. The no-activity zone will be large enough to avoid nest abandonment and will extend a minimum of 250 feet around the burrow.
- If burrowing owls are present at the site during the non-breeding season (September 1–January 31), a qualified biologist will establish a no-activity zone that extends a minimum of 150 feet around the burrow.
- If the designated no-activity zone for either breeding or non-breeding burrowing owls cannot be established, a wildlife biologist experienced in burrowing owl behavior will evaluate site-specific conditions and, in coordination with CDFW, recommend a smaller buffer (if possible) and/or other measure that still minimizes disturbance of the owls (while allowing reproductive success during the breeding season). The site-specific buffer (and/or other measure) will consider the type and extent of the proposed activity occurring near the occupied burrow, the duration and timing of the activity, the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity to background activities.
- If burrowing owls are present in the direct disturbance area and cannot be avoided during the non-breeding season (generally September 1 through January 31), burrowing owls may be excluded from burrows through the installation of one-way doors at burrow entrances. A burrowing owl exclusion plan, prepared by the project proponent, must be approved by CDFW prior to exclusion of owls. One-way doors (e.g., modified dryer vents or other CDFW approved method), which will be left in place for a minimum of 1 week and monitored daily to ensure that the owl(s) have left the burrow(s). Excavation of the burrow will be conducted using hand tools. During excavation of the burrow, a section of flexible plastic pipe (at least 3 inches in diameter) will be inserted into the burrow tunnel to maintain an escape route for any animals that may be inside the burrow. Owls will be excluded from their burrows as a last resort and only if other avoidance and minimization measures cannot be implemented.

- Avoid destruction of unoccupied burrows outside the work area and place visible markers near burrows to ensure that they are not collapsed.
- Conduct ongoing surveillance of the project site for burrowing owls during project activities. If additional owls are observed using burrows within 500 feet of construction, the onsite biological monitor will determine, in coordination with CDFW, if the owl(s) are or would be affected by construction activities and if additional exclusion zones are required.

2020 Updated PEIR Mitigation Measure BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger

Where suitable habitat is present for San Joaquin kit fox and American badger in and adjacent to proposed work areas, the following measures, consistent with measures developed in the EACCS, will be implemented to ensure that proposed project does not have a significant impact on San Joaquin kit fox or American badger. *Implementation of some of these measures will require that the Project proponent obtain incidental take permits from USFWS and CDFW (San Joaquin kit fox) before construction begins.* Implementation of state and federal requirements contained in such authorization may constitute compliance with corresponding measures in the PEIR.

- To the maximum extent feasible, suitable dens for San Joaquin kit fox and American badger will be avoided.
- All project proponents will retain qualified approved biologists (as determined by USFWS) to conduct a preconstruction survey for potential San Joaquin kit fox dens. Resumes of biologists will be submitted to USFWS for review and approval prior to the start of the survey.
- Preconstruction surveys for American badgers will be conducted in conjunction with San Joaquin kit fox preconstruction surveys.
- The preconstruction survey will be conducted no less than 14 days and no more than 30 days before the beginning of ground disturbance, or any activity likely to affect San Joaquin kit fox. The biologists will conduct den searches by systematically walking transects through the project area and a buffer area to be determined in coordination with USFWS and CDFW. Transect distance should be based on the height of vegetation such that 100% visual coverage of the project area is achieved. If a potential or known den is found during the survey, the biologist will measure the size of the den, evaluate the shape of the den entrances, and note tracks, scat, prey remains, and recent excavations at the den site. The biologists will also determine the status of the dens and map the features. Dens will be classified in one of the following four den status categories defined by USFWS.
 - Potential den: Any subterranean hole within the species' range that has entrances of appropriate dimensions and for which available evidence is sufficient to conclude that it is being used or has been used by a kit fox. Potential dens include (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, ground squirrel) that otherwise has appropriate characteristics for kit fox use; or an artificial structure that otherwise has appropriate characteristics for kit fox use.
 - Known den: Any existing natural den or artificial structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records; past or current radiotelemetry or spotlighting data; kit fox sign such as tracks, scat, and/or prey remains; or other reasonable proof that a given den is being or has

been used by a kit fox (USFWS discourages use of the terms *active* and *inactive* when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly).

- Known natal or pupping den: Any den that is used, or has been used at any time in the past, by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two; therefore, for purposes of this definition either term applies.
- Known atypical den: Any artificial structure that has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

Written results of the survey including the locations of any potential or known San Joaquin kit fox dens will be submitted to USFWS within 5 days following completion of the survey and prior to the start of ground disturbance or construction activities.

- After preconstruction den searches and before the commencement of repowering activities, exclusion zones will be established as measured in a radius outward from the entrance or cluster of entrances of each den. Repowering activities will be prohibited or greatly restricted within these exclusion zones. Only essential vehicular operation on existing roads and foot traffic will be permitted. All other repowering activities, vehicle operation, material and equipment storage, and other surface-disturbing activities will be prohibited in the exclusion zones. Barrier fencing will be removed within 72 hours of completion of work. Exclusion zones will be established using the following parameters.
 - Potential and atypical dens: A total of four or five flagged stakes will be placed 50 feet from the den entrance to identify the den location.
 - Known den: Orange construction barrier fencing will be installed between the work area and the known den site at a minimum distance of 100 feet from the den. The fencing will be maintained until construction-related disturbances have ceased. At that time, all fencing will be removed to avoid attracting subsequent attention to the den.
 - Natal/pupping den: USFWS will be contacted immediately if a natal or pupping den is discovered in or within 200 feet of the work area.
- Any occupied or potentially occupied badger den will be avoided by establishing an exclusion zone consistent with a San Joaquin kit fox potential burrow (i.e., four or five flagged stakes will be placed 50 feet from the den entrance).
- In cases where avoidance is not a reasonable alternative, limited destruction of potential San Joaquin kit fox dens may be allowed as follows.
 - Natal/pupping dens: Natal or pupping dens that are occupied will not be destroyed until the adults and pups have vacated the dens and then only after consultation with USFWS.

Removal of natal/pupping dens requires incidental take authorization from USFWS and CDFW.

- Known dens: Known dens within the footprint of the activity must be monitored for 3 days with tracking medium or an infrared camera to determine current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use. If kit fox activity is observed during this period, the den will be monitored for at least 5 consecutive days from the time of observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged by partially plugging its entrance(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied will the den be excavated under the direction of a biologist. If the fox is still present after 5 or more consecutive days of monitoring, the den may be excavated when, in the judgment of the biologist, it is temporarily vacant, such as during the fox's normal foraging activities. Removal of known dens requires incidental take authorization from USFWS and CDFW.
- Potential dens: If incidental take permits have been received (from USFWS and CDFW), potential dens can be removed (preferably by hand excavation) by biologist or under the supervision of a biologist without monitoring, unless other restrictions were issued with the incidental take permits. If no take authorizations have been issued, the potential dens will be monitored as if they are known dens. If any den was considered a potential den but was later determined during monitoring or destruction to be currently or previously used by kit foxes (e.g., kit fox sign is found inside), then all construction activities will cease and USFWS and CDFW will be notified immediately.
- Nighttime work will be minimized to the extent possible. The vehicular speed limit will be reduced to 10 miles per hour during nighttime work.
- Pipes, culverts, and similar materials greater than 4 inches in diameter will be stored so as to prevent wildlife species from using these as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved.
- A representative appointed by the project proponent will be the contact for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured, or entrapped kit fox. The representative will be identified during environmental sensitivity training (2020 Updated PEIR Mitigation Measure BIO-1b) and his/her name and phone number will be provided to USFWS and CDFW. Upon such incident or finding, the representative will immediately contact USFWS and CDFW.
- The Sacramento USFWS office and CDFW will be notified in writing within 3 working days of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, and location of the incident, and any other pertinent information.

2020 Updated PEIR Mitigation Measure BIO-11b: Site turbines to minimize potential mortality of birds

PEIR Mitigation Measure BIO-11c: Use turbine designs that reduce avian impacts

PEIR Mitigation Measure BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure**PEIR Mitigation Measure BIO-11e: Retrofit existing infrastructure to minimize risk to raptors****2020 Updated PEIR Mitigation Measure BIO-11i: Implement an avian adaptive management program****PEIR Mitigation Measure BIO-12a: Conduct bat roost surveys**

Prior to development of any repowering project, a qualified bat biologist will conduct a roost habitat assessment to identify potential colonial roost sites of special-status and common bat species within 750 feet of the construction area. If suitable roost sites are to be removed or otherwise affected by the proposed project, the bat biologist will conduct targeted roost surveys of all identified sites that would be affected. Because bat activity is highly variable (both spatially and temporally) across the landscape and may move unpredictably among several roosts, several separate survey visits may be required. Surveys will be repeated at different times of year if deemed necessary by the bat biologist to determine the presence of seasonally active roosts (hibernacula, migratory stopovers, maternity roosts). Appropriate field methods will be employed to determine the species, type, and vulnerability of the roost to construction disturbance. Methods will follow best practices for roost surveys such that species are not disturbed, and adequate temporal and spatial coverage is provided to increase likelihood of detection.

Roost surveys may consist of both daylight surveys for signs of bat use and evening/night visit(s) to conduct emergence surveys or evaluate the status of night roosts. Survey timing should be adequate to account for individual bats or species that might not emerge until well after dark.

Methods and approaches for determining roost occupancy status should include a combination of the following components as the biologist deems necessary for the particular roost site.

- Passive and/or active acoustic monitoring to assist with species identification.
- Guano traps to determine activity status.
- Night-vision equipment.
- Passive infrared camera traps.

At the completion of the roost surveys, a report will be prepared documenting areas surveyed, methods, results, and mapping of high-quality habitat or confirmed roost locations.

PEIR Mitigation Measure BIO-12b: Avoid removing or disturbing bat roosts

- Active bat roosts will not be disturbed and will be provided a minimum buffer of 500 feet where preexisting disturbance is moderate or 750 feet where preexisting disturbance is minimal. Confirmation of buffer distances and determination of the need for a biological monitor for active maternity roosts or hibernacula will be obtained in consultation with CDFW. At a minimum, when an active maternity roost or hibernaculum is present within 750 feet of a construction site, a qualified biologist will conduct an initial assessment of the

roost response to construction activities and will recommend buffer expansion if there are signs of disturbance from the roost.

- Structures (natural or artificial) showing evidence of significant bat use within the past year will be left in place as habitat wherever feasible. Should such a structure need to be removed or disturbed, CDFW will be consulted to determine appropriate buffers, timing and methods, and compensatory mitigation for the loss of the roost.
- All project proponents will provide environmental awareness training to construction personnel, establish buffers, and initiate consultation with CDFW if needed.
- Artificial night lighting within 500 feet of any roost will be shielded and angled such that bats may enter and exit the roost without artificial illumination and the roost does not receive artificial exposure to visual predators.
- Tree and vegetation removal will be conducted outside the maternity season (April 1–September 15) to avoid disturbance of maternity groups of foliage-roosting bats.
- If a maternity roost or hibernaculum is present within 500 feet of the construction site where preexisting disturbance is moderate or within 750 feet where preexisting disturbance is minimal, a qualified biological monitor will be onsite during groundbreaking activities.

2020 Updated PEIR Mitigation Measure BIO-14a: Site and select turbines to minimize potential mortality of bats

2020 Updated PEIR Mitigation Measure BIO-14d: Develop and implement a bat adaptive management plan

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-3a, 2020 Updated PEIR BIO-5a, PEIR BIO-5c, PEIR BIO-7a, 2020 Updated PEIR BIO-8a, 2020 Updated PEIR BIO-8b, 2020 Updated PEIR BIO-10a, 2020 Updated PEIR BIO-11b, PEIR BIO-11c, PEIR BIO-11d, PEIR BIO-11e, 2020 Updated PEIR BIO-11i, PEIR BIO-12a, PEIR BIO-12b, 2020 Updated PEIR BIO-14a, and 2020 Updated PEIR BIO-14d will reduce the project's impacts on native resident or migratory wildlife corridors, and the use of native wildlife nursery sites, but will not mitigate this impact to a less-than-significant level, as there is no feasible way to avoid the significant impact.

Remaining Impacts: Remaining impacts related to the project impacts on the movement of any native resident or migratory wildlife species or established native resident or migratory wildlife corridors, and the use of native wildlife nursery sites will be significant and unavoidable.

Overriding Considerations: As more fully explained in the Statement of Overriding Considerations contained in Exhibit C to the Resolution to which these CEQA Findings are attached, the County finds that there are environmental, economic, or other benefits of the approved project that override the remaining significant and unavoidable impacts on biological resources. There are no other feasible mitigation measures, or changes to the project that would reduce this impact to a less-than-significant level.

Findings and Recommendations Regarding Significant Impacts that are Mitigated to a Less-Than-Significant Level

Aesthetics

Impact AES-1: Potential to have a substantial adverse effect on a scenic vista

Potential Impact: Temporary visual impacts would be caused by construction activities. The PEIR also concluded that construction activities associated with the repowering program could result in a significant impact, particularly for highly sensitive viewers such as residents and recreationists. The analysis specifically called out Bethany Reservoir, which is surrounded by the Project area, as well as scenic roadways and recreation trails such as the California Aqueduct Bikeway. Although the project site is not visible from Bethany Reservoir or the California Aqueduct Bikeway, several of the southernmost turbines would be visible from the upper elevations of the Carnegie and Tesla sites, which lie about 2 miles south of the site. Construction of the proposed project is expected to last approximately 8 months. In general, views of construction activities and equipment, though temporary, could be adverse and disturbing to residents and the users of the recreational facilities in the project area, and high-powered construction nighttime lighting could be perceived as significant and adverse by area residents.

Although there are no formally designated scenic vistas in the Project area or vicinity, the PEIR analysis of the repowering program and the two projects evaluated at the project level (the Golden Hills and Patterson Pass projects) addressed scenic vistas available from local roadways and recreational trails. The analysis of the program indicated that new turbine structures located on ridges in the program area that were specifically identified for protection in the ECAP by Policy 105 would constitute a significant adverse visual impact, especially if they were located in areas that had not previously been developed with wind turbines or where they did not exist at the time the PEIR was being prepared (formally when the PEIR Notice of Preparation was circulated in 2010). Although these sensitive ridgelines and hilltops as referenced in Policy 105 are outside of the project area, a number of scenic vistas are available from the local Patterson Pass and Midway Roads, out and over the project site, which are protected by ECAP Policies 170 and 215, as discussed in the PEIR analysis of the program alternatives.

The analysis of program impacts on scenic vistas in the PEIR concluded that where no turbines currently exist the impact would be significant, but that in areas with existing older turbines the replacement of the many existing smaller and older turbines with proportionally far fewer and less intrusive fourth-generation turbines would be less than significant because it would serve ECAP Policies 170 and 215, and otherwise serve to protect and enhance scenic values.

Comparable to the project-level analysis provided in the PEIR of the Golden Hills project, it is recognized that within the Mulqueeney Ranch project vicinity, many views, as shown in the existing conditions Viewpoints 5 through 7 in Figures 3.1-7 through 3.1-9, currently do not include wind turbines. Although the project site is not currently developed with wind turbines, the site had several hundred turbines at the time the PEIR was published and up until 2016, and as reflected in photos taken of the project site as it was in 2013 (Figures 3.1-3 through 3.1-5). In addition, the project site is part of the area designated by the County as the wind resource area and was intended

to be repowered as is currently proposed. In addition, as shown in Viewpoint 8 in Figure 3.1-10, the new turbines would be widely spaced compared to the concentration and density of existing, older turbines and the spacing of the proposed turbines would detract much less from the natural landscape than the existing string configuration within this view.

Consistent with the PEIR analysis, the wider configuration of turbines allows for views of the rolling, grassy terrain to become more prominent, back-dropped against the sky, and less interrupted by anthropogenic features. While the larger turbines would draw viewers' attention toward them, the eye is also able to follow the ridgeline of the hills in a more cohesive manner than when turbines are placed more closely together.

As stated in the PEIR, views of the proposed turbines may be more or less prevalent depending on a viewer's location within the landscape and if the viewer has more direct views of the turbines or views that are partially or fully screened by topography. However, all of the proposed turbines are within views that had turbines in place from the 1980s up until 2016, when the old generation wind turbines and towers on the project site were decommissioned and removed. As described above, the project site is in a state- and County-designated wind resource area and was intended to be repowered as is currently proposed, making the development of the site with new current-generation turbines part of the anticipated and customary visual conditions. Therefore, while the southernmost proposed turbines, especially those at elevations of more than 1,400 feet, would be visible from existing and planned park and trail areas south of Tesla Road, the distance of more than 2 miles indicates the impact would be less than significant, or effectively mitigated by distance. Further, while the painting of turbines for avian protection could make them slightly more visible, it is not anticipated that such measures would affect scenic views.

While installation of new turbines generally would not disrupt views from scenic vistas, significant impact on scenic vistas could still occur if the project site is not maintained in an orderly fashion, causing it to accumulate debris and resulting in haphazard visual conditions if surplus parts and materials become strewn about the site.

Mitigation Measures: The following mitigation measures, discussed in Section 3.1.3 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure AES-1: Limit construction to daylight hours

Major construction activities will not be undertaken between sunset and sunrise or on weekends. Construction activity is specifically prohibited from using high-wattage lighting sources to illuminate work sites after sunset and before sunrise, with the exception of nighttime deliveries under the approved transportation control plan or other construction activities that require nighttime work for safety considerations.

PEIR Mitigation Measure AES-2b: Maintain site free of debris and restore abandoned roadways

Project sites will be cleaned of all derelict equipment, wind turbine components not required for the project, and litter and debris from old turbines and past turbine operations. Such litter and debris may include derelict turbines, obsolete anemometers, unused electrical poles, and broken turbine blades. In addition, abandoned roads that are no longer in use on such parcels will be restored and hydroseeded to reclaim the sites and remove their visual traces from the

viewscape, except in cases where the resource agencies (USFWS and CDFW) recommend that the features be left in place for resource protection. All parcels with new turbines will be maintained in such a manner through the life of project operations and until the parcels are reclaimed in accordance with the approved reclamation plan.

PEIR Mitigation Measure AES-2c: Screen surplus parts and materials

Surplus parts and materials that are kept onsite will be maintained in a neat and orderly fashion and screened from view. This can be accomplished by using a weatherproof camouflage material that can be draped over surplus parts and materials stockpiles. Draping materials will be changed out to accommodate for seasonal variations so that surplus materials are camouflaged in an effective manner when grasses are both green and brown.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR AES-1, PEIR AES-2b, and PEIR AES-2c will ensure that the impacts associated with adverse effect on a scenic vista will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with scenic vistas will be less than significant.

Impact AES-2: Potential to substantially damage scenic resources along a scenic highway

Potential Impact: County-designated scenic roads and highways in the project vicinity are shown on Figure 3.1-1 of the SEIR and include Patterson Pass Road, Midway Road, and I-580. Because these routes were lined with previously existing turbines until those turbines were recently removed, motorists on these routes are accustomed to views of turbines. Although the new turbines would be substantially taller than the previously existing turbines, the new widely spaced configuration would detract less from the natural landscape than did the previously existing configuration. This would allow for views of the rolling, grassy terrain to become more prominent, back-dropped against the sky, and less interrupted by anthropogenic features. While the larger turbines would draw viewers' attention toward them, the eye would be able to follow the ridgeline of the hills in a more cohesive manner.

Although no turbines currently exist within the project site, it is in a County-designated wind resource area and was intended to be repowered as is currently proposed, making the development of the site with turbines part of the expected visual conditions seen from Patterson Pass Road and I-580. Because the removal of old turbines was anticipated in the PEIR, and the changed circumstances since the 2014 certification of the PEIR are considered part of the expected visual conditions in the project areas, construction of the new turbines, even after 5 years, would have less-than-significant impacts on scenic resources along a local scenic highway.

As discussed under Impact AES-1, although avian protective measures such as painting turbine blades with staggered stripes or painting one blade black may make turbine blades slightly more visible from scenic routes when the turbines are lit from the front or from above by the sun, the environmental offset of reducing avian mortality by as much as 70 percent would outweigh the visual impact associated with the blades being somewhat more visible in the landscape. In addition, public support for reducing avian mortality is likely to result in a positive viewer response toward such a visual change, compared to the traditional look of having blades being all one color.

Therefore, implementing the blade painting measures is not anticipated to negatively affect views from scenic routes associated with the proposed project to a greater degree than if the blades would be all one color. Significant impacts on scenic roadways could occur if the project site is not maintained in an orderly fashion, causing it to accumulate debris and resulting in haphazard visual conditions if surplus parts and materials become strewn about the site.

Mitigation Measures: The following mitigation measures, discussed in Section 3.1.3 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure AES-2b: Maintain site free of debris and restore abandoned roadways

PEIR Mitigation Measure AES-2c: Screen surplus parts and materials

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR AES-2b and PEIR AES-2c will ensure that the impacts associated with adverse effect on a scenic vista will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with scenic vistas will be less than significant.

Impact AES-3: Substantial degradation of the existing visual character or quality of the project site and its surroundings (less than significant with mitigation)

Potential Impact: As described above, I-580 and Patterson Pass Road are considered scenic routes. As stated in the PEIR, and as illustrated in Viewpoints 5 through 8 in Figures 3.1-6 through 3.1-10, there are portions of these roads where no turbines currently exist.

Although no turbines currently exist within the project site, it is in a County-designated wind resource area and was intended to be repowered as is currently proposed, making the development of the project site with turbines part of the expected visual conditions seen by nearby residents and motorists and recreational viewers on roadways surrounding the project site. In addition, motorists and recreational viewers are accustomed to seeing wind turbines along other routes within the project vicinity. Therefore, motorists, recreational viewers, and residents would not be adversely affected by the proposed project. As a result, the construction of new turbines would have less-than-significant impacts on visual character.

As discussed under Impact AES-1, although avian protective measures such as painting turbine blades with staggered stripes or painting one blade black may make turbine blades slightly more visible from scenic routes when the turbines are lit from the front or from above by the sun, the environmental offset of reducing avian mortality by as much as 70 percent would outweigh the visual impact associated with the blades being somewhat more visible in the landscape. In addition, public support for reducing avian mortality is likely to result in a positive viewer response toward such a visual change, compared to the traditional look of having blades being all one color. However, while significant effects associated with installation of the new turbines would not occur because the site has previously been developed with turbines, significant impacts on the existing visual character and quality of the project site could nonetheless occur if the project site is not maintained in an orderly fashion.

Mitigation Measure: The following mitigation measures, discussed in Section 3.1.3.3 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure AES-2b: Maintain site free of debris and restore abandoned roadways

PEIR Mitigation Measure AES-2c: Screen surplus parts and materials

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measures PEIR AES-2b and PEIR AES-2c will ensure that the impacts associated with visual quality in urbanized areas and conflicts with zoning will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with degradation of the visual character or quality of the project site and surroundings will be less than significant.

Air Quality

Impact AQ-2: Cumulatively considerable net increase of any criteria pollutant for which the Project region is a nonattainment area for an applicable federal or state ambient air quality standard

Potential Impact: The PEIR concluded that maximum daily unmitigated ROG and NO_x from construction of repowering projects would exceed BAAQMD's significance thresholds, resulting in a significant impact. Fugitive dust would also constitute a significant impact without application of best management practices (BMPs). Implementation of PEIR Mitigation Measures AQ-2a, *Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures*, and AQ-2b, *Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures*, would ensure that impacts related to fugitive dust would be less than significant. However, implementation of these measures would not reduce NO_x emissions to a less-than-significant level.

Implementation of an additional mitigation measure, 2020 NEW Mitigation Measure AQ-2c: *Reduce construction-related air pollutant emissions to below BAAQMD NO_x thresholds*, which has been added to this SEIR as a required mitigation measure for the project, would reduce NO_x emissions to a less-than-significant level. Neither long-term operation of the project nor material hauling in SJVAPCD during construction would exceed any air district thresholds, and impacts would be less than significant.

Mitigation Measures: The following mitigation measures, discussed in in Section 3.3.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures

The Project proponents will require all contractors to comply with the following requirements for all areas with active construction activities.

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered as needed to maintain dust control onsite—approximately two times per day.
- All haul trucks transporting soil, sand, or other loose material offsite will be covered.
- All visible mud or dirt track-out onto adjacent public roads will be removed 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 will be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points.
- All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified visible emissions evaluator.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person will respond and take corrective action within 48 hours. The air district's phone number will also be visible to ensure compliance with applicable regulations.

PEIR Mitigation Measure AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures

The Project proponents will require all contractors to comply with the following requirements for all areas with active construction activities.

- During construction activities, all exposed surfaces will be watered at a frequency adequate to meet and maintain fugitive dust control requirements of all relevant air quality management entities.
- All excavation, grading, and/or demolition activities will be suspended when average wind speeds exceed 20 mph, as measured at the Livermore Municipal Airport.
- Wind breaks (e.g., trees, fences) will be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50% air porosity.
- Vegetative ground cover (e.g., fast-germinating native grass seed) will be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- If feasible and practicable, the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time will be limited.

- Construction vehicles and machinery, including their tires, will be cleaned prior to leaving the construction area to remove vegetation and soil. Cleaning stations will be established at the perimeter of the construction area.
- Site accesses to a distance of 100 feet from the paved road will be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.
- Sandbags or other erosion control measures will be installed to prevent silt runoff to public roadways from sites with a slope greater than 1%.
- The idling time of diesel powered construction equipment will be minimized to 2 minutes.
- The Project will develop a plan demonstrating that the offroad equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a Project wide fleet-average 20% NO_x reduction and 45% PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
- Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).
- All construction equipment, diesel trucks, and generators will be equipped with BACT for emission reductions of NO_x and PM.
- All contractors will use equipment that meets ARB's most recent certification standard for offroad heavy duty diesel engines.

2020 NEW Mitigation Measure AQ-2c: Reduce construction-related air pollutant emissions to below BAAQMD NO_x thresholds

The project proponents will ensure construction-related emissions do not exceed BAAQMD's construction NO_x threshold of 54 pounds per day. In addition to implementing PEIR Mitigation Measures AQ-2a and AQ-2b, the project proponents will coordinate with BAAQMD (or the Clean Air Foundation) to purchase NO_x credits to offset remaining NO_x construction and operations emissions exceeding BAAQMD thresholds.

The project proponents will track construction activity, estimate emissions, and enter into a construction mitigation contract with BAAQMD to offset NO_x emissions that exceed BAAQMD NO_x maximum daily threshold of 54 pounds per day.

The maximum daily emissions will be calculated on a daily basis by determining total construction-related NO_x emissions for each calendar day. BAAQMD will use the mitigation fees provided by the project proponents to implement emissions reduction efforts that offset project NO_x emissions that exceed the BAAQMD threshold.

This mitigation includes the following specific requirements:

- The project proponents will require construction contractors to provide daily construction activity monitoring data for all construction activities associated with the project to estimate actual construction emissions, including the effect of equipment emissions reduction measures. The project proponents will submit the daily construction activity monitoring data and an estimate of actual daily construction emissions to the lead agency and BAAQMD

for review by the 15th day of each month for the prior construction month. The lead agency will examine the construction and operational activity monitoring to ensure it is representative, and BAAQMD will examine the emissions estimate to ensure it is calculated properly.

- After acceptance of the emissions estimates by BAAQMD for the prior month, the project proponents will submit mitigation fees to BAAQMD to fund offsets for the portion of daily emissions that exceed the maximum daily NO_x threshold. The mitigation fees will be based on the mitigation contract with BAAQMD (see discussion below) but will not exceed the emissions-reduction project cost-effectiveness limit set for the Carl Moyer Program for the year in which mitigation fees are paid. The current Carl Moyer Program cost-effectiveness limit is \$30,000 per weighted ton of criteria pollutants (NO_x + ROG + [20*PM]). An administrative fee of 5% will be paid by the project proponents to BAAQMD to implement the program.
- The mitigation fees will be used by BAAQMD to fund projects that are eligible for funding under the Carl Moyer Program guidelines or other BAAQMD emissions-reduction incentive programs that meet the Carl Moyer Program cost-effectiveness threshold and are real, surplus, quantifiable, and enforceable.
- The project proponents will enter into a mitigation contract with BAAQMD for the emissions-reduction incentive program. The mitigation contract will include the following:
 - Identification of appropriate offsite mitigation fees required for the project.
 - Timing for submission of mitigation fees.
 - Processing of mitigation fees paid by the project proponents.
 - Verification of emissions estimates submitted by the project proponents.
 - Verification that offsite fees are applied to appropriate mitigation programs within the SFBAAB.

The mitigation fees will be submitted within 4 weeks of BAAQMD acceptance of an emissions estimate provided by the project proponents showing that the maximum daily NO_x threshold was exceeded (when measured on a daily basis).

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR AQ-2a, PEIR AQ-2b, and 2020 NEW AQ-2c will ensure that the impacts associated with a cumulatively considerable net increase of criteria pollutants that exceed BAAQMD's thresholds will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with exceeding BAAQMD's significance thresholds will be less than significant.

Impact AQ-3: Exposure of sensitive receptors to substantial pollutant concentrations

Potential Impact: Long-term operation of the proposed Project would not result in a significant new source of emissions. Offsite truck trips during construction would be transitory and would use multiple roads over a widespread area, thereby helping to disperse toxic pollutants and minimize exposure. Onsite construction activities would generate DPM, but these activities would occur over a relatively short period—approximately 7 months, far less than the exposure duration of 30 years

that is typically associated with chronic cancer risk (Office of Environmental Health Hazard Assessment 2015). Emissions would also be spatially dispersed throughout the project area and at multiple turbine locations.

While exposure to DPM emissions would be of short duration, one receptor, the Mulqueeney Ranch, is within 1,000 feet of turbine work areas. This receptor may be exposed to increased health risks during construction that could exceed BAAQMD thresholds. Accordingly, this impact is conservatively concluded to be potentially significant.

Mitigation Measures: The following mitigation measures, discussed in Section 3.3.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures

PEIR Mitigation Measure AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR AQ-2a and PEIR AQ-2b will ensure that the impacts associated with the exposure of sensitive receptors to substantial pollutant concentrations will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with exposure of sensitive receptors to pollutant concentrations will be less than significant.

Biological Resources

Impact BIO-1: Potential for ground-disturbing activities to result in adverse effects on special-status plants or habitat occupied by special-status plants

Potential Impact: Ground-disturbing activities associated with the project could result in adverse effects on special-status plants or their habitat. Direct effects include those effects where plants may be removed, damaged, or crushed (seedlings) by ground-disturbing activities, the movement or parking of vehicles, and/or the placement of equipment and supplies. Ground disturbance can kill or damage mature individuals or eliminate their habitat. Excavation alters soil properties and may create conditions unsuitable for the growth of some species or favor their replacement by other species. The roots of shrubs and other perennial species are susceptible to damage from soil compaction by equipment or construction materials. Possible indirect effects on plants could result from erosion that degrades habitat or accidental ignition of a fire that damages or kills individuals. Because these ground-disturbing activities could have substantial adverse effects on special-status plant species, if present, this impact would be potentially significant. This conclusion is consistent with the analysis presented in the PEIR.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1a: Conduct surveys to determine the presence or absence of special-status plant species

The project proponent will conduct surveys for the special-status plant species within and adjacent to all project sites. All surveys will be conducted by qualified biologists in accordance with the appropriate protocols.

Special-status plant surveys will be conducted in accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (California Department of Fish and Wildlife 2018) during the season that special-status plant species would be evident and identifiable—i.e., during their blooming season. No more than 3 years prior to ground-disturbing repowering activities and during the appropriate identification periods for special-status plants (Table 3.4-2), a qualified biologist (as determined by Alameda County) will conduct field surveys within proposed construction areas, and the immediately adjacent areas to determine the presence of habitat for special-status plant species. The project proponent will submit a report documenting the survey results to Alameda County for review and approval prior to conducting any repowering activities. The report will include the location and description of all proposed work areas, the location and description of all suitable habitat for special-status plant species, and the location and description of other sensitive habitats (e.g., vernal pools, wetlands, riparian areas). Additionally, the report will outline where additional species and/or habitat-specific mitigation measures are required. This report will provide the basis for any applicable permit applications where incidental take of listed species may occur.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

The project proponent will ensure that the following BMPs, in accordance with practices established in the EACCS, will be incorporated into the final project design and construction documents.

- Employees and contractors performing ground-disturbing activities, including construction and maintenance activities will receive environmental sensitivity training. Training will include review of environmental laws, mitigation measures, permit conditions, and other requirements that must be followed by all personnel to reduce or avoid effects on special-status species and sensitive habitats during construction activities.
- Environmental tailboard trainings will take place on an as-needed basis in the field. These trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during construction and maintenance activities. Directors, managers, superintendents, and the crew leaders will be responsible for ensuring that crewmembers comply with the guidelines.
- Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.

- Off-road vehicle travel outside the project footprint will be avoided and minimized to the extent possible within the project footprint.
- Material will be stockpiled only in areas that do not support special-status species or sensitive habitats.
- Grading will be restricted to the minimum area necessary.
- Prior to ground-disturbing activities in sensitive habitats, project construction boundaries and access areas will be flagged and temporarily fenced during construction to reduce the potential for vehicles and equipment to stray into adjacent habitats.
- Vehicles or equipment will not be refueled within 100 feet of a wetland, stream, or other waterway unless a bermed and lined refueling area (i.e., a created berm made of sandbags or other removable material) is constructed.
- Erosion control measures will be implemented to reduce sedimentation in nearby aquatic habitat when activities are the source of potential erosion. Plastic monofilament netting (erosion control matting) or similar material containing netting will not be used at the project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
- Significant earth moving-activities will not be conducted in riparian areas within 24 hours of predicted storms or after major storms (defined as 1-inch of rain or more).
- The following will not be allowed at or near work sites for project activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations).

PEIR Mitigation Measure BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones

Where surveys determine that a special-status plant species is present in or adjacent to a project area, direct and indirect impacts of the Project on the species will be avoided through the establishment of activity exclusion zones, within which no ground-disturbing activities will take place, including construction of new facilities, construction staging, or other temporary work areas. Activity exclusion zones for special-status plant species will be established around each occupied habitat site, the boundaries of which will be clearly marked with standard orange plastic construction exclusion fencing or its equivalent. The establishment of activity exclusion zones will not be required if no construction-related disturbances will occur within 250 feet of the occupied habitat. The size of activity exclusion zones may be reduced through consultation with a qualified biologist and with concurrence from CDFW based on site-specific conditions.

2020 Updated PEIR Mitigation Measure BIO-1d: Compensate for impacts on special-status plant species

The project proponent will avoid or minimize temporary and permanent impacts on special-status plants that occur on the project site and will compensate for impacts on special-status plant species. Although all impacts on large-flowered fiddleneck, diamond-petaled California poppy, and caper-fruited tropidocarpum will be avoided, impacts on other special-status plant species will be avoided to the extent feasible, and any unavoidable impacts will be addressed through compensatory mitigation.

Where avoidance of impacts on a special-status plant species is infeasible, loss of individuals or occupied habitat of a special-status plant species occurrence will be compensated for through the acquisition, protection, and subsequent management in perpetuity of other existing occurrences at a minimum 2:1 ratio (occurrences preserved:occurrences impacted). For focal species identified in the EACCS (San Joaquin spearscale, big tarplant, Congdon's tarplant, palmate-bracted bird's-beak, Livermore Valley tarplant, and recurved larkspur), loss of individuals and occupied habitat will be compensated at 5:1, consistent with the EACCS. The project proponent will provide detailed information to the County and CDFW on the location of the preserved occurrences, quality of the preserved habitat, feasibility of protecting and managing the areas in-perpetuity, responsibility parties, and other pertinent information. The preserved habitat will be confirmed to support populations of the impacted species and will be preserved in perpetuity via deed restriction, establishment of a conservation easement, or similar preservation mechanism. A qualified botanist or plant ecologist will prepare a preservation plan or long-term management plan for the site containing at a minimum: a monitoring plan and performance criteria for the preserved plant population; a description of remedial measures to be performed in the event that performance criteria are not met; a description of maintenance activities to be conducted on the site, including weed control, trash removal, irrigation, and control of herbivory by livestock and wildlife; and an adequate funding mechanism to ensure long-term management of the preserved habitat. If suitable occurrences of a special-status plant species are not available for preservation, then the project will be redesigned to remove features that would result in impacts on that species.

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

The project proponents will retain a qualified biologist (as determined by Alameda County) to conduct periodic monitoring of decommissioning, repowering, and reclamation activities that occur adjacent to sensitive biological resources (e.g., special-status species, sensitive vegetation communities, wetlands). Monitoring will occur during initial ground disturbance where sensitive biological resources are present and weekly thereafter or as determined by the County in coordination with a qualified biologist. The biologist will assist the crew, as needed, to comply with all project implementation restrictions and guidelines. In addition, the biologist will be responsible for ensuring that the project proponent or its contractors maintain exclusion areas adjacent to sensitive biological resources, and for documenting compliance with all biological resource-related mitigation measures.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1a, 2020 Updated PEIR BIO-1b, PEIR BIO-1c, 2020 Updated PEIR BIO-1d, and PEIR BIO-1e will ensure that the impacts associated with the potential for ground-disturbing activities to result in adverse effects on special-status plants or habitat occupied by special-status plants will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with special-status plants will be less than significant.

Impact BIO-2: Potential for the introduction and spread of invasive plant species to result in adverse effects on special-status plants and natural communities

Potential Impact: Construction activities have the potential to facilitate the introduction and spread of invasive nonnative plant species by removing vegetation and disturbing soils. Construction vehicles and machinery are primary vectors for the spread of such species. Control of the introduction and spread of invasive species is required for federal agencies under Executive Order 11312. The introduction and spread of invasive nonnative plant species as a result of activities associated with the program would constitute a significant indirect impact.

Mitigation Measure: The following mitigation measures, discussed in Section 3.4.2 of the PEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-2: Prevent introduction, spread, and establishment of invasive plant species**

To avoid and minimize the introduction and spread of invasive nonnative plant species, the project proponent will implement the following BMPs.

- Construction vehicles and machinery will be cleaned prior to entering the construction area. Cleaning stations will be established at the perimeter of the construction area along all construction routes or immediately offsite.
- Vehicles will be washed only at approved areas. No washing of vehicles will occur at job sites.
- To discourage the introduction and establishment of invasive plant species, seed mixtures and straw used within natural vegetation will be either rice straw or weed-free straw, as allowed by state and federal regulation of stormwater runoff.
- In addition, the project proponent will prepare and implement erosion and sediment control plans to control short-term and long-term erosion and sedimentation effects and to restore soils and vegetation in areas affected by construction activities (2020 Updated PEIR Mitigation Measure BIO-1b). Prior to initiating any construction activities that will result in temporary impacts on natural communities, a restoration and monitoring plan will be developed for temporarily affected habitats in each project area (PEIR Mitigation Measure BIO-5c). Restoration and monitoring plans will be submitted to the County and CDFW for approval. These plans will include methods for restoring soil conditions and revegetating disturbed areas, seed mixes, monitoring and maintenance schedules, adaptive management strategies, reporting requirements, and success criteria. Following completion of project construction, the project proponents will implement the revegetation plans to restore areas disturbed by project activities to a condition of equal or greater habitat function than occurred prior to the disturbance.

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

Within 30 days prior to any ground disturbance, a qualified biologist will prepare a Grassland Restoration Plan in coordination with CDFW and subject to CDFW approval, to ensure that

temporarily disturbed annual grasslands and areas planned for the removal of permanent roads and turbine pad areas are restored to preproject conditions. The Grassland Restoration Plan will include but not be limited to the following measures.

- Gravel will be removed from areas proposed for grassland restoration.
- To the maximum extent feasible, topsoil will be salvaged from within onsite work areas prior to construction. Imported fill soils will be limited to weed-free topsoil similar in texture, chemical composition, and pH to soils found at the restoration site.
- Where appropriate, restoration areas will be seeded (hydroseeding is acceptable) to ensure erosion control. Seed mixes will be tailored to closely match that of reference site(s) within the program area and should include native or naturalized, noninvasive species sourced within the Project area or from the nearest available location.
- Reclaimed roads will be restored in such a way as to permanently prevent vehicular travel.

The plan will include a requirement to monitor restoration areas annually (between March and October) for up to 3 years following the year of restoration. The restoration will be considered successful when the percent cover for restored areas is 70% absolute cover of the planted/seeded species compared to the percent absolute cover of nearby reference sites. No more than 5% relative cover of the vegetation in the restoration areas will consist of invasive plant species rated as “high” in Cal-IPC’s California Invasive Plant Inventory Database (<http://www.cal-ipc.org>). Remedial measures prescribed in the plan will include supplemental seeding, weed control, and other actions as determined necessary to achieve the long-term success criteria. Monitoring may be extended if necessary to achieve the success criteria or if drought conditions preclude restoration success. Other performance standards may also be required as they relate to special-status species habitat; these will be identified in coordination with CDFW and included in the plan. The project proponent will provide evidence that CDFW has reviewed and approved the Grassland Restoration Plan. Additionally, the project proponent will provide annual monitoring reports to the County by January 31 of each year, summarizing the monitoring results and any remedial measures implemented (if any are necessary) during the previous year.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Project contractors will obtain coverage under the Construction General Permit before the onset of any construction activities, because the Project would disturb 1 acre or more. A SWPPP will be developed by a qualified engineer or erosion control specialist in accordance with the appropriate Water Board’s requirements for NPDES compliance and implemented prior to the issuance of any grading permit before construction. The SWPPP will be kept onsite during construction activities and will be made available upon request to representatives of the Regional Water Boards.

Compliance and coverage with the Storm Water Management Program and General Construction Permit will require controls of pollutant discharges that utilize BMPs and technology reduce erosion and sediments to meet water quality standards. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other nonpoint-source runoff. Measures range from source control, such as reduced surface disturbance, to the treatment of polluted runoff, such as detention basins.

BMPs to be implemented as part of the *Storm Water Management Program* and Construction General Permit (and SWPPP) may include the following practices.

- Temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) will be employed to control erosion from disturbed areas.
- Use a dry detention basin (which is typically dry except after a major rainstorm, when it will temporarily fill with stormwater), designed to decrease runoff during storm events, prevent flooding, and allow for off-peak discharge. Basin features will include maintenance schedules for the periodic removal of sediments, excessive vegetation, and debris that may clog basin inlets and outlets.
- Cover or apply nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more) that could contribute sediment to waterways.
- Enclose and cover exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways.
- Ensure that no earth or organic material will be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water.
- Prohibit the following types of materials from being rinsed or washed into the streets, shoulder areas, or gutters: concrete, solvents and adhesives, thinners, paints, fuels, sawdust, dirt, gasoline, asphalt and concrete saw slurry, and heavily chlorinated water.
- Ensure that grass or other vegetative cover will be established on the construction site as soon as possible after disturbance.

The contractor will select a combination of BMPs (consistent with Section A of the Construction General Permit) that is expected to minimize runoff and remove contaminants from stormwater discharges. The final selection of BMPs will be subject to approval by the San Francisco Bay Regional Water Board and the Central Valley Water Board.

The contractor will verify that a notice of intent has been filed with the State Water Board and that a SWPPP has been developed before allowing construction to begin. The contractor will perform inspections of the construction area, to verify that the BMPs specified in the SWPPP are properly implemented and maintained. The contractor will notify the appropriate Regional Water Board immediately if there is a noncompliance issue and will require compliance. If necessary, the contractor or their agent will require that additional BMPs be designed and implemented if those originally constructed do not achieve the identified performance standard.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-2, PEIR BIO-5c, and PEIR WQ-1 will ensure that the impacts associated with the potential for the introduction and spread of invasive plant species to result in adverse effects on special-status plants or habitat occupied by special-status plants will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with the potential for the introduction of invasive plant species to result in adverse effects on special-status plants or habitat occupied by special-status plants will be less than significant.

Impact BIO-3: Potential mortality of or loss of habitat for vernal pool branchiopods and curved-footed hygrotus diving beetle

Potential Impact: Ground-disturbing activities (i.e., excavation, grading, and stockpiling of soil) associated with constructing turbine foundations, building new and altering existing access roads, replacing culverts, installing a power collection system, and performing maintenance activities near or upslope of suitable habitat could result in the runoff of sediment, gasoline, oil, or other contaminants into suitable habitat, which could cause illness or mortality of vernal pool fairy shrimp and vernal pool tadpole shrimp (collectively referred to as vernal pool branchiopods) and curved-foot hygrotus diving beetle or their food resources. The use of horizontal directional drilling (HDD) methods during installation of the collection system to avoid sensitive habitats could result in an inadvertent release of drilling fluid containing bentonite near suitable habitat, which could also cause mortality of vernal pool branchiopods and curved-foot hygrotus diving beetle or contaminate habitat.

Effects associated with potential sediment and chemical runoff during construction would be avoided and minimized through implementation of construction BMPs requiring installation of sediment control devices and implementation of a spill response plan. However, new facilities or improvements to existing roads that impede or alter the flow of stormwater across the project site once the project has been constructed could reduce the suitability of vernal pool branchiopod and curved-foot hygrotus diving beetle habitat by altering the hydroperiod of those aquatic features. Therefore, direct and indirect impacts on vernal pool brachiopods and curved-foot hygrotus diving beetle would be significant because the project could reduce the local populations of a federally listed or locally rare species.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas****PEIR Mitigation Measure BIO-3b: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-footed hygrotus diving beetle**

Where suitable habitat for listed vernal pool branchiopods and curved-footed hygrotus diving beetle are identified within 250 feet (or another distance as determined by a qualified biologist based on topography and other site conditions) of proposed work areas, the following measures will be implemented to ensure that the repowering projects do not have adverse impacts on listed vernal pool branchiopods or curved-footed hygrotus diving beetle. Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., ESA incidental take permit).

- Avoid all direct impacts on sandstone rock outcrop vernal pools.

- Ground disturbance will be avoided from the first day of the first significant rain (1 inch or more) until June 1, or until pools remain dry for 72 hours and no significant rain is forecast on the day of such ground disturbance.
- If vernal pools, clay flats, alkaline pools, ephemeral stock tanks (or ponds), sandstone pools, or roadside ditches are present within 250 feet of the work area (or another appropriate distance as determined by a qualified biologist on the basis of topography and other site conditions), the biologist will stake and flag an exclusion zone prior to construction activities. The width of the exclusion zone will be based on site conditions and will be the maximum practicable distance that ensures protection of the feature from direct and indirect effects of the Project. Exclusion zones will be established around features whether they are wet or dry at the time. The exclusion zone will be fenced with orange construction zone and erosion control fencing (to be installed by construction crew).
- No herbicide will be applied within 100 feet of exclusion zones, except when applied to cut stumps or frilled stems or injected into stems. No broadcast applications will be allowed.
- Avoid modifying or changing the hydrology of aquatic habitats.
- Minimize the work area for stream crossings and conduct work during the dry season (June 1 through the first significant rain of the fall/winter).
- Install utility collection lines across perennial creeks by boring under the creek.

Where impacts cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the East Alameda County Conservation Strategy. In the event that an incidental take permit is required, compensatory mitigation will be undertaken in accordance with the terms of the permit in consultation with USFWS.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-3b, and PEIR WQ-1 will ensure that the impacts associated with the potential mortality of or loss of habitat for vernal pool branchiopods and curved-footed hygrotus diving beetle will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with the potential mortality of or loss of habitat for vernal pool branchiopods and curved-footed hygrotus diving beetle will be less than significant.

Impact BIO-4: Potential disturbance or mortality of and loss of suitable habitat for valley elderberry longhorn beetle (less than significant with mitigation)

Potential Impact: Riparian habitat supporting blue elderberry shrubs occurs along Patterson Run creek on the project site and provides suitable habitat for valley elderberry longhorn beetle. Two of the onsite elderberry shrubs are located along proposed power collection system routes and could be directly affected by activities associated with installing power collection system infrastructure. Potential construction-related impacts include breaking or trimming branches, disturbance of roots, or removal of shrubs. These impacts would be significant because the project could reduce the local populations of a federally listed species.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas****PEIR Mitigation Measure BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle**

If it is determined through preconstruction surveys conducted pursuant to Mitigation Measure BIO-3a that elderberry shrubs are present within proposed work areas or within 100 feet of these areas, the following measures will be implemented to ensure that the proposed project does not have a significant impact on valley elderberry longhorn beetle.

- Avoid removal of elderberry shrubs.
- Elderberry shrubs/clusters within 100 feet of the construction area that will not be removed will be protected during construction. A qualified biologist (i.e., with elderberry/species experience) will mark the elderberry shrubs and clusters that will be protected during construction. Orange construction barrier fencing will be placed at the edge of the buffer areas. The buffer area distances will be proposed by the biologist and approved by USFWS (if required by project permits). No construction activities will be permitted within the buffer zone other than those activities necessary to erect the fencing. Signs will be posted every 50 feet along the perimeter of the buffer area fencing. The signs will contain the following information: *This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment.*
- Buffer area fences around elderberry shrubs will be inspected weekly by a qualified biological monitor during ground-disturbing activities and monthly after ground-disturbing activities until project construction is complete or until the fences are removed, as approved by the biological monitor and the resident engineer. The biological monitor will be responsible for ensuring that the contractor maintains the buffer area fences around elderberry shrubs throughout construction. Biological inspection reports will be provided to the project proponent and USFWS (if required by project permits).

2020 Updated PEIR Mitigation Measure BIO-4b: Compensate for direct and indirect effects on valley elderberry longhorn beetle

If elderberry shrubs cannot be avoided and protected as outlined in PEIR Mitigation Measure BIO-4a, the project proponent will obtain an incidental take permit from USFWS and compensate for direct impacts on any elderberry shrubs (i.e., removed or trimmed). Surveys of elderberry shrubs to be transplanted will be conducted by a qualified biologist prior to transplantation or trimming. Surveys will be conducted in accordance with the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (U.S. Fish and Wildlife Service 2017) and will document the following: (1) presence/absence of exit holes; (2) evaluation of riparian/non-riparian habitat; and (3) suitability of shrubs to support valley elderberry longhorn beetle. Survey results and an analysis of the number of mitigation units that would be required based on the survey results will be submitted to USFWS in a biological assessment or an HCP. After receipt of an incidental take permit and before construction begins, the project proponent will compensate for direct effects on elderberry shrubs by transplanting shrubs that cannot be avoided to a USFWS-approved conservation area and planting additional elderberry shrubs and associated riparian habitat at a USFWS-approved conservation area. Any elderberry shrub containing stem(s) measuring 1 inch or more in diameter at ground level that is deemed suitable habitat and is adversely affected (i.e., trimmed, transplanted, or destroyed) will be mitigated by planting replacement habitat (i.e., elderberry shrub seedlings and associate plant species), in the conservation area, at a ratio ranging from 1:1 to 3:1 (mitigation unit to affected habitat). The number of mitigation units (1 unit = 0.041 acre) to be planted as replacement habitat are determined by either the acreage of habitat (elderberry shrub and associated riparian) removed or number of shrubs trimmed, as well as the presence or absence of exit holes and whether the shrub lies in a riparian or non-riparian habitat. Stock of either seedlings or cuttings would be obtained from local sources.

At the discretion of USFWS, shrubs that are unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation. In cases where transplantation is not possible, mitigation ratios could be increased to offset the additional habitat loss.

The relocation of the elderberry shrubs will be conducted according to USFWS-approved procedures outlined in the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (U.S. Fish and Wildlife Service 2017), or the most current USFWS guidance. If possible, elderberry shrubs within the project construction area that cannot be avoided will be transplanted during the plant's dormant phase (November through the first 2 weeks of February). A qualified biological monitor will remain onsite while the shrubs are being transplanted.

Evidence of valley elderberry longhorn beetle occurrence in the conservation area, the condition of the elderberry shrubs in the conservation area, and the general condition of the conservation area itself will be monitored. Monitoring protocols and reporting timelines will be determined as part of the endangered species coordination/consultation with USFWS for the project. The project proponent will be responsible for funding and providing monitoring reports to USFWS in each of the years in which a monitoring report is required. As specified in the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (U.S. Fish and Wildlife Service 2017), the report will include information on presence of exit holes, evaluation of success criteria, summary of weed control and site protection, assessment of threats to valley elderberry longhorn beetle on the site, and photo documentation of current habitat condition. Mitigation

credits may be purchased at a USFWS-approved mitigation bank in lieu of the above monitoring requirements, as determined during coordination/consultation with USFWS for the project.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-4a, and 2020 Updated PEIR BIO-4b will ensure that the impacts associated with the potential disturbance or mortality of and loss of suitable habitat for valley elderberry longhorn beetle will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with potential disturbance or mortality of and loss of suitable habitat for valley elderberry longhorn beetle will be less than significant.

Impact BIO-5: Potential disturbance or mortality of and loss of suitable habitat for California tiger salamander, western spadefoot, California red-legged frog, and foothill yellow-legged frog

Potential Impact: Construction activities such as excavation, grading, and stockpiling of soil and materials could remove or otherwise alter suitable habitat for or result in injury or mortality of California tiger salamanders, California red-legged frogs, and western spadefoots or their food resources. A spill of drilling fluid containing bentonite near suitable habitat could also cause mortality of California tiger salamander, western spadefoot, and California red-legged frog or contaminate habitat. Ground-disturbing activities associated with constructing new access roads, widening existing access roads, installing the power collection system, and performing maintenance activities would affect small areas of intermittent stream and alkali wetland that provide aquatic nonbreeding and dispersal habitat for California red-legged frog; however the majority of individual California red-legged frogs would be at suitable breeding ponds where there would be no disturbance. California tiger salamanders, western spadefoot toads, and California red-legged frogs in active work areas also could be killed or injured by being crushed by equipment, entrapped in open trenches or other project facilities or entombed in burrows that are covered or filled, or be run over by vehicles traveling on the project site or to the project site on Patterson Pass Road during construction and maintenance activities.

New facilities or improvements to existing roads that impede or alter the flow of stormwater across the project site once the project has been constructed could reduce the suitability of California tiger salamander, western spadefoot, and California red-legged frog aquatic habitats by altering the hydroperiod of those aquatic features. Because of the limited extent of impacts in relation to the size of the watershed, the project is not expected to significantly increase the amount of impervious surface or to alter local hydrology. Soil surfaces left unvegetated have the potential to lead to sedimentation of suitable aquatic breeding, foraging, and dispersal habitats, and project maintenance has the potential to result in degradation of water quality in aquatic habitats from runoff of petroleum-based products associated with equipment and vehicles used during maintenance activities.

Lighting around the new substation also has the potential to disrupt nighttime foraging and migration activities of California tiger salamander, western spadefoot, and California red-legged frog. However, because no ponds are located within 0.75 mile of the new substation and new lighting would be restricted to this area, would operate with motion sensors, and be directed downward, the effect of new lighting on these amphibians is expected to be minor or negligible.

Direct and indirect impacts on California tiger salamander, California red-legged frog, and western spadefoot would be significant because the project could reduce the local populations of state- and federally listed and locally rare species.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

2020 Updated PEIR Mitigation Measure BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians

The project proponent will ensure that BMPs and other appropriate measures, in accordance with measures developed for the EACCS, be incorporated into the appropriate design and construction documents. *Implementation of some of these measures will require that the project proponent obtain incidental take permits from USFWS (California red-legged frog and California tiger salamander) and from CDFW (California tiger salamander only) before construction begins.* Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., ESA or CESA incidental take authorization). The applicant will comply with the State Water Board NPDES construction general requirements for stormwater.

- Ground-disturbing activities will be limited to dry weather between April 15 and October 31. No ground-disturbing work will occur during wet weather. Wet weather is defined as when there has been 0.25 inch of rain in a 24-hour period. Ground disturbing activities halted due to wet weather may resume when precipitation ceases and the National Weather Service 72-hour weather forecast indicates a 30% or less chance of precipitation. No ground-disturbing work will occur during a dry-out period of 48 hours after the above-referenced wet weather.
- Where applicable, barrier fencing will be installed around the worksite to prevent amphibians from entering the work area. Barrier fencing will be removed within 72 hours of completion of work. The need and location of barrier fencing will be identified by a qualified biologist in cooperation with the County and/or any applicable resource agencies with the purpose of protecting dispersing special-status amphibians.
- Before construction begins, a qualified biologist will locate appropriate relocation areas and prepare a relocation plan for special-status amphibians that may need to be moved during construction. The proponent will submit this plan to USFWS and CDFW for review a minimum of 2 weeks prior to the start of construction.
- A qualified biologist will conduct preconstruction surveys (i.e., visual surveys of the ground surface and areas within burrows visible from the surface) immediately prior to ground-disturbing activities (including equipment staging, vegetation removal, grading). The biologist will survey the work area and all suitable habitats within 300 feet of the work area. If individuals (including adults, juveniles, larvae, or eggs) are found, work will not begin until USFWS and/or CDFW is contacted to determine if moving these life-stages is appropriate. If

relocation is deemed necessary, it will be conducted in accordance with the relocation plan. Incidental take permits are required for relocation of California tiger salamander (USFWS and CDFW) and California red-legged frog (USFWS). Relocation of western spadefoot toad requires a letter of permission or permit from CDFW authorizing this activity.

- No monofilament plastic will be used for erosion control.
- All project activity will terminate 30 minutes before sunset and will not resume until 30 minutes after sunrise during the migration/active season from November 1 to June 15. Sunrise and sunset times are established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area where the project is located.
- Vehicles will not exceed a speed limit of 15 mph on unpaved roads within natural land cover types, or during offroad travel.
- Trenches or holes more than 6 inches deep will be provided with one or more escape ramps constructed of earth fill or wooden planks and will be inspected by a qualified biologist prior to being filled. Any such features that are left open overnight will be searched each day prior to construction activities to ensure no covered species are trapped. Work will not continue until trapped animals have moved out of open trenches.
- Work crews or the onsite biological monitor will inspect open trenches, pits, and under construction equipment and material left onsite in the morning and evening to look for amphibians that may have become trapped or are seeking refuge. If special-status amphibians are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist who is USFWS and/or CDFW-approved under a biological opinion and/or incidental take permit for the specific project, will trap and move special-status amphibians in accordance with the relocation plan. Relocation of western spadefoot toad requires a separate letter of permission or permit from CDFW authorizing this activity.

PEIR Mitigation Measure BIO-5b: Compensate for loss of habitat for special-status amphibians

Where impacts on aquatic and upland habitat for special-status amphibians cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the East Alameda County Conservation Strategy. In the event that take authorization is required, compensatory mitigation will be undertaken in accordance with the terms of the authorization in consultation with USFWS and/or CDFW.

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, 2020 Updated PEIR BIO-5a, PEIR BIO-5b, PEIR BIO-5c, and PEIR WQ-1 will ensure that the impacts associated with the potential disturbance or mortality of and loss of suitable habitat for California tiger salamander, western spadefoot,

California red-legged frog, and foothill yellow-legged frog will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with potential disturbance or mortality of and loss of suitable habitat for California tiger salamander, western spadefoot, California red-legged frog, and foothill yellow-legged frog will be less than significant.

Impact BIO-6: Potential disturbance or mortality of and loss of suitable habitat for western pond turtle

Potential Impact: Suitable aquatic habitat (perennial ponds) for western pond turtle is located in lowland areas that would not be filled or directly disturbed by the installation of turbines and foundations. Ground-disturbing activities (i.e., excavation, grading, and stockpiling of soil) associated with constructing turbine foundations, new access roads, widening existing access roads, installing the power collection system, and performing maintenance activities near or upslope of suitable aquatic habitat could result in the runoff of sediment, gasoline, oil, or other contaminants into suitable aquatic habitat, which could cause illness or mortality of western pond turtle or its food resources. A spill of drilling fluid containing bentonite near suitable habitat could also cause mortality of western pond turtle or contaminate habitat. Widening of two access roads would be conducted near one pond that provide suitable habitat for western pond turtle. Disturbance of nonnative annual grassland near this pond would result in temporary and permanent impacts on suitable western pond turtle upland habitat and potential injury or mortality of individuals. Nests containing pond turtle eggs could be crushed or individuals could be injured or killed during movement of equipment or grading activities. Direct and indirect impacts on western pond turtle would be significant because the proposed project could diminish the local population of western pond turtles and lower reproductive potential, contributing to the further decline of the species.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

PEIR Mitigation Measure BIO-6: Conduct preconstruction surveys for western pond turtle and monitor construction activities if turtles are observed

If it is determined through preconstruction surveys conducted pursuant to Mitigation Measure BIO-3a that suitable aquatic or upland habitat for western pond turtle is present within proposed work areas, the following measures, consistent with measures developed for the EACCS, will be implemented to ensure that the proposed project does not have a significant impact on western pond turtle.

- One week before and within 24 hours of beginning work in suitable aquatic habitat, a qualified biologist (one who is familiar with different species of turtles) will conduct surveys for western pond turtle. The surveys should be timed to coincide with the time of day and year when turtles are most likely to be active (during the cooler part of the day between 8

a.m. and 12 p.m. during spring and summer). Prior to conducting the surveys, the biologist should locate the microhabitats for turtle basking (logs, rocks, brush thickets) and determine a location to quietly observe turtles. Each survey should include a 30-minute wait time after arriving onsite to allow startled turtles to return to open basking areas. The survey should consist of a minimum 15-minute observation period for each area where turtles could be observed.

- If western pond turtles are observed during either survey, a biological monitor will be present during construction activities in the aquatic habitat where the turtle was observed. The biological monitor also will be mindful of suitable nesting and overwintering areas in proximity to suitable aquatic habitat and will periodically inspect these areas for nests and turtles.
- If one or more western pond turtles are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist will remove and relocate the turtle to appropriate aquatic habitat outside and away from the construction area. Relocation of western pond turtle requires a letter from CDFW authorizing this activity.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, and BIO-6 will ensure that the impacts associated with the potential disturbance or mortality of and loss of suitable habitat for western pond turtle will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with potential disturbance or mortality of and loss of suitable habitat for western pond turtle will be less than significant.

Impact BIO-7: Potential disturbance or mortality of and loss of suitable habitat for Blainville's horned lizard, California glossy snake, Alameda whipsnake, and San Joaquin coachwhip

Potential Impact: Nonnative annual grassland and shrub/scrub in the project site provide suitable habitat for Blainville's horned lizard, California glossy snake, Alameda whipsnake, and San Joaquin coachwhip. Ground-disturbing activities (i.e., excavation, grading, and stockpiling of soil) that occur in these habitats could result in injury or mortality of these species if they are present in active work areas. Individuals could be run over by vehicles or equipment during construction and maintenance activities, or be entrapped in pits or trenches if these features are left open overnight. Individuals seeking shade or refuge under vehicles or equipment could be crushed when vehicles or equipment are moved. Construction activities would also permanently and temporarily disturb suitable habitat. Direct impacts on Blainville's horned lizard, California glossy snake, Alameda whipsnake, or San Joaquin coachwhip would be significant because the proposed project could diminish the local population of these species and lower reproductive potential, contributing to the further decline of the species.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas****PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands****2020 Updated PEIR Mitigation Measure BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles**

Where suitable habitat for Blainville's horned lizard, California glossy snake, Alameda whip-snake, or San Joaquin coachwhip is identified in proposed work areas, all project proponents will ensure that BMPs and other appropriate measures, in accordance with measures developed for the EACCS, be incorporated into the appropriate design and construction documents. Implementation of some of these measures may require that the project proponent obtain incidental take permits from USFWS and CDFW (Alameda whipsnake) before construction begins. Additional conservation measures or conditions of approval may be required in applicable project permits (i.e., ESA incidental take permit).

- A qualified biologist will conduct preconstruction surveys immediately prior to ground-disturbing activities (e.g., equipment staging, vegetation removal, grading) associated with the program. If any Blainville's horned lizards, California glossy snake, Alameda whipsnakes, or San Joaquin coachwhips are found, work will not begin until they are moved out of the work area to a USFWS- and/ or CDFW-approved relocation site. Incidental take permits from USFWS and CDFW are required for relocation of Alameda whipsnake. Relocation of Blainville's horned lizard, California glossy snake, and San Joaquin coachwhip requires a letter from CDFW authorizing this activity.
- No monofilament plastic will be used for erosion control.
- Where applicable, barrier fencing will be used to exclude Blainville's horned lizard, California glossy snake, Alameda whipsnake, and San Joaquin coachwhip. Barrier fencing will be removed within 72 hours of completion of work.
- Work crews or an onsite biological monitor will inspect open trenches and pits and under construction equipment and materials left onsite for special-status reptiles each morning and evening during construction.
- Ground disturbance in suitable habitat will be minimized.
- Vegetation within the proposed work area will be removed prior to grading. Prior to clearing and grubbing operations, a qualified biologist will clearly mark vegetation within the work area that will be avoided. Vegetation outside the work area will not be removed. Where possible hand tools (e.g., trimmer, chain saw) will be used to trim or remove vegetation. All vegetation removal will be monitored by the qualified biologist to minimize impacts on special-status reptiles.
- If special-status reptiles are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist who is USFWS- and/or CDFW-approved under an incidental take permit for the specific project will trap and move the animal(s) to a USFWS and/or CDFW approved relocation area. Incidental take permits from USFWS and

CDFW are required for relocation of Alameda whipsnake. Relocation of Blainville's horned lizard, California glossy snake, and San Joaquin coachwhip requires a letter or permit from CDFW authorizing this activity.

PEIR Mitigation Measure BIO-7b: Compensate for loss of habitat for special-status reptiles

Where impacts on habitat for special-status reptiles cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the EACCS. In the event that incidental take permits are required for Alameda whipsnake, compensatory mitigation will be undertaken in accordance with the terms of permits in consultation with USFWS and CDFW.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-5c, 2020 Updated PEIR BIO-7a, and PEIR BIO-7b will ensure that the impacts associated with the potential disturbance or mortality of and loss of suitable habitat for Blainville's horned lizard, California glossy snake, Alameda whipsnake, and San Joaquin coachwhip will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with potential disturbance or mortality of and loss of suitable habitat for Blainville's horned lizard, California glossy snake, Alameda whipsnake, and San Joaquin coachwhip will be less than significant.

Impact BIO-8: Potential construction-related disturbance or mortality of special-status and other raptors

Potential Impact: Several special-status, non-raptor migratory bird species could nest on the project site including tricolored blackbird, loggerhead shrike, and grasshopper sparrow. The project would result in the permanent removal and temporary disturbance of vegetated habitats that provide potential nesting habitat for special-status and other raptors. Habitat disturbance caused by construction of the project during the breeding season could destroy or disturb active bird or raptor nests, which could result in the incidental loss of fertile eggs or nestlings. Noise and visual disturbance from construction near active nests in trees, shrubs, on rock outcrops, transmission towers, or other structures could result in nest abandonment, disruption of feeding patterns, or forced fledging of young, and loss of migratory bird eggs, young, or adults that results from construction activities would violate the Migratory Bird Treaty Act and provisions of the California Fish and Game Code. This would result in a significant impact to special-status and other raptors.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

2020 Updated PEIR Mitigation Measure BIO-8a: Implement measures to avoid and minimize potential construction-related impacts on special-status and non-special-status nesting birds

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-5c, and 2020 Updated PEIR BIO-8a will ensure that the impacts associated with the potential construction-related disturbance or mortality of special status and non-special-status and other raptors will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with construction-related disturbance or mortality of special status and other raptors will be less than significant.

Impact BIO-8b: Potential construction-related disturbance or mortality of special-status and non-special-status raptors

Potential Impact: Permanent and temporary removal of grasslands could result in the loss of potential habitat and disturbance of ground nesting raptors. Construction of the project would avoid removal of large trees or disturbance of existing electrical towers that could provide nesting habitat for tree/structure-nesting raptors. However, if active nests are present in proximity to construction, they could be disturbed by noise and visual disturbances. Destruction or disturbance of active nests could result in the incidental loss of fertile eggs or nestlings. Noise and visual disturbance from construction near active nests in trees, shrubs, on rock outcrops, transmission towers, or other structures could result in nest abandonment, disruption of feeding patterns, or forced fledging of young. Loss of migratory bird eggs, young, or adults that results from construction activities would violate the MBTA and provisions of the California Fish and Game Code. Therefore, project construction would result in potentially significant impacts to white-tailed kite, Swainson's hawk, golden eagle, northern harrier, short-eared owl, western burrowing owl, and other non-special-status raptors.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

2020 Updated PEIR Mitigation Measure BIO-8a: Implement measures to avoid and minimize potential construction-related impacts on special-status and non-special-status nesting birds and raptors.

2020 Updated PEIR Mitigation Measure BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-5c, 2020 Updated PEIR BIO-8a, and 2020 Updated BIO-8b will ensure that the impacts associated with the potential construction-related disturbance or mortality of special status and non-special-status raptors will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with construction-related disturbance or mortality of special status and non-special-status raptors will be less than significant.

Impact BIO-9a: Permanent and temporary loss of occupied habitat for western burrowing owl

Potential Impact: Project construction activities, including excavation, grading, and culvert replacement, could result in the permanent or temporary loss of active burrowing owl burrows or refuge sites (i.e., culverts) on the project site. Permanent and temporary loss of grassland habitat would also reduce the available foraging habitat for burrowing owls. While there would be a small reduction in breeding and foraging habitat during the construction season, this loss is not expected to substantially reduce reproductive potential of burrowing owls in the project area, would be short-term (7 months). The temporary loss of burrowing owl habitat during project construction would be less than significant. However, permanent loss of occupied burrowing owl habitat could affect the local population and would be a significant impact.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas****PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands****2020 Updated PEIR Mitigation Measure BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl****PEIR Mitigation Measure BIO-9: Compensate for the permanent loss of occupied habitat for western burrowing owl**

If construction activities would result in the removal of occupied burrowing owl habitat (determined during preconstruction surveys described in 2020 Updated PEIR Mitigation Measure BIO-8b), this habitat loss will be mitigated by permanently protecting mitigation land through a conservation easement or by implementing alternative mitigation determined

through consultation with CDFW as described in its *Staff Report on Burrowing Owl Mitigation* (California Department of Fish and Game 2012:11–13). The project proponent will work with the CDFW to develop the compensation plan, which will be subject to County review and approval.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-5c, 2020 Updated PEIR BIO-8b, and PEIR BIO-9 will ensure that the impacts associated with the permanent and temporary loss of occupied habitat for western burrowing owl will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with permanent and temporary loss of occupied habitat for western burrowing owl will be less than significant.

Impact BIO-9b: Permanent and temporary loss of foraging habitat for tricolored blackbird and other special-status and non-special-status birds

Potential Impact: Implementation of the project would result in the temporary and permanent loss of grassland that provides suitable foraging habitat for tricolored blackbird and other special-status and non-special-status birds. Overall, the project would permanently remove approximately 26 acres of annual grassland, which is less than 1% of the approximately 4,370 acres of annual grassland of the entire project site. The loss of less than 1% of available foraging habitat at the project site is not expected to substantially reduce the availability of foraging habitat in the project region and will not adversely affect special-status and non-special-status bird species. Up to 264 acres of annual grassland would be temporarily disturbed during project construction. Temporary loss of foraging habitat on the project site would be a significant impact

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure 2020 PEIR BIO-5c will ensure that the impacts associated with the permanent and temporary loss of foraging habitat for tricolored blackbird and other special-status and non-special-status birds will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with permanent and temporary loss of foraging habitat for tricolored blackbird and other special-status and non-special-status birds will be less than significant.

Impact BIO-10: Potential injury or mortality of and loss of habitat for San Joaquin kit fox and American badger

Potential Impact: Project construction and maintenance activities of would occur within suitable denning, foraging, and dispersal habitat (nonnative annual grassland) for San Joaquin kit

fox and American badger, and could result in temporary and permanent losses of habitat. In addition to the permanent and temporary removal of habitat, other potential direct impacts include mortality or injury of individuals from construction vehicles or heavy equipment and direct mortality or injury of individuals from den covering and/or collapse. Lighting introduced at the project site also could affect these species; however, new lighting would be restricted in area, would operate with motion sensors, and would be directed downward, the effect of new lighting on San Joaquin kit fox and American badger is expected to be negligible since a minimal amount of natural area would be illuminated.

Direct impacts on San Joaquin kit fox or American badger would be significant because the project could diminish the local population of a state and federally listed species and a state species of special concern and lower reproductive potential, contributing to the further decline of these species.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

2020 Updated PEIR Mitigation Measure BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger

Where suitable habitat is present for San Joaquin kit fox and American badger in and adjacent to proposed work areas, the following measures, consistent with measures developed in the EACCS, will be implemented to ensure that proposed project does not have a significant impact on San Joaquin kit fox or American badger. *Implementation of some of these measures will require that the Project proponent obtain incidental take permits from USFWS and CDFW (San Joaquin kit fox) before construction begins.* Implementation of state and federal requirements contained in such authorization may constitute compliance with corresponding measures in the PEIR.

- To the maximum extent feasible, suitable dens for San Joaquin kit fox and American badger will be avoided.
- All project proponents will retain qualified approved biologists (as determined by USFWS) to conduct a preconstruction survey for potential San Joaquin kit fox dens. Resumes of biologists will be submitted to USFWS for review and approval prior to the start of the survey.
- Preconstruction surveys for American badgers will be conducted in conjunction with San Joaquin kit fox preconstruction surveys.
- The preconstruction survey will be conducted no less than 14 days and no more than 30 days before the beginning of ground disturbance, or any activity likely to affect San Joaquin kit fox. The biologists will conduct den searches by systematically walking transects through

the project area and a buffer area to be determined in coordination with USFWS and CDFW. Transect distance should be based on the height of vegetation such that 100% visual coverage of the project area is achieved. If a potential or known den is found during the survey, the biologist will measure the size of the den, evaluate the shape of the den entrances, and note tracks, scat, prey remains, and recent excavations at the den site. The biologists will also determine the status of the dens and map the features. Dens will be classified in one of the following four den status categories defined by USFWS.

- Potential den: Any subterranean hole within the species' range that has entrances of appropriate dimensions and for which available evidence is sufficient to conclude that it is being used or has been used by a kit fox. Potential dens include (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, ground squirrel) that otherwise has appropriate characteristics for kit fox use; or an artificial structure that otherwise has appropriate characteristics for kit fox use.
- Known den: Any existing natural den or artificial structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records; past or current radiotelemetry or spotlighting data; kit fox sign such as tracks, scat, and/or prey remains; or other reasonable proof that a given den is being or has been used by a kit fox (USFWS discourages use of the terms *active* and *inactive* when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly).
- Known natal or pupping den: Any den that is used, or has been used at any time in the past, by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two; therefore, for purposes of this definition either term applies.
- Known atypical den: Any artificial structure that has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

Written results of the survey including the locations of any potential or known San Joaquin kit fox dens will be submitted to USFWS within 5 days following completion of the survey and prior to the start of ground disturbance or construction activities.

- After preconstruction den searches and before the commencement of repowering activities, exclusion zones will be established as measured in a radius outward from the entrance or cluster of entrances of each den. Repowering activities will be prohibited or greatly restricted within these exclusion zones. Only essential vehicular operation on existing roads and foot traffic will be permitted. All other repowering activities, vehicle operation, material and equipment storage, and other surface-disturbing activities will be prohibited in the exclusion zones. Barrier fencing will be removed within 72 hours of completion of work. Exclusion zones will be established using the following parameters.

- Potential and atypical dens: A total of four or five flagged stakes will be placed 50 feet from the den entrance to identify the den location.
- Known den: Orange construction barrier fencing will be installed between the work area and the known den site at a minimum distance of 100 feet from the den. The fencing will be maintained until construction-related disturbances have ceased. At that time, all fencing will be removed to avoid attracting subsequent attention to the den.
- Natal/pupping den: USFWS will be contacted immediately if a natal or pupping den is discovered in or within 200 feet of the work area.
- Any occupied or potentially occupied badger den will be avoided by establishing an exclusion zone consistent with a San Joaquin kit fox potential burrow (i.e., four or five flagged stakes will be placed 50 feet from the den entrance).
- In cases where avoidance is not a reasonable alternative, limited destruction of potential San Joaquin kit fox dens may be allowed as follows.
 - Natal/pupping dens: Natal or pupping dens that are occupied will not be destroyed until the adults and pups have vacated the dens and then only after consultation with USFWS. Removal of natal/pupping dens requires incidental take authorization from USFWS and CDFW.
 - Known dens: Known dens within the footprint of the activity must be monitored for 3 days with tracking medium or an infrared camera to determine current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use. If kit fox activity is observed during this period, the den will be monitored for at least 5 consecutive days from the time of observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged by partially plugging its entrance(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied will the den be excavated under the direction of a biologist. If the fox is still present after 5 or more consecutive days of monitoring, the den may be excavated when, in the judgment of the biologist, it is temporarily vacant, such as during the fox's normal foraging activities. Removal of known dens requires incidental take authorization from USFWS and CDFW.
 - Potential dens: If incidental take permits have been received (from USFWS and CDFW), potential dens can be removed (preferably by hand excavation) by biologist or under the supervision of a biologist without monitoring, unless other restrictions were issued with the incidental take permits. If no take authorizations have been issued, the potential dens will be monitored as if they are known dens. If any den was considered a potential den but was later determined during monitoring or destruction to be currently or previously used by kit foxes (e.g., kit fox sign is found inside), then all construction activities will cease and USFWS and CDFW will be notified immediately.
- Nighttime work will be minimized to the extent possible. The vehicular speed limit will be reduced to 10 miles per hour during nighttime work.
- Pipes, culverts, and similar materials greater than 4 inches in diameter will be stored so as to prevent wildlife species from using these as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved.

- A representative appointed by the project proponent will be the contact for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured, or entrapped kit fox. The representative will be identified during environmental sensitivity training (2020 Updated PEIR Mitigation Measure BIO-1b) and his/her name and phone number will be provided to USFWS and CDFW. Upon such incident or finding, the representative will immediately contact USFWS and CDFW.
- The Sacramento USFWS office and CDFW will be notified in writing within 3 working days of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, and location of the incident, and any other pertinent information.

PEIR Mitigation Measure BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger

Where permanent impacts on habitat for San Joaquin kit fox and American badger cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the EACCS. In the event that incidental take permits are required for San Joaquin kit fox, compensatory mitigation will be undertaken in accordance with the terms of permits in consultation with USFWS and CDFW.

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-5c, 2020 Updated PEIR BIO-10a, and PEIR BIO-10b will ensure that the impacts associated with the potential for injury or mortality of and loss of habitat for San Joaquin kit fox and American badger will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with potential injury or mortality of and loss of habitat for San Joaquin kit fox and American badger will be less than significant.

Impact BIO-12: Potential mortality or disturbance of bats from roost removal or disturbance

Potential Impact: Some of the rock outcrops at the project site have crevices that may provide suitable roosting habitat for little brown bat, pallid bat, and other bats species that have been documented in the APWRA (western mastiff bat, silver-haired bat [night roosting only], Mexican free-tailed bat, big brown bat, or California myotis). Western red bat and hoary bat could roost in riparian habitat along Patterson Run Creek or in other groups of trees in the project site. Construction and maintenance of turbines could result in a temporary increase in noise and ground vibration during installation or removal of turbine generators and pads, which could disturb nearby active bat roosts. Several species of bat are sensitive to disturbance and may abandon flightless young, or they may simply not return to the roost once disturbed, resulting in the loss of that roost as habitat for the local population. Removal of a bat roost structure in a roost-limited habitat could result in the loss of a significant portion of the local bat population. These impacts would be significant.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species****PEIR Mitigation Measure BIO-12a: Conduct bat roost surveys**

Prior to development of any repowering project, a qualified bat biologist will conduct a roost habitat assessment to identify potential colonial roost sites of special-status and common bat species within 750 feet of the construction area. If suitable roost sites are to be removed or otherwise affected by the proposed project, the bat biologist will conduct targeted roost surveys of all identified sites that would be affected. Because bat activity is highly variable (both spatially and temporally) across the landscape and may move unpredictably among several roosts, several separate survey visits may be required. Surveys will be repeated at different times of year if deemed necessary by the bat biologist to determine the presence of seasonally active roosts (hibernacula, migratory stopovers, maternity roosts). Appropriate field methods will be employed to determine the species, type, and vulnerability of the roost to construction disturbance. Methods will follow best practices for roost surveys such that species are not disturbed and adequate temporal and spatial coverage is provided to increase likelihood of detection.

Roost surveys may consist of both daylight surveys for signs of bat use and evening/night visit(s) to conduct emergence surveys or evaluate the status of night roosts. Survey timing should be adequate to account for individual bats or species that might not emerge until well after dark.

Methods and approaches for determining roost occupancy status should include a combination of the following components as the biologist deems necessary for the particular roost site.

- Passive and/or active acoustic monitoring to assist with species identification.
- Guano traps to determine activity status.
- Night-vision equipment.
- Passive infrared camera traps.

At the completion of the roost surveys, a report will be prepared documenting areas surveyed, methods, results, and mapping of high-quality habitat or confirmed roost locations.

PEIR Mitigation Measure BIO-12b: Avoid removing or disturbing bat roosts

- Active bat roosts will not be disturbed, and will be provided a minimum buffer of 500 feet where preexisting disturbance is moderate or 750 feet where preexisting disturbance is minimal. Confirmation of buffer distances and determination of the need for a biological monitor for active maternity roosts or hibernacula will be obtained in consultation with CDFW. At a minimum, when an active maternity roost or hibernaculum is present within 750 feet of a construction site, a qualified biologist will conduct an initial assessment of the roost response to construction activities and will recommend buffer expansion if there are signs of disturbance from the roost.

- Structures (natural or artificial) showing evidence of significant bat use within the past year will be left in place as habitat wherever feasible. Should such a structure need to be removed or disturbed, CDFW will be consulted to determine appropriate buffers, timing and methods, and compensatory mitigation for the loss of the roost.
- All project proponents will provide environmental awareness training to construction personnel, establish buffers, and initiate consultation with CDFW if needed.
- Artificial night lighting within 500 feet of any roost will be shielded and angled such that bats may enter and exit the roost without artificial illumination and the roost does not receive artificial exposure to visual predators.
- Tree and vegetation removal will be conducted outside the maternity season (April 1–September 15) to avoid disturbance of maternity groups of foliage-roosting bats.
- If a maternity roost or hibernaculum is present within 500 feet of the construction site where preexisting disturbance is moderate or within 750 feet where preexisting disturbance is minimal, a qualified biological monitor will be onsite during groundbreaking activities.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-3a, PEIR BIO-12a, and PEIR BIO-12b will ensure that the impacts associated with the potential for mortality or disturbance of bats from roost removal or disturbance will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with potential mortality or disturbance of bats from roost removal or disturbance will be less than significant.

Impact BIO-13: Potential for construction activities to temporarily remove or alter bat foraging habitat

Potential Impact: Construction of the repowering project could degrade bat foraging habitat by replacing vegetation with nonvegetated land cover types. Project construction would create a temporary increase in traffic, noise, and artificial night lighting in the program area, reducing the extent of landscape available for foraging. Overall, the project would result in the permanent loss of less than 1% and temporary disturbance of only 6% of the available foraging habitat on the project site. The loss of less than 1% of available foraging habitat at the project site is not expected to substantially reduce the availability of foraging habitat in the project region and will not adversely affect foraging bat species in the project vicinity. However temporary disturbance of to 264 acres of annual grassland during project construction would result in a significant impact.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR BIO-5c will ensure that the impacts associated with the temporary removal or alteration of bat foraging habitat will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with the temporary removal or alteration of bat foraging habitat will be less than significant.

Impact BIO-16: Potential for road and electrical infrastructure upgrades to result in adverse effects on riparian habitat

Potential Impact: Riparian habitats, which are also wetlands that qualify as waters of the United States and waters of the state, are present at the project site. Access road expansion may temporarily affect riparian habitat, but no permanent effects on riparian habitats are anticipated. HDD methods may be used to avoid the surface disturbance of some aquatic habitats and also avoid riparian habitat during the installation of electrical infrastructure; however, the exact locations where HDD may be used are not currently known. Consequently, impacts on riparian habitats due to installation of electrical infrastructure are assumed to potentially occur, but may ultimately be less than those described. An Inadvertent Return Contingency Plan would be prepared and implemented to ensure that any inadvertent release of drilling fluids are contained and cleaned up immediately to avoid and minimize potential impacts on riparian habitats.

Additionally, some activities could have indirect effects on riparian habitats through potential changes in hydrology and water quality if the activities are conducted near streams and/or associated riparian habitats. Indirect effects could involve altered hydrology or runoff of sediment and other substances during road construction activities. Some effects, such as those due to runoff, would be avoided and minimized through implementation of erosion control BMPs and postconstruction reclamation. Installation of new and upgraded culverts would maintain existing hydrology.

Temporary loss of riparian habitat as a result of direct fill would be a substantial adverse effect on a sensitive natural community that is regulated by CDFW, USACE, and the Regional Water Board. This would be a significant impact.

Mitigation Measure: The following mitigation measure, discussed in Section 3.4.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

PEIR Mitigation Measure BIO-3b: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-foot hygrotus diving beetle

Where suitable habitat for listed vernal pool branchiopods and curved-foot hygrotus diving beetle are identified within 250 feet (or another distance as determined by a qualified biologist based on topography and other site conditions) of proposed work areas, the following measures will be implemented to ensure that the repowering projects do not have adverse impacts on listed vernal pool branchiopods or curved-foot hygrotus diving beetle. Additional conservation

measures or conditions of approval may be required in applicable project permits (e.g., ESA incidental take permit).

- Avoid all direct impacts on sandstone rock outcrop vernal pools.
- Ground disturbance will be avoided from the first day of the first significant rain (1 inch or more) until June 1, or until pools remain dry for 72 hours and no significant rain is forecast on the day of such ground disturbance.
- If vernal pools, clay flats, alkaline pools, ephemeral stock tanks (or ponds), sandstone pools, or roadside ditches are present within 250 feet of the work area (or another appropriate distance as determined by a qualified biologist on the basis of topography and other site conditions), the biologist will stake and flag an exclusion zone prior to construction activities. The width of the exclusion zone will be based on site conditions and will be the maximum practicable distance that ensures protection of the feature from direct and indirect effects of the project. Exclusion zones will be established around features whether they are wet or dry at the time. The exclusion zone will be fenced with orange construction zone and erosion control fencing (to be installed by construction crew).
- No herbicide will be applied within 100 feet of exclusion zones, except when applied to cut stumps or frilled stems or injected into stems. No broadcast applications will be allowed.
- Avoid modifying or changing the hydrology of aquatic habitats.
- Minimize the work area for stream crossings and conduct work during the dry season (June 1 through the first significant rain of the fall/winter).
- Install utility collection lines across perennial creeks by boring under the creek.

Where impacts cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the EACCS. In the event that an incidental take permit is required, compensatory mitigation will be undertaken in accordance with the terms of the permit in consultation with USFWS.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-3b, and PEIR WQ-1 will ensure that the impacts associated with the potential for road and electrical infrastructure upgrades to result in adverse effects on riparian habitat will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with the potential for road and electrical infrastructure upgrades to result in adverse effects on riparian habitat will be less than significant.

Impact BIO-18: Potential for road infrastructure upgrades to result in adverse effects on wetlands and streams

Potential Impact: Construction activities that result in ground disturbance (including temporary fill and extension of culverts and installation of electrical collection lines) could directly or indirectly affect wetlands and streams that qualify as waters of the United States and waters of the State.

Construction of turbines, the power collection system, the temporary construction area, and access road widening have the potential to permanently affect alkali wetland, pond, and intermittent stream (see Table 3.4-6). Temporary impacts could occur in these habitats, as well as in ephemeral stream (see Table 3.4-6). HDD methods may be used to avoid the surface disturbance of some aquatic habitats; however, the exact locations where HDD may be used are not currently known. Consequently, impacts on alkali wetland, pond, intermittent stream, and ephemeral stream habitats are assumed to potentially occur, but may ultimately be less than those described. An IRCP would be prepared and implemented to ensure that any inadvertent release of drilling fluids are contained and cleaned up immediately to avoid and minimize potential impacts on aquatic habitats.

Additionally, some activities would have indirect effects (not quantified) on some wetlands and streams through potential changes in hydrology and water quality if the activities are conducted near these aquatic habitats. Indirect effects could involve altered hydrology or runoff of sediment and other substances during road construction activities. Some effects, such as those due to runoff, would be avoided and minimized through implementation of erosion control BMPs and postconstruction reclamation. Installation of new and upgraded culverts would maintain existing hydrology.

Permanent and temporary loss of on alkali wetland, pond, intermittent stream, and ephemeral stream habitats from direct fill would be a substantial adverse effect on wetlands and streams that are regulated by USACE and the Regional Water Board. This would be a significant impact.

Mitigation Measure: The following mitigation measure, discussed in Section 3.4.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas****2020 Updated PEIR Mitigation Measure BIO-18: Compensate for the loss of wetlands and streams**

If wetlands or streams are filled or disturbed as part of a project, the project proponent will compensate for the loss to ensure no net loss of habitat functions and values. Compensation ratios will be based on site-specific information and determined through coordination with state and federal agencies (CDFW, USFWS, USACE, Regional Water Board). The compensation will be at a minimum 1:1 ratio (1 acre restored or created for every 1 acre filled) and may be a combination of onsite restoration/creation, offsite restoration, and mitigation credits. A

restoration and monitoring plan will be developed and implemented. The plan will describe how wetlands and streams will be created and monitored.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, 2020 Updated PEIR BIO-18, and PEIR WQ-1 will ensure that the impacts associated with the potential for road infrastructure upgrades to result in adverse effects on wetlands and streams will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with the potential for road infrastructure upgrades to result in adverse effects on wetlands and streams will be less than significant.

Impact BIO-20: Conflict with local plans or policies

Potential Impact: The ECAP encourages the preservation of areas known to support special-status species and no net loss of riparian and seasonal wetlands. Loss of special-status species and their habitat, loss of alkali wetland/drainage habitat and loss of existing wetlands and drainages as a result of implementing the project would be in conflict with these policies.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure BIO-1a: Conduct surveys to determine the presence or absence of special-status species

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

PEIR Mitigation Measure BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones

PEIR Mitigation Measure BIO-1d: Compensate for impacts on special-status plant species

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

PEIR Mitigation Measure BIO-2: Prevent introduction, spread, and establishment of invasive plant species

PEIR Mitigation Measure BIO-3a: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-footed hygrotus diving beetle

2020 Updated PEIR Mitigation Measure BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians

PEIR Mitigation Measure BIO-5b: Compensate for loss of habitat for special-status amphibians

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

PEIR Mitigation Measure BIO-6: Conduct preconstruction surveys for western pond turtle and monitor construction activities if turtles are observed

PEIR Mitigation Measure BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles

2020 Updated PEIR Mitigation Measure BIO-8a: Implement measures to avoid and minimize potential construction-related impacts on special-status and non-special-status nesting birds and raptors

2020 Updated PEIR Mitigation Measure BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl

PEIR Mitigation Measure BIO-9: Compensate for the permanent loss of foraging habitat for western burrowing owl

2020 Updated PEIR Mitigation Measure BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger

PEIR Mitigation Measure BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger

PEIR Mitigation Measure BIO-11a: Prepare a Project-specific avian protection plan

2020 Updated PEIR Mitigation Measure BIO-11b: Site turbines to minimize potential mortality of birds

PEIR Mitigation Measure BIO-11c: Use turbine designs that reduce avian impacts

PEIR Mitigation Measure BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure

PEIR Mitigation Measure BIO-11e: Retrofit existing infrastructure to minimize risk to raptors

PEIR Mitigation Measure BIO-11f: Discourage prey for raptors

PEIR Mitigation Measure BIO-11g: Implement postconstruction avian fatality monitoring for all repowering projects

2020 Updated PEIR Mitigation Measure BIO-11h: Compensate for the loss of raptors and other avian species, including golden eagles, by contributing to conservation efforts

2020 Updated PEIR Mitigation Measure BIO-11i: Implement an avian adaptive management program**PEIR Mitigation Measure BIO-12a: Conduct bat roost surveys****PEIR Mitigation Measure BIO-12b: Avoid removing or disturbing bat roosts****2020 Updated PEIR Mitigation Measure BIO-14a: Site and select turbines to minimize potential mortality of bats****2020 Updated PEIR Mitigation Measure BIO-14d: Develop and implement a bat adaptive management plan****2020 Updated PEIR Mitigation Measure BIO-18: Compensate for the loss of wetlands and non-wetland waters**

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR BIO-1a, 2020 Updated PEIR BIO-1b, PEIR BIO-1c, PEIR BIO-1d, PEIR BIO-1e, PEIR BIO-2, PEIR BIO-3a, 2020 Updated PEIR BIO-5a, PEIR BIO-5b, PEIR BIO-5c, PEIR BIO-6, PEIR BIO-7a, 2020 Updated PEIR BIO-8a, 2020 Updated PEIR BIO-8b, PEIR BIO-9, 2020 Updated PEIR BIO-10a, PEIR BIO-10b, PEIR BIO-11a, 2020 Updated PEIR BIO-11b, PEIR BIO-11c, PEIR BIO-11d, PEIR BIO-11e, PEIR BIO-11f, PEIR BIO-11g, 2020 Updated PEIR BIO-11h, 2020 Updated PEIR BIO-11i, PEIR BIO-12a, PEIR BIO-12b, 2020 Updated PEIR BIO-14a, 2020 Updated PEIR BIO-14d, and 2020 Updated PEIR BIO-18 will ensure that the impacts associated with conflict with local plans or policies will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with conflict with local plans or policies will be less than significant.

Impact BIO-22: Potential disturbance or mortality of western bumble bee

Potential Impact: Potential effects on western bumble bee were not addressed in the PEIR because the species was not a candidate for state listing at the time that the PEIR was prepared. While there is low potential for western bumble bees to occupy areas where turbines are proposed, suitable foraging habitat for western bumble bees could be present along existing and proposed new access roads since many of these occur in low-lying areas. Overall, there is a moderate potential for western bumble bee to forage and nest along existing access roads proposed for widening and along proposed new access roads. Direct and indirect impacts on western bumble bee that could occur during project implementation would be significant because the project could reduce the local population of a species that is a state candidate for listing as endangered and is considered locally rare.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas****PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands****2020 New Mitigation Measure BIO-22a: Conduct a preconstruction habitat assessment and focused surveys for western bumble bee**

Prior to the start of construction, qualified biologist(s) will conduct botanical surveys in late spring/early summer to identify and map concentrations of flowering plants that provide food resources for western bumble bee. The areas containing higher densities and varieties of flowering plants will be evaluated by a qualified invertebrate biologist to determine if these areas provide suitable foraging habitat for western bumble bee. The habitat evaluation surveys would follow recommendations in the *Rusty Patched Bumble Bee Habitat Assessment Form and Guide* (Xerces Society for Invertebrate Conservation 2017).

If moderate to high quality foraging habitat for western bumble bee is identified in the project area based on the habitat assessment, these areas will be surveyed by qualified invertebrate biologist(s) (with experience conducting bumble bee surveys) within 1 year prior to the start of construction. Surveys would be conducted according to the methods in Thorp et al. (1983) or according to any future survey methodology specifically for western bumble bee proposed or approved by CDFW. The methods in Thorp et al. (1983) recommend surveys be conducted during four evenly spaced sampling periods during the flight season (March through September) (Thorp et al. 1983). For each sampling event, the biologist(s) would survey suitable habitat using nonlethal netting methods for 1 person-hour per 3 acres of the highest quality habitat or until 150 bumble bees are sighted, whichever comes first. If initial sampling of a given habitat area indicates that the habitat is of low quality or nonexistent, no further sampling of that area would be required. General guidelines and best practices for bumble bee surveys would follow USFWS' *Survey Protocols for the Rusty Patched Bumble Bee* (*Bombus affinis*) (U.S. Fish and Wildlife Service 2019b), which are consistent with other bumble bee survey protocols used by The Xerces Society (Hatfield et al. 2017; Washington Department of Fish and Wildlife et al. 2019).

If western bumble bee is determined not to be present at the project site or a qualified invertebrate biologist (experienced with bumble bees) concludes that there is a very low likelihood that the species is present, then no additional mitigation is required. If western bumble bees are determined to be present at the project site, then the project proponent will implement 2020 New Mitigation Measure BIO-22b.

2020 New Mitigation Measure BIO-22b: Implement protection measures to avoid and minimize effects on western bumble bee

If it is determined through preconstruction surveys conducted pursuant to 2020 New Mitigation Measure BIO-22a that western bumble bees are present at the project site, the following measures will be implemented to ensure that the proposed project does not have a significant impact on western bumble bee. *Implementation of some of these measures may require that the project proponent obtain incidental take permit from CDFW if western bumble bee remains a*

candidate or is formally listed under CESA before construction begins. Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., CESA incidental take permit).

- If bumble bee surveys identify occupied western bumble bee habitat within the project area, the project biologist would then conduct additional preconstruction surveys within the project disturbance footprint for active bee nest colonies and associated floral resources (i.e., flowering vegetation on which bees from the colony are observed foraging) no more than 30 days prior to any ground disturbance between March and September. The purpose of this preconstruction survey would be to identify active nest colonies and associated floral resources outside of permanent impact areas that could be avoided by construction personnel. The project biologist would establish, monitor, and maintain no-work buffers around nest colonies and floral resources identified during surveys. The size and configuration of the no-work buffer would be based on best professional judgment of the project biologist in coordination with the County. At a minimum, the buffer would provide at least 20 feet of clearance around nest entrances. Construction activities would not occur within the no-work buffers until the colony is no longer active (i.e., no bees are seen flying in or out of the nest for three consecutive days indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony). Monitoring of an active nest could be conducted using a motion-detecting wildlife trail camera.
- To minimize temporary disturbance of suitable foraging and nesting habitat for western bumble bee, ground disturbance within suitable annual grassland habitat will be restricted to the minimum area necessary to perform construction activities.
- To encourage growth of additional nectar and pollen producing plants at the project site, disturbed grasslands that are revegetated in accordance with PEIR Mitigation Measure BIO-5c will use a seed mix combination that includes nectar and pollen producing plants commonly used as a food source by western bumble bee. Plants of the following genus are appropriate: *Cirsium* sp., *Erigeron* sp., *Solidago* sp., *Aster* sp., *Centaurea* sp., and *Penstemon* sp. These annual plants would be incorporated into the seed mix, as applicable for the existing habitat conditions.
- To minimize impacts on bees from herbicide drift, herbicide application around tower foundations will be performed using handheld equipment and will be restricted to a 20-foot radius buffer area around the tower foundations. The contractor will use an herbicide that has been shown to be less toxic to amphibians and invertebrates, such as 2, 4 D. Herbicides containing the surfactant POEA (polyoxyethylene tallow amine) will not be used at the project site. The most current information on herbicide toxicity on wildlife will be used to inform future decisions about herbicide use during operations.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-5c, 2020 New BIO-22a, and 2020 New BIO-22b will ensure that the impacts associated with potential disturbance or mortality of western bumble bee will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with potential disturbance or mortality of western bumble bee will be less than significant.

Cultural Resources

Impact CUL-2: Potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5

Potential Impact: The PEIR identified a variety of prehistoric and historic-era archaeological resources in the program area and determined that there is a possibility of encountering and damaging previously unrecorded archaeological resources during ground-disturbing activities. No previously undocumented archaeological resources were identified within the Project area during the pedestrian survey. Because project site and vicinity may have been used by prehistoric peoples, the nature of this land use would primarily have been resource collection, prehistoric artifacts and feature types on the project site could include projectile points and lithic tools, lithic debitage, bedrock mortars, and grinding stones. However, although the area could have been used for upland resource collection activities, the project site is located far from permanent water sources and is, therefore, expected to have moderate to low potential to contain prehistoric archaeological resources.

Mitigation Measures: The following mitigation measures, discussed in Section 3.5.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure CUL-2c: Conduct worker awareness training for archaeological resources prior to construction

Prior to the initiation of any site preparation and/or the start of construction, the Project applicant will ensure that all construction workers receive training overseen by a qualified professional archaeologist who is experienced in teaching nonspecialists, to ensure that forepersons and field supervisors can recognize archaeological resources (e.g., areas of shellfish remains, chipped stone or groundstone, historic debris, building foundations, human bone) in the event that any are discovered during construction.

PEIR Mitigation Measure CUL-2d: Stop work if cultural resources are encountered during ground-disturbing activities

The Project applicant will ensure that construction specifications include a stop-work order if prehistoric or historic-era cultural resources are unearthed during ground-disturbing activities. If such resources are encountered, the Project applicant will immediately halt all activity within 100 feet of the find until a qualified archaeologist can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil ("midden") containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If the find is determined to be potentially significant, the archaeologist, in consultation with the Native American representative (if appropriate), will develop a treatment plan that could include site avoidance, capping, or data recovery.

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR CUL-2c, and CUL-2d will ensure that the impacts with the potential to cause a substantial adverse change in the significance of an archaeological resource will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with a substantial adverse change in the significance of an archaeological resource will be less than significant.

Impact CUL-3: Disturbance of any human remains, including those interred outside of dedicated cemeteries

Potential Impact: The PEIR did not identify any known formal cemeteries or burials in the program area; however, the PEIR noted the possibility that ground-disturbing activities could uncover previously unknown buried human remains, which could cause a potentially significant impact. Although there are no known formal cemeteries within the project site, and there is no indication that the human remains are present on the project site, previously unknown buried human remains could be discovered during ground-disturbing activities.

Mitigation Measure: The following mitigation measure, discussed in Section 3.5.2 of the PEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure CUL-3: Stop work if human remains are encountered during ground-disturbing activities

The project applicant will ensure the construction specifications include a stop-work order if human remains are discovered during construction or demolition. There will be no further excavation or disturbance of the site within a 100-foot radius of the location of such discovery, or any nearby area reasonably suspected to overlie adjacent remains. The Alameda County Coroner will be notified and will make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he will notify the Native American Heritage Commission, who will attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this state law, then the landowner will re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. A final report will be submitted to Alameda County. This report will contain a description of the mitigation program and its results, including a description of the monitoring and testing resources analysis methodology and conclusions and a description of the disposition/curation of the resources

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure PEIR CUL-3 will ensure that the impacts with the potential to disturb human remains will be mitigated to a less-than-significant level.

Remaining Impacts: : Any remaining impact associated with disturbance of human remains will be less than significant.

Energy

Geology, Soils, Mineral Resources, and Paleontological Resources

Impact GEO-1: Potential substantial adverse effects involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides

Potential Impact: While no faults have been recorded within the project site, the site lies within a seismically active area with active faults in the immediate vicinity. The Corral Hollow Fault, the Marsh Creek Greenville Section of the Greenville Fault Zone, and the Las Positas Fault all lie west of the project site and are considered active and have experienced fault displacement within the last 15,000 years. The Midway fault is located directly northeast of the project site, and has been designated as a potentially active (i.e., active during the last 130,000 years).

Consistent with the analysis presented in the PEIR, if a turbine were constructed on or near a fault, rupture of that fault could damage a turbine or cause harm to personnel on the site. The turbine could be damaged or collapse and possibly injure personnel or property in the immediate area. However, with implementation of site-specific recommendations for siting project features, such impact would be less than significant.

Construction of turbines or power collection systems in areas with potential to experience non-seismic-related landsliding caused by heavy precipitation could also expose people or structures to potential substantial adverse effects. Damage or collapse resulting from landsliding could cause harm to personnel or property in the immediate area, as disclosed in the PEIR. Although the project must comply with existing building safety requirements, these requirements may not address all ground failure issues. Therefore, this impact would be significant.

Mitigation Measures: The following mitigation measure, discussed in the SEIR in Section 3.7.2, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report

Prior to construction activities at any site, the Project proponent will retain a geotechnical firm with local expertise in geotechnical investigation and design to prepare a site-specific geotechnical report. This report will be prepared by a licensed geotechnical engineer or engineering geologist and will be submitted to the County building department as part of the approval process. This report will be based on data collected from subsurface exploration, laboratory testing of samples, and surface mapping and will address the following issues.

- Potential for surface fault rupture and turbine site location: The geotechnical report will investigate the Greenville, Corral Hollow-Carnegie, and the Midway faults (as appropriate to the location) and determine whether they pose a risk of surface rupture. Turbine foundations and power collection systems will be sited according to recommendations in this report.

- Strong ground shaking: The geotechnical report will analyze the potential for strong ground shaking in Project area and provide turbine foundation design recommendations, as well as recommendations for power collection systems.
- Slope failure: The geotechnical report will investigate the potential for slope failure (both seismically and nonseismically induced) and develop site-specific turbine foundation and power collection system plans engineered for the terrain, rock and soil types, and other conditions present at the Project area in order to provide long-term stability.
- Expansive soils: The geotechnical report will assess the soil types in the Project area and determine the best engineering designs to accommodate the soil conditions.
- Unstable cut or fill slopes: The geotechnical report will address geologic hazards related to the potential for grading to create unstable cut or fill slopes and make site-specific recommendations related to design and engineering.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure PEIR GEO-1 will ensure that the impacts with the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, as a result of rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with the exposure of people or structures to potential substantial adverse effects will be less than significant.

Impact GEO-3: Placement of Project-related facilities on a geologic unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse

Potential Impact: Construction of turbines or power collection systems in areas with potential to experience non-seismic-related landsliding caused by heavy precipitation could also expose people or structures to potential substantial adverse effects. Damage or collapse resulting from landsliding could cause harm to personnel or property in the immediate area, as disclosed in the PEIR. Although the project must comply with existing building safety requirements, these requirements may not address all ground failure issues.

Mitigation Measure: The following mitigation measure, discussed in Section 3.7.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR GEO-1 will ensure that the impacts associated with being located on expansive soil, including risks to life and property, as a result of landsliding will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with being located on expansive soil will be less than significant.

Impact GEO-4: Placement of Project-related facilities on expansive soil, creating substantial direct or indirect risks to life or property

Potential Impact: The PEIR disclosed that expansive soils occur in much of the APWRA, particularly in the Fontana-Diablo-Altamont soil association, which underlies the project site. Turbine foundations built on expansive soils would be subject to the shrink and swell of these soils, which could damage structures if the subsoil, drainage, and foundation are not properly engineered. However, soil sampling and treatment procedures are addressed by state and local building codes. Treatment of expansive soil may include removing the expansive soil and replacing it with non-expansive soil, incorporating additives, and installing specially designed foundations.

Mitigation Measure: The following mitigation measure, discussed in Section 3.7.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure PEIR GEO-1 will ensure that the impacts associated with being located on expansive soil, including risks to life and property, as a result of landsliding will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with being located on expansive soil will be less than significant.

Impact GEO-5: Direct or indirect destruction of a unique paleontological resource or site or unique geologic feature

Potential Impact: If fossils are present in the Project area, they could be damaged by during earth-disturbing activities during construction, such as excavation for foundations, placement of fills, trenching for power collection systems, and grading for roads and staging areas. The more extensive and deeper the earth-disturbing activity, the greater the potential for damage to paleontological resources. Because most geologic units in the project area are likely to be sensitive for paleontological resources, excavation in these units could damage paleontological resources, resulting in a significant impact.

Mitigation Measures: The following mitigation measures, discussed in Section 3.7.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure GEO-7a: Retain a qualified professional paleontologist to monitor significant ground-disturbing activities

The applicant will retain a qualified professional paleontologist as defined by the SVP's *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*

(2010) to monitor activities with the potential to disturb sensitive paleontological resources. Data gathered during detailed Project design will be used to determine the activities that will require the presence of a monitor. In general, these activities include any ground-disturbing activities involving excavation deeper than 3 feet in areas with high potential to contain sensitive paleontological resources. Recovered fossils will be prepared so that they can be properly documented. Recovered fossils will then be curated at a facility that will properly house and label them, maintain the association between the fossils and field data about the fossils' provenance, and make the information available to the scientific community.

PEIR Mitigation Measure GEO-7b: Educate construction personnel in recognizing fossil material

The applicant will ensure that all construction personnel receive training provided by a qualified professional paleontologist experienced in teaching non-specialists to ensure that they can recognize fossil materials in the event any are discovered during construction.

PEIR Mitigation Measure GEO-7c: Stop work if substantial fossil remains are encountered during construction

If substantial fossil remains (particularly vertebrate remains) are discovered during earth disturbing activities, activities within 100 feet of the find will stop immediately until a state-registered professional geologist or qualified professional paleontologist can assess the nature and importance of the find and a qualified professional paleontologist can recommend appropriate treatment. Treatment may include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The applicant will be responsible for ensuring that recommendations regarding treatment and reporting are implemented.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR GEO-7a, PEIR GEO-7b, and PEIR GEO-7c will ensure that the impacts associated with directly or indirectly destroying a unique paleontological resource or site or unique geologic feature will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with destruction of paleontological resources will be less than significant.

Greenhouse Gas Emissions

Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases

Potential Impact: The PEIR evaluated the repowering of the program area for consistency with several AB 32 Scoping Plan and Alameda County CCAP measures relevant to GHG emissions, concluding that except for Scoping Plan Measures E-3, repowering projects could potentially conflict with all measures. In concept, the proposed project is being pursued to promote sustainability and further alternative energy. Although the measures included in the AB 32 Scoping Plan, 2017 Climate Change Scoping Plan, and Alameda County CCAP are necessarily broad, the Project is generally consistent with the goals and desired outcomes of the plans. The additional wind energy generated

by the Project would directly support the decarbonization of the electric power sector, helping California to meet the GHG goals contained in SB 32, SB 100, and EO B-55-18. Nevertheless, and consistent with the conclusion of the PEIR, emissions generated by the project could potentially conflict with applicable measures in the AB 32 Scoping Plan, 2017 Climate Change Scoping Plan, and Alameda County CAP.

Mitigation Measures: The following mitigation measures, discussed in Section 3.8.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure GHG-2a: Implement best available control technology for heavy-duty vehicles

The applicant will require existing trucks/trailers to be retrofitted with the best available technology and/or CARB-approved technology consistent with the CARB Truck and Bus Regulation (California Air Resources Board 2019). The CARB Truck and Bus Regulation applies to all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds.

Starting January 1, 2015, the applicant must replace lighter trucks (GVWR of 14,001 to 26,000 pounds) with engines that are 20 years or older with newer trucks. The Applicant has the option to install a PM filter retrofit on a lighter truck by 2014 to make the truck exempt from replacement until January 1, 2020, and any lighter truck equipped with a PM filter retrofit prior to July 2011 would receive credit toward the compliance requirements for a heavier truck or bus in the same fleet.

Starting January 1, 2012, the applicant is required to meet the engine model year schedule shown below for heavier trucks (GVWR greater than 26,000 pounds). To comply with the schedule, the applicant will install the best available PM filter on 1996 model year and newer engines and would replace the vehicle 8 years later. The Applicant will replace trucks with 1995 model year and older engines starting in 2015. Replacements with 2010 model year or newer engines meets the final requirements, but the applicant could also replace trucks with used trucks that would have a future compliance date on the schedule. For example, a replacement with a 2007 model year engine complies until 2023. By 2023 all trucks and buses must have 2010 model year engines with few exceptions.

Engine Model Year Schedule for Heavier Trucks	
Engine Model	Requirement from January 1
Pre-1994	No requirements until 2015, then 2010 engine
1994–1995	No requirements until 2016, then 2010 engine
1996–1999	PM filter from 2012 to 2020, then 2010 engine
2000–2004	PM filter from 2013 to 2021, then 2010 engine
2005–2006	PM filter from 2014 to 2022, then 2010 engine
2007–2009	No requirements until 2023, then 2010 engine
2010	Meets final requirements

In addition, the applicant could comply with a phase-in option that would allow the applicant to decide which vehicles to retrofit or replace, regardless of engine model year. The applicant must report information about all heavier trucks starting January 31, 2012, to use this option.

The Applicant could comply by demonstrating that trucks have met the percentage requirement each year as shown in the table below. For example, by 2012 the applicant's fleet would need to have PM filters on 30% of the heavier trucks in the fleet. This option counts 2007 model year and newer engines originally equipped with PM filters toward compliance and would reduce the overall number of retrofit PM filters needed. Any engine with a PM filter regardless of model year would be compliant until at least 2020. Beginning January 1, 2020, all heavier trucks would need to meet the requirements specified in the Compliance Schedule for Heavier Trucks.

Phase-In Option for Heavier Trucks	
Compliance Date	Vehicles with PM Filters
1-Jan-12	30%
1-Jan-13	60%
1-Jan-14	90%
1-Jan-15	90%
1-Jan-16	100%

PEIR Mitigation Measure GHG-2b: Install low SF₆ leak rate circuit breakers and monitoring

The applicant will ensure that any new circuit breaker installed at a substation has a guaranteed SF₆ leak rate of 0.5% by volume or less. The applicant will provide Alameda County with documentation of compliance, such as specification sheets, prior to installation of the circuit breaker. In addition, the applicant will monitor the SF₆-containing circuit breakers at the substation consistent with Scoping Plan Measure H-6 for the detection and repair of leaks.

PEIR Mitigation Measure GHG-2c: Require new construction to use building materials containing recycled content

The applicant will require the construction of all new substation and other permanent buildings to incorporate materials for which the sum of post-consumer recycled content plus one-half of the post-industrial content constitutes at least 10% of the total value of the materials in the Project.

PEIR Mitigation Measure GHG-2d: Comply with construction and demolition debris management ordinance

The applicant will comply with the County's revised Green Building Ordinance regarding construction and demolition debris as follows: (1) 100% of inert waste and 50% wood/vegetative/scrap metal not including Alternative Daily Cover (ADC) and unsalvageable material will be put to other beneficial uses at landfills, and (2) 100% of inert materials (concrete and asphalt) will be recycled or put to beneficial reuse.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR GHG-2a, PEIR GHG-2b, PEIR GHG-2c, and PEIR GHG-2d will ensure that the impacts associated with a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases will be mitigated to a less-than-significant level.

Hazards and Hazardous Materials

Impact HAZ-4: Placement of Project-related facilities on a site that is included on a list of hazardous materials sites, and resulting creation of a significant hazard to the public or the environment

Potential Impact: As outlined in the PEIR, a Phase I ESA (and remediation, if necessary) is required for all projects requiring a Conditional Use Permit (CUP) prior to construction activities as a standard condition of approval for the CUP. Based on data collection the Phase I ESA identified the following existing environmental conditions that could potentially represent environmental hazards at the project site: a Union Pacific Railroad railway that transects the northern portion of the project site; a DTSC cleanup site (Site 300) located southeast of the project site; a reported release of oil on the project site; and a PG&E Tesla Substation located adjacent to the project site. The Phase I ESA concluded that while the identified conditions could potentially represent environmental hazards at the project site, a Phase II investigation would not be warranted, and that overall, the identified environmental conditions are classified as either typical conditions that would be addressed through standard construction BMPs and compliance with regulations, or as potential soil contamination that could be addressed by property notification, handling, and disposal.

Mitigation Measure: The following mitigation measure, discussed in Section 3.9.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure HAZ-4: Perform a Phase I Environmental Site Assessment prior to construction activities and remediate if necessary (only including the portion of the mitigation measure relevant to the proposed project)

If contamination is uncovered as part of Phase I or II environmental site assessments, remediation will be required. If materials such as asbestos-containing materials, lead-based paint, or PCB-containing equipment are identified, these materials will be properly managed and disposed of prior to or during the demolition process.

Any contaminated soil identified on a project site must be properly disposed of in accordance with DTSC regulations in effect at the time. Hazardous wastes generated by the proposed project will be managed in accordance with the California Hazardous Waste Control Law (HSC, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulation (Title 22, CCR, Division 4.5).

If, during construction/demolition of structures, soil or groundwater contamination is suspected, the construction/demolition activities will cease and appropriate health and safety procedures will be implemented, including the use of appropriate personal protective equipment (e.g., respiratory protection, protective clothing, helmets, goggles).

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure PEIR HAZ-4 will ensure that the impacts associated with locating on a hazardous materials site creating a significant hazard to the public or the environment will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with location on a hazardous materials site creating a significant hazard to the public or the environment will be less than significant.

Impact HAZ-6: Impairment of implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

Potential Impact: Vehicular traffic associated with project operation and maintenance (O&M) would be limited to six to eight O&M staff (turbine technicians, operations personnel, administrative personnel, and management staff). O&M staff would monitor turbine and system operation, perform routine maintenance, shut down and restart turbines when necessary, and provide security. Accordingly, operation of the project would have minimal vehicular traffic and generate a less than significant impact on an adopted emergency response plan or emergency evacuation plan.

During construction, there would be an increase in vehicular traffic transporting work crews, equipment, and materials. Construction traffic routing would be established in a Construction Traffic Control Plan as described in Section 3.16 *Transportation* and would include a traffic safety and signing plan prepared by the project engineers in coordination with Alameda County and other related agencies. The plan would define hours, routes, and safety and management requirements. The project would therefore not conflict with any adopted emergency response plan or emergency evacuation plan.

Mitigation Measures: The following mitigation measure, discussed in Section 3.9.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan

Prior to starting construction-related activities, the Applicant shall prepare and implement a Traffic Control Plan (TCP) that will reduce or eliminate impacts associated with the proposed program. The TCP shall adhere to Alameda County and Caltrans requirements, and must be submitted for review and approval of the County Public Works Department prior to implementation. The TCP shall include the following elements. The County and Caltrans may require additional elements to be identified during their review and approval of the TCP.

- Schedule construction hours to minimize concentrations of construction workers commuting to/from the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.).
- Limit truck access to the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.).
- Require that written notification be provided to contractors regarding appropriate haul routes to and from the program area, as well as the weight and speed limits on local county roads used to access the program area.
- Provide access for emergency vehicles to and through the program area at all times.
- When lane/road closures occur during delivery of oversized loads, provide advance notice to local fire, police, and emergency service providers to ensure that alternative evacuation and emergency routes are designated to maintain service response times.
- Provide adequate onsite parking for construction trucks and worker vehicles.

- Require suitable public safety measures in the program area and at the entrance roads, including fences, barriers, lights, flagging, guards, and signs, to give adequate warning to the public of the construction and of any dangerous conditions that could be encountered as a result thereof.
- Complete road repairs on local public roads as needed during construction to prevent excessive deterioration. This work may include construction of temporary roadway shoulders to support any necessary detour lanes.
- Repair or restore the road right-of-way to its original condition or better upon completion of the work.
- Coordinate program-related construction activities, including schedule, truck traffic, haul routes, and the delivery of oversized or overweight materials, with Alameda County, Caltrans, and affected cities to identify and minimize overlap with other area construction projects.

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure PEIR TRA-1 will ensure that any impacts that would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with interference with an adopted emergency response plan or emergency evacuation plan will be less than significant.

Hydrology and Water Quality

Impact WQ-1: Violation of any water quality standards or waste discharge requirements or other degradation of surface water or groundwater quality

Potential Impact: Construction-related earth-disturbing activities associated with the project would introduce the potential for increased erosion and sedimentation, with subsequent effects on drainage and water quality. During construction, trenching, site preparation, and other construction activities would create areas of bare soil that can be exposed to erosive forces. Bare soils are much more likely to erode than vegetated areas because of the lack of dispersion, infiltration, and retention properties created by covering vegetation. Construction activities involving soil disturbance, excavation, cutting/filling, stockpiling, and grading could result in increased erosion and sedimentation that can increase sediment discharge to surface waters, if proper BMPs are not used.

Existing activities in the Project area may already result in the release of sediment, and the extent of earth disturbance resulting from construction of the Project is anticipated to result in a new and intensified potential for the release of sediments from staging areas and turbine construction sites. If precautions are not taken to contain or capture sedimentation, earth-disturbing construction activities could result in substantial sedimentation in stormwater runoff and result in a significant impact on existing surface water quality.

Project operation is not anticipated to result in a substantial amount of additional runoff that would degrade surface or groundwater quality.

Mitigation Measure: The following mitigation measure, discussed in Section 3.10.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Project contractors will obtain coverage under the Construction General Permit before the onset of any construction activities, because the Project would disturb 1 acre or more. A SWPPP will be developed by a qualified engineer or erosion control specialist in accordance with the appropriate Water Board's requirements for NPDES compliance and implemented prior to the issuance of any grading permit. The SWPPP will be kept onsite during construction activities and will be made available upon request to representatives of the Regional Water Boards.

Compliance and coverage with the local stormwater management programs and Construction General Permit will require controls of pollutant discharges that utilize BMPs and technology to reduce erosion and sediments to meet water quality standards. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other nonpoint-source runoff. Measures range from source control, such as reduced surface disturbance, to the treatment of polluted runoff, such as detention basins.

BMPs to be implemented as part of the *Storm Water Management Program* and Construction General Permit (and SWPPP) may include the following practices.

- Temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) will be employed to control erosion from disturbed areas.
- Use a dry detention basin (which is typically dry except after a major rainstorm, when it will temporarily fill with stormwater), designed to decrease runoff during storm events, prevent flooding, and allow for off-peak discharge. Basin features will include maintenance schedules for the periodic removal of sediments, excessive vegetation, and debris that may clog basin inlets and outlets.
- Cover or apply nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more) that could contribute sediment to waterways.
- Enclose and cover exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways.
- Ensure that no earth or organic material will be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water.
- Prohibit the following types of materials from being rinsed or washed into the streets, shoulder areas, or gutters: concrete, solvents and adhesives, thinners, paints, fuels, sawdust, dirt, gasoline, asphalt and concrete saw slurry, and heavily chlorinated water.
- Ensure that grass or other vegetative cover will be established on the construction site as soon as possible after disturbance.

The contractor will select a combination of BMPs (consistent with the Construction General Permit) that is expected to minimize runoff and remove contaminants from stormwater

discharges. The final selection of BMPs will be subject to approval by the San Francisco Bay Regional Water Board and the Central Valley Water Board.

The contractor will verify that a notice of intent has been filed with the State Water Board and that a SWPPP has been developed before allowing construction to begin. The contractor will perform inspections of the construction area, to verify that the BMPs specified in the SWPPP are properly implemented and maintained. The contractor will notify the appropriate Regional Water Board immediately if there is a noncompliance issue and will require compliance. If necessary, the contractor or their agent will require that additional BMPs be designed and implemented if those originally constructed do not achieve the identified performance standard.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure PEIR WQ-1 will ensure that any impacts that would violate water quality standards or waste discharge requirements or other degradation of surface water or groundwater quality will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with violation of any water quality standards or waste discharge requirements will be less than significant.

Impact WQ-3: Substantial alteration of existing drainage patterns in a manner that would result in substantial erosion or siltation onsite or offsite

Potential Impact: The project would not substantially alter the existing drainage pattern in the area, and measures would be implemented to minimize soil erosion, sedimentation of drainages downslope of the project site, and any other environmental impacts. In addition, the project would not construct any turbines within existing drainage areas and project facilities would be designed to not cause any downstream erosion during the storm season, and the proposed project would be required to adhere to the NPDES Construction General Permit.

Mitigation Measure: The following mitigation measure, discussed in Section 3.10.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure WQ-1 will ensure that any impacts that would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with substantially altering the existing drainage pattern of the site or area resulting in substantial erosion or siltation onsite or offsite will be less than significant.

Impact WQ-4: Substantial increase in the amount of surface runoff in a manner that would result in flooding onsite or offsite

Potential Impact: Changes in impervious cover associated with project construction would not cause a substantial increase in the amount of surface runoff that would result in flooding. Up to 36 new wind turbine foundations would be added to the project site as well as meteorological tower foundations. Small concrete pads within the substation footprint would also be added. New and expanded roads would be constructed to accommodate the new, larger turbines. However, new and expanded roads would be gravel, and would not introduce new impervious surfaces. Although this would result in an increase in the extent of graveled surfaces (which can result in increased runoff), it would not introduce new impervious surfaces, and the soils underlying the project area are predominantly high runoff soils (i.e., Hydrologic Soil Group D). Compacted gravel roads have runoff potential similar to that of Hydrologic Soil Group D soils. Consequently, the additional graveled roads would not result in a net increase in runoff potential compared with existing native soils where the new gravel would be placed. Because runoff would not increase as a result of additional gravel and concrete surfaces, there would not be an increase in flooding onsite or offsite. In addition, project construction would be required to comply with the NPDES stormwater Construction General Permit.

Mitigation Measure: The following mitigation measure, discussed in Section 3.10.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR WQ-1 will ensure that any impacts that would substantially increase surface runoff resulting in flooding onsite or offsite will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with a substantial increase in surface runoff resulting in flooding onsite or offsite will be less than significant.

Impact WQ-5: Creation of or contribution to runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff

Potential Impact: The project site does not have any existing stormwater drainage facilities, and none are planned. Construction of the project would not increase the rate of polluted runoff. However, construction could generate polluted runoff because soil would be stripped, bare areas exposed, and sedimentation from stormwater could result.

Mitigation Measure: The following mitigation measure, discussed in Section 3.10.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR WQ-1 will ensure that any impacts that would create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff will be less than significant.

Impact WQ-7: In flood hazard, tsunami, or seiche zones, risk of release of pollutants as a result of Project inundation

Potential Impact: The project is not near a large body of water capable of producing a seiche event, and is approximately 45 miles east of the Pacific Ocean and not subject to a tsunami event. If the Bethany Reservoir Dam were to fail, the likelihood of significant flood risk is considered minimal. Potential release of pollutants as a result of Project inundation could occur during construction involving sediment- or contaminated runoff from disturbed work areas or potential spills that could result in temporary impacts on water resources. However, BMPs such as runoff control measures, including stabilizing construction areas, and sediment controls and filtration, would be implemented to minimize impacts on water resources. Furthermore, the SWPPP, which includes provisions to reduce and control discharges other than stormwater, would be implemented.

Due to the minimal change in impervious area, there would be no substantial reduction of water infiltration into the ground, and risk of release of pollutants as a result of project inundation would be minimal during project operation.

Mitigation Measure: The following mitigation measure, discussed in Section 3.10.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR WQ-1 will ensure that any impacts that would risk the release of pollutants via inundation by seiche, tsunami, or mudflow will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would risk release of pollutants via inundation by seiche, tsunami, or mudflow will be less than significant.

Impact WQ-8: Conflict with or obstruction of implementation of a water quality control plan or sustainable groundwater management plan

Potential Impact: The project area is within the jurisdiction of the Central Valley Water Board, and subject to the boards' basin plan. The project would include stormwater BMPs, as required by PEIR Mitigation Measure WQ-1, to protect water quality and beneficial uses, as defined in the basin plan. Implementation of the project SWPPP would also regulate discharges to ensure compliance with the basin plan's water quality standards, and would not conflict with or obstruct implementation of a water quality control plan. Adequate water supply is available to meet the needs of the project for both construction and operation activities, and would not decrease groundwater supplies. The

project would only minimally affect groundwater resources because excavation would be temporary and short-term during the construction period. Due to the existing soils impervious nature, the increase of gravel and concrete to the project site would not substantially reduce or interfere with water infiltration into the ground and associated groundwater recharge or depletion of groundwater supplies that would conflict with implementation of sustainable groundwater management would not occur.

Mitigation Measure: The following mitigation measure, discussed in Section 3.10.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR WQ-1 will ensure that any impacts that would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan will be less than significant.

Transportation/Traffic

Impact TRA-1: Conflict with a program, plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities

Potential Impact: The PEIR concluded that while construction activities could cause a substantial traffic increase on local county roads that provide direct access to project construction sites, these increases, would be of temporary duration. In addition, the PEIR concluded that no public transit services, or pedestrian or bicycle facilities are present on the project access routes in the program area. Consistent with the analysis in the PEIR, the project would cause temporary increases in traffic on local roads, and would not affect public transit services or bicycle or pedestrian facilities. However, oversized construction vehicles could potentially disrupt the movement of bicycles traveling on the shoulders of some local access roads (e.g., Altamont Pass Road, West Grant Line Road, Mountain House Road), and lane or road closures associated with material deliveries could temporarily disrupt bicycle access.

Mitigation Measure: The following mitigation measure, discussed in the SEIR in Section 3.16.2, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan

Prior to starting construction-related activities, the Applicant shall prepare and implement a Traffic Control Plan (TCP) that will reduce or eliminate impacts associated with the proposed Project. The TCP shall adhere to Alameda County, San Joaquin County, and Caltrans

requirements, and must be submitted for review and approval of the County Public Works Department prior to implementation. The TCP shall include the following elements. The County and Caltrans may require additional elements to be identified during their review and approval of the TCP.

- Schedule construction hours to minimize concentrations of construction workers commuting to/from the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.).
- Limit truck access to the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.).
- Require that written notification be provided to contractors regarding appropriate haul routes to and from the Project area, as well as the weight and speed limits on local county roads used to access the Project area.
- Provide access for emergency vehicles to and through the Project area at all times.
- When lane/road closures occur during delivery of oversized loads, provide advance notice to local fire, police, and emergency service providers to ensure that alternative evacuation and emergency routes are designated to maintain service response times.
- Provide adequate onsite parking for construction trucks and worker vehicles.
- Require suitable public safety measures in the Project area and at the entrance roads, including fences, barriers, lights, flagging, guards, and signs, to give adequate warning to the public of the construction and of any dangerous conditions that could be encountered as a result thereof.
- Complete road repairs on local public roads as needed during construction to prevent excessive deterioration. This work may include construction of temporary roadway shoulders to support any necessary detour lanes.
- Repair or restore the road right-of-way to its original condition or better upon completion of the work.
- Coordinate Project-related construction activities, including schedule, truck traffic, haul routes, and the delivery of oversized or overweight materials, with Alameda County, Caltrans, and affected cities and counties to identify and minimize overlap with other area construction projects.

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR TRA-1 will ensure that any impacts that would conflict with a program, plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would conflict with a program, plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities will be less than significant.

Impact TRA-4: Substantial increase in hazards because of a geometric design feature (e.g., sharp curves, dangerous intersections) or incompatible uses (e.g., farm equipment)

Potential Impact: The PEIR concluded that the presence of large, slow-moving construction and delivery vehicles could increase traffic safety hazards. Additionally, some of these vehicles could exceed roadway load and size limits. Permits from Caltrans District 4 and other relevant jurisdictions would be required for such vehicles.

Mitigation Measure: The following mitigation measure, discussed in the SEIR in Section 3.16.2, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure PEIR TRA-1 will ensure that any impacts that would substantially increase hazards because of a design feature or incompatible uses due to construction-generated traffic will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would substantially increase hazards because of a design feature or incompatible uses due to construction-generated traffic will be less than significant.

Impact TRA-5: Potential to cause inadequate emergency access

Potential Impact: Large, slow-moving construction and delivery vehicles and temporary road and lane closures could delay or obstruct the movement of emergency vehicles, as disclosed in the PEIR. Therefore, construction would have the potential to significantly affect emergency vehicle access.

Mitigation Measure: The following mitigation measure, discussed in the SEIR in Section 3.16.2, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR TRA-1 will ensure that any impacts that would result in inadequate emergency access due to construction-generated traffic will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would result in inadequate emergency access due to construction-generated traffic will be less than significant.

Wildfire

Impact WF-1: Substantial impairment of an adopted emergency response plan or emergency evacuation plan

Potential Impact:

The project would reintroduce windpower uses to the project site, which would require operations and maintenance (O&M) staff to access the project site for routine and non-routine maintenance such as repair or replacement of rotors or other major components when necessary. Operations of the project would therefore result in a small routine increase of traffic associated with O&M, which would not interfere with an adopted emergency response plan or emergency evacuation plan.

Accordingly, operation of the Project would have no impact.

Large, slow-moving construction and delivery vehicles and temporary road and lane closures could delay or obstruct roadways used for emergency evacuation and emergency response vehicles, resulting in a potentially significant impact. Construction traffic routing would be established in a Construction Traffic Plan, which would include a traffic safety and signing plan prepared by the Project engineers in coordination with Alameda County and other related agencies to ensure adequate emergency route access at all times. All required permits from the County and/or Caltrans would be acquired before the construction of the Project.

Mitigation Measure: The following mitigation measure, discussed in the SEIR in Section 3.19.2, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR TRA-1 will ensure that any impacts that would substantially impair an adopted emergency response plan or emergency evacuation plan will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would substantially impair an adopted emergency response plan or emergency evacuation plan will be less than significant.

Impact WF-4: Exposure of people or structures to significant risks such as downslope or downstream flooding or landslide as a result of runoff, post-fire slope instability, or drainage changes

The PEIR concluded that impacts related to flooding, landslides, runoff, and drainage changes would be less-than-significant with implementation of WQ-1: Comply with NPDES requirements. As discussed in more detail in Section 3.7, *Geology, Soils, and Paleontological Resources*, and Section 3.10, *Hydrology and Water Quality*, design requirements to minimize risk of exposure to geologic and hydrologic hazards, including flooding, landslides, runoff, and drainage changes would be required.

While the project site is not located in an earthquake-induced landslide hazard zone, the presence of the Neroly Sandstone makes slope instability a concern at the project site. If a wildfire were to take place on these slopes, there could be an increase in risk of landslide or flooding due to post-fire

slope instability, which occurs when a wildfire removes the vegetation that holds soils in place, making it more likely for soil to move downslope, especially in tandem with precipitation.

However, as discussed under Impact WF-2, the new generation turbines have improved upon older models in terms of fire ignition risk and are equipped with internal protective control mechanisms which would safely shut them down during a high-voltage grid outage or fire-related turbine failure, greatly reducing the wildfire which could lead to post-fire slope instability. In addition, the risk of wildfire within the project site would be minimized through compliance with all pertinent local, state, and federal policies and codes and project BMPs, and post-wildfire risk also would be reduced with implementation of applicable policies and regulatory requirements.

Mitigation Measure: The following mitigation measure, discussed in the SEIR in Section 3.19.2, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR WQ-1 will ensure that any impacts related to the exposure of people or structures to significant risks such as downslope or downstream flooding or landslide as a result of runoff, post-fire slope instability, or drainage changes will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would expose people or structures to significant risks such as downslope or downstream flooding or landslide as a result of runoff, post-fire slope instability, or drainage changes will be less than significant.

Findings and Recommendations Regarding Impacts that are Less Than Significant

Aesthetics

Impact AES-4: Creation of a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area

The PEIR concluded that lighting required by the Federal Aviation Administration (FAA) in the project area and vicinity and lighting associated with the substations would be shielded and directed downward to reduce glare, and that the color of new towers and rotors would be neutral and non-reflective. Since the preparation of the PEIR, the County has noted that lighting associated with the turbines may have effects beyond those described in the PEIR. Given the height of first and second generation turbines, almost no FAA lighting was required; while, for taller, fourth generation turbines, FAA-required lighting would be highly noticeable. However, because the County does not have the ability to limit the placement of required FAA lighting, and the PEIR established that such lighting at a program level would have a less-than-significant impact, and that conclusion is not subject to change because information about FAA lighting could have been known with reasonable diligence prior to certification of the PEIR, the impacts of FAA lighting requirements at a program level have already been considered and were not further analyzed in this SEIR.

Regarding shadow flicker, the PEIR concluded that shadow flicker caused by blade rotation could create a disruptive visual intrusion to residents who are within 500 meters (1,640 feet) of a turbine and have the potential to be exposed to shadow flicker for extended periods (i.e., more than 30 minutes in a given day or 30 hours in a given year). There are no residences within 500 meters (1,640 feet) of any turbines associated with the proposed project. Therefore, impacts related to shadow flicker would be less than significant.

Air Quality

Impact AQ-1: Conflict with or obstruction of implementation of the applicable air quality plan

Consistent with the PEIR's conclusions regarding the Altamont Pass Wind Resource Area repowering projects, the proposed project would not conflict with the goals of BAAQMD's air quality attainment plans. Implementation of the proposed project would result in no new permanent employees or increase population projections, and therefore would not induce population or employment growth or result in a net increase in vehicle miles traveled in the San Francisco Bay Area Air Basin (SFBAAB).

While minor amounts of emissions would be generated during construction, modeling demonstrates that short-term mitigated emissions resulting from proposed project construction would not exceed the BAAQMD significance thresholds (see Impact AQ-2). Ultimately, the project would result in long-term benefits from new renewable wind-generated energy, including reduction of criteria pollutants and GHG emissions relative to the production of comparable energy from fossil fuel sources. Accordingly, the project supports the primary goals of the *2017 Clean Air Plan*.

There are no public transit services, or pedestrian or bicycle facilities, present on the project access routes in the program area. However, the project would not preclude extension of a public transit line or bike lane, or otherwise create an impediment or disruption to implementation of any *2017 Clean Air Plan* control measures.

This potential impact is determined to be less than significant.

Impact AQ-4: Generation of objectionable odors adversely affecting a substantial number of people

The PEIR concluded that neither construction nor operation of the repowering projects would result in significant odor impacts. Consistent with the PEIR, odor emissions of the proposed project would primarily be limited to the construction period. Sources of odors during construction would be diesel-powered trucks and vehicles. Potential odors from these sources would be temporary (7 months) and spatially dispersed over the project area. Accordingly, the proposed project is not anticipated to create objectionable odors that would violate air district nuisance rules.

This potential impact is determined to be less than significant.

Biological Resources

Impact BIO-17: Potential for ground-disturbing activities to result in direct adverse effects on common habitats

Ground-disturbing activities would result in the permanent loss of common habitats as a result of constructing new permanent facilities and the temporary loss of common habitats as a result of constructing temporary facilities and landscape reclamation. These activities would create minor changes in total acreage of common habitats in the program area, primarily in the annual grassland plant community.

All lands disturbed by infrastructure installation or removal would be returned to preproject conditions. At each reclamation site, the topography would be contour graded (if necessary and if environmentally beneficial), stabilized, and reseeded with an appropriate seed mixture to maintain slope stability. Reclamation activities would be guided by a reclamation plan developed in coordination with the County and other applicable agencies. This potential impact is determined to be less than significant.

Impact BIO-23: Potential disturbance or mortality of monarch butterfly

Potential effects on monarch butterfly were not addressed in the PEIR because the species was not a candidate for federal listing at the time that the PEIR was prepared.

The project site supports grassland and vegetated aquatic land cover types that represent potential foraging and breeding habitat for Monarch butterflies. Overall, the project would permanently remove approximately 26 acres of annual grassland, which is less than 1% of the available grassland on the project site. The loss of less than 1% of available foraging habitat at the project site is not expected to substantially reduce the availability of foraging habitat in the project region for Monarch butterfly. Up to 264 acres of annual grassland would be temporarily disturbed during project construction (accounting for approximately 6 % of the total available habitat); however, all lands temporarily disturbed by infrastructure installation would be returned to preproject conditions.

Permanent and temporary disturbances within annual grassland could also result in the removal of milkweed plants (potential host plant for Monarch butterflies) if they are present within the construction footprint. Because the milkweed plant was only sporadically found throughout the project site, the removal of potential breeding habitat is expected to be negligible. Overall, the small amount of permanent loss and temporary disturbances of potential foraging and breeding habitat for Monarch butterfly is not anticipated to result in substantial adverse effects on migrating and breeding Monarch butterflies. This potential impact is determined to be less than significant.

Energy

Impact EN-1: Wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation

Project construction would require use a variety of construction equipment, including heavy equipment, excavator, trucks, graders, and a crane. The project encompasses up to six phases. Most of the energy would be consumed during road construction, foundation and electrical work, turbine delivery and installation, and electrical trenching and substation construction. Although substantial amounts of energy would be used in construction of the project, the expenditure of this energy

would be temporary in duration and would be outweighed by the energy produced by operation of the proposed wind energy facility. During operations, the project would produce electricity via wind power which would help to meet California's energy demands with renewable sources of energy, and ultimately, would help to decrease the State's reliance on carbon-based, or nonrenewable, energy resources. Therefore, potential energy impacts of project operation would be less than significant

Geology, Soils, Mineral Resources, and Paleontological Resources

Impact GEO-2: Result in substantial soil erosion or the loss of topsoil

As disclosed in the PEIR, decommissioning and project construction could cause surface disturbance and vegetation removal resulting in the potential for soil erosion or loss of topsoil. However, because the project would disturb more than 1 acre, compliance with federal and local erosion-related regulations (e.g., the SWPPP developed for the Project, requirements of the county's Stormwater Management Plan) would be required. Compliance with these requirements would ensure that ground-disturbing activities do not result in significant erosion. Typical erosion-prevention measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover would be used. Moreover, the PEIR requires a reclamation plan with specific measures taken to ensure that repowering sites are regraded and seeded to pre-project conditions. These requirements would ensure that potential impacts of soil erosion would be minimized. This potential impact is determined to be less than significant.

Greenhouse Gas Emissions

Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

The PEIR concluded that while repowering the Altamont Pass Wind Resource Area (an aggregate of all the anticipated repowering projects proposed within the program area) would result in short-term emissions of GHGs, primarily associated with construction activities, and the potential operational emission of SF₆, the repowering projects collectively would result in an annual net reduction of more than 100,000 tons of CO₂e. Consistent with the PEIR, wind energy generated by the project would reduce GHG emissions and would more than offset emissions generated by project construction and operation. This beneficial impact would be less than significant.

Hazards and Hazardous Materials

Impact HAZ-1: Creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

Construction of the project would involve small quantities of commonly used materials, such as fuels and oils, to operate construction equipment. Because standard construction BMPs would be implemented to reduce pollutant emissions during construction, this impact is considered less than significant.

The majority of hazardous materials to be used during operations, decommissioning, and removal and reclamation activities—fuels, oils, and lubricants—are of low toxicity. As these materials are

required for operation of construction vehicles and equipment, BMPs would be implemented to reduce the potential for or exposure to accidental spills involving the use of hazardous materials. In addition, a Hazardous Materials Business Plan (HMBP) would be developed for the proposed Project.

Lubricants used in the turbine gearbox are potentially hazardous. The gearbox would be sealed to prevent lubricant leakage and would be periodically tested. When the lubricants have degraded to the point where they are no longer adequate, the gearbox would be drained, new lubricant added, and the used lubricants disposed of at an appropriate facility in accordance with all applicable laws and regulations. Dielectric fluid to be used in transformers is biodegradable, contains no PCBs, and is not considered a hazardous material. This potential impact is determined to be less than significant.

Impact HAZ-2: Creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

Site workers, the public, and the environment could be inadvertently exposed to preexisting onsite contaminants during project construction. Small quantities of potentially toxic substances (such as petroleum and other chemicals used to operate and maintain construction equipment) would be used in the program area and transported to and from the area during construction. During operation, larger quantities (more than 55 gallons of liquid, 500 pounds of solids, or 200 cubic feet of compressed gases) of fuel could be stored in individual project areas. In addition, fuel and other petroleum products could be stored onsite.

However, as previously discussed, an HMBP would be developed for the project. The HMBP would contain specific information regarding the types and quantities of hazardous materials, as well as production, use, storage, spill response, transport, and disposal of such materials. The handling and disposal of these materials would be governed according to regulations enforced by CUPA, Cal/OSHA, and DTSC, as previously discussed. In addition, regulations under the federal Clean Water Act require contractors to avoid allowing the release of materials into surface waters as part of their SWPPP and National Pollutant Discharge Elimination System permit requirements (see Section 3.10, *Hydrology and Water Quality*, for a discussion of the Clean Water Act and SWPPPs). This regulatory scheme would ensure that safety measures and precautions are taken, thereby reducing any potential impacts associated with the accidental upset or release of hazardous materials.

Persons, structures, and facilities within the blade throw hazard zone could be at risk of damage, injury, or death if struck by a falling blade. People potentially within the hazard zone include motorists travelling along Patterson Pass Road and county roads and those occupying residences. The important infrastructure in and adjacent to the project site potentially susceptible to damage from blade throw includes PG&E transmission lines and windfarm substations. Overall, the strict control of public access would reduce the risk of potential blade strike in the project site. The closest recreational area (Carnegie State Vehicular Recreation) to a proposed turbine is approximately 2,200 meters in distance, and the closest proposed turbine to a public road is approximately 390 meters (from Patterson Pass Road). These distances are considered an adequate setback distance to avoid impacts associated with potential blade throw. This potential impact is determined to be less than significant.

Impact HAZ-5: Placement of Project-related facilities within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, resulting in a safety hazard or excessive noise for people residing or working in the Project area

The project site is not within 2 miles of a public airport or a private airstrip. Therefore, implementation of the project would not normally result in a safety hazard for people residing or working in the project site.

However, according to the PEIR, projects with facilities in the influence area zones of local airports are required to submit a Notice of Proposed Construction or Alteration form to the FAA for review and to implement all FAA requirements to reduce potential aviation impacts. A review of the Tracy Municipal Airport (located approximately 6 miles from the project site) compatibility zones indicates that the project site is outside all compatibility and influence area zones (San Joaquin County Aviation System 2009). Also, wind turbines would require FAA lighting as most would be more than 200 feet tall and must be individually lit with obstruction lighting. Through its Notice of Proposed Construction or Alteration (Form 7460.1), the FAA would review the proposed Project prior to construction (14 CFR Part 77). The FAA analysis would include a review of proposed marking (paint scheme) and nighttime lighting to ensure that aircraft could readily identify and avoid the wind turbines. This potential impact is determined to be less than significant.

Impact HAZ-7: Exposure of people or structures, either directly or indirectly, to a significant risk involving wildland fires

As discussed in Section 3.19 *Wildfire*, the most likely source of an ignition from the project site is in a moderate to high fire hazard severity zone. The most likely source of an ignition would be hardware or conductor failures of power collection lines, dropping of collection lines, turbine malfunction or mechanical failure, and avian-related incidents. In addition, during construction, additional work crews would be required, temporarily increasing the number of vehicles in the Project area. Climate conditions together with the potential for vehicle-related ignitions increase the potential for ignition, especially during the summer months.

Construction on project site would be a temporary activity, and onsite water tanks would be made available for fire suppression needs during construction. OSHA requirements would be followed regarding the safe control and storage of combustible materials. Therefore, construction of the project would not result in significant impacts to exposure of people or structures directly or indirectly of wildland fires.

Operation of the project would potentially increase the risk of wildfires ignited by wind generators. However, the site is currently served by CalFire and the Alameda County Fire Department and wind turbines were formerly located on the site, thus the fire protection facilities and infrastructure required to protect the existing facilities are in place. In addition, as discussed previously, new generation wind turbines have improved upon older models in terms of fire ignition risk and are anticipated to result in a reduction of potential fire ignitions. Under Operational Safety and Environmental Compliance Programs, the proposed turbines would be equipped with internal protective control mechanisms which would safely shut them down during a high-voltage grid outage or fire-related turbine failure. Collector substations would also be fenced and locked and would include visible safety signage. In addition, the project would be subject to County requirements for fire prevention as outlined in the County's *Altamont Pass Wind Farm Fire Requirements*. The project would be required to maintain firebreaks and clearances around

electrical lines, as well as year-round water supplies to be provided for firefighting. Therefore, consistent with the PEIR, operation of the project would not result in significant impacts to exposure of people or structures directly or indirectly of wildland fires.

This potential impact is determined to be less than significant.

Hydrology and Water Quality

Impact WQ-2: Substantial decrease of groundwater supplies or substantial interference with groundwater recharge such that the Project may impede sustainable groundwater management of the basin

Project construction would involve relatively small footprints, compared with the size of the entire groundwater basin, and, therefore, would not result in blocking groundwater infiltration or interfere with groundwater recharge. The project would require water on a temporary basis during construction, and a minimal amount of water during project operation.

Water for construction activities would be provided through an agreement with municipal or private suppliers. Temporary onsite water tanks and water trucks would be made available for fire water support, dust suppression, and construction needs. Operation of wind power facilities require very little water; operation of the project could use up to 1.7 acre-feet of water per year, which represents approximately 0.5 percent of the water the Alameda County Water District estimates for industrial uses. This water demand is anticipated to be accommodated within the County's water management plan without the need for additional water supplies. As such, the project would not be a source of groundwater extraction. Therefore, the project would not result in a substantial decrease of groundwater supplies or substantially interfere with groundwater recharge such that the project would impede sustainable groundwater management of the basin, and this potential impact is determined to be less than significant.

Noise

Impact NOI-1: Generation of increased ambient noise levels in the Project vicinity in excess of applicable standards

Construction activities may potentially result in noise levels that exceed Alameda County noise ordinance standards during nonexempt hours. However, construction would be done during hours of day allowed by the county (7:00 a.m. to 7:00 p.m. Monday to Friday, and 8:00 a.m. to 5:00 p.m. on Saturday), and no evening or nighttime construction is anticipated. Therefore, the exposure of residences to equipment noise during construction is considered to be a less-than-significant impact.

Operation of wind turbines added by the project would result in increased ambient noise levels in the project area. The nearest residence, the on-site Mulqueeney Ranch located south of the PG&E Tesla substation, is approximately 3,200 feet away from the nearest turbine that would be constructed. This is outside of the maximum setback distance of 2,000 feet that would require an operational noise analysis under PEIR Mitigation Measure NOI-1, *Perform project-specific noise studies and implement measures to comply with County noise standards*. Therefore, sound levels from operation of wind turbines are not expected to exceed performance standards specified in the conditional use permit. This potential impact is considered to be less than significant.

Impact NOI-2: Generation of excessive groundborne vibration or groundborne noise levels

Construction of access roads, turbines, and associated facilities would involve the use of heavy equipment that may produce vibration that would be perceptible up to a distance of 50 feet away from the vibration source. No impact equipment such as pile drivers is expected to be used during construction. Rubber-tired vehicles such as heavy trucks are not a significant source of vibration. Consequently, proposed construction activities are not expected to result in perceptible levels of vibration in sensitive buildings. This potential impact is determined to be less than significant.

Transportation

Impact TRA-2: Conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision

Section 15064.3 subdivision (b) concerns analysis of project impacts based on potential increases in vehicle miles traveled (VMT). The Governor's Office of Planning and Research released a technical advisory on Section 10564.3 subdivision (b), which indicates that without "projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than significant transportation impact" (Office of Planning and Research 2018). Construction-related trips would generate a temporary increase in VMT associated with the project. Once operational, the estimated daily VMT associated with the project's routine operations and maintenance would be 213 VMT for two people commuting daily up to 100 miles round trip, far fewer than 110 trips per day (Brookfield Renewables 2020). Based on OPR's guidance and the nature of the project, VMT impacts would be less than significant.

Impact TRA-3: Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks

There are four airports in the vicinity of the project site: Meadowlark Field (a private landing strip); Tracy Municipal Airport; Byron Airport; and Livermore Municipal Airport. The project would not affect existing air traffic patterns at any of the region's airports and therefore would not result in substantial safety risks. The impact would be less than significant.

Tribal Cultural Resources

Impact TCR-1: Potential to cause a substantial adverse change in the significance of a tribal cultural resource with cultural value to a California Native American tribe and that is listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)

The results from the search of the NAHC's Sacred Lands Files, and outreach efforts by the County pursuant to AB 52, as discussed in the *Methods for Analysis* section, did not identify any tribal cultural resources in or near the project area. This potential impact is determined to be less than significant.

Impact TCR-2: Potential to cause a substantial adverse change in the significance of a tribal cultural resource with cultural value to a California Native American tribe and that is a resource determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

The results from the search of the NAHC's Sacred Lands Files, and outreach efforts by the County pursuant to AB 52, as discussed in the *Methods for Analysis* section, did not identify any tribal cultural resources in or near the project area. This potential impact is determined to be less than significant.

Utilities and Service Systems

Impact UT-1: Relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects

The construction and operation of the project would not substantially modify the existing stormwater drainage patterns at the project site, and would include only a small increase in impervious surfaces tower, turbine, and substation foundations. As the project would disturb more than 1 acre, it would require coverage under the state's Construction General Permit. Coverage under this permit requires developing and complying with a SWPPP, which would include BMPs and recommendations which would prevent environmental effects related to stormwater drainage. Consequently, impacts related to construction of new stormwater drainage facilities or expansion of existing facilities would be less than significant.

Neither construction nor operation of the project would not generate a significant amount of wastewater. Water for construction activities would be provided through an agreement with municipal or private suppliers, and would be trucked onto the project site to provide water for fire support, dust suppression, and other construction needs. Operation of the project would not generate a significant amount of wastewater. Windpower turbines do not consume water or produce wastewater during operations and no additional permanent wastewater-producing structures such as restrooms are included in the project. As the project would not require the relocation, construction, or expansion of water, wastewater treatment, or stormwater drainage facilities, and no natural gas or telecommunication facilities are required, this potential impact is determined to be less than significant.

Impact UT-2: Have sufficient water supply to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years

Water quantities used for the project are expected to be minimal. The majority of water use would take place during construction. Temporary onsite water tanks and water trucks would be made available for fire water support, dust suppression, and other construction needs. A minimal amount of water would be required for construction worker needs (e.g., drinking water, sanitation facilities). In general, wind power uses very little water and water consumption savings in California from wind power projects amount to more than 3.4 billion gallons per year (CalWEA 2020). The project could use up to 1.7 acre-feet of water per year, the yearly water use equivalent of approximately 8 single-family homes. Based on the project's minimal estimated water demand compared with the supplies available, it is not anticipated that the project would require new or expanded entitlements

during normal, dry, or multiple dry years. This potential impact is determined to be less than significant.

Impact UT-4: Project-related exceedance of state or local solid waste standards or of the capacity of local infrastructure, or other impediments to attaining solid waste reduction goals

The majority of solid waste generated would be during construction and during the decommissioning of turbines. The project is not anticipated to generate a substantial amount of solid waste because turbines and components would be sold or recycled, which would reduce the amount of solid waste taken to landfills. As the project would recycle solid waste onsite and conform to the County's Green Building Ordinance, it is not anticipated that the project would generate enough solid waste to affect the capacity of any landfill. This potential impact is determined to be less than significant.

Wildfire

Impact WF-2: Exacerbation of wildfire risks associated with pollutant concentrations or uncontrolled spread of wildfire

The project site is located in an SRA and encompasses an area which includes moderate to high fire hazard severity zones (California State Geoportal 2020). Construction on the project site would be a temporary activity; an active working crew would control any potential combustible materials though standard OSHA worker protection requirements. Temporary onsite water tanks and water trucks would be made available for fire support. Therefore, construction of the project would not exacerbate wildfire risks associated with pollutant concentration or uncontrolled spread of wildfire and impacts would be less than significant.

As discussed above, wind energy facilities are prone to fire ignition from different sources. However, as described above in Chapter 2, *Project Description*, standard O&M procedures would be employed in the event of downed power lines. The turbines would be equipped with internal protective control mechanisms to safely shut them down in the event of a high-voltage grid outage or a turbine failure related to fire or mechanical problems. Collector substations would also be fenced and locked and would include visible safety signage. In addition, the project would be subject to County requirements for fire prevention as outlined in the County's *Altamont Pass Wind Farm Fire Requirements* to maintain firebreaks and clearances around electrical lines and provide water supplies for firefighting.

The PEIR concluded that the fire-related impact of individual repowering projects would be less than significant, and no mitigation is required. As noted above, the proposed project would comply with the Altamont Pass Wind Farms Fire Requirements as described in Exhibit C of the 2005 Conditional Use Permits. This potential impact is determined to be less than significant.

Impact WF-3: Project-related installation or maintenance of associated infrastructure that may exacerbate fire risk or result in temporary or ongoing environmental impacts

As discussed above Impact WF-2, implementation of the project would carry with it a potential for fire ignition risks (e.g., turbine overload, bearing overheating, pendant cable failure; avian-related incidents). However, employing standard measures to reduce fire risks during construction and

standard O&M procedures as described above during operation and maintenance, fire risks would be reduced.

The PEIR concluded that the fire-related impact of individual repowering projects would be less than significant, and no mitigation is required. The proposed Project would comply with the Altamont Pass Wind Farms Fire Requirements as described in Exhibit C of the 2005 Conditional Use Permits. This potential impact is determined to be less than significant.

Findings for Cumulative Impacts

State CEQA Guidelines Section 15130 requires the consideration of cumulative impacts in an EIR when a project's incremental effects are cumulatively considerable. Cumulatively considerable "means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects the effects of other current projects and the effects of probable future projects." (CEQA Guidelines Section 15065(a)(3).) In identifying projects that may contribute to cumulative impacts, the State CEQA Guidelines allow the use of a list of past, present, and reasonably anticipated future projects, producing related or cumulative impacts, including those that are outside of the control of the lead agency. The proposed Project's cumulative contribution to various impacts was considered in conjunction with other proposed and approved projects, as set forth in Chapter 5 of the SEIR.

Based on analysis in the SEIR and the entire record before the County, the County makes the following findings with respect to the project's cumulatively considerable potential cumulative impacts of the proposed project.

Cumulatively Considerable Contributions to Potentially Significant Impacts that Cannot Mitigated to a Less-Than-Significant Level

Air Quality

Construction of the Project would generate reactive organic gases (ROG), nitrogen oxides (NO_x), and localized particulate (PM_{2.5} and PM₁₀) and diesel particulate matter. The PEIR identified no cumulative impact related to localized particulate and diesel particulate matter. Therefore, the project's mitigated construction impact to a less-than-significant level would not result in or contribute to a cumulatively considerable impact. With respect to NO_x and ROG emissions, the PEIR found that the cumulative program emissions would be greater than the BAAQMD thresholds after the implementation of PEIR Mitigation Measures AQ-2a and AQ-2b, and therefore cumulative construction impacts would be significant and unavoidable. Although the project would generate ROG and NO_x below the BAAQMD threshold (see Impact AQ-2, PEIR Mitigation Measures AQ-2a and AQ-2b, and 2020 NEW Mitigation Measure AQ-2c), the project generated ROG and NO_x emissions would contribute to the cumulative impact identified in the PEIR. Therefore, because the amounts of project-generated ROG and NO_x would be substantial, the contribution to the cumulative air quality impact would be cumulatively considerable during construction. There are no other feasible mitigation measures that can reduce these impacts to a less-than-significant level. As more fully explained in the Statement of Overriding Considerations contained in Exhibit C to the Resolution to which these CEQA Findings are attached, the County finds that there are environmental, economic, or other benefits of the project that override these cumulatively considerable impacts.

Biological Resources

As determined in *PEIR Analysis: Avian and Bat Mortality*, cumulative impacts would affect the burrowing owl, golden eagle, and hoary bat. Avian and bat mortality associated with turbine collisions has been identified as a significant and unavoidable impact. By definition, and considered with other sources of avian mortality [e.g., the Contra Costa County portion of the APWRA and the neighboring Montezuma Hills Wind WRA (MHWRA)], this would constitute a considerable contribution to a significant cumulative impact. Since certification of the PEIR, changed understanding about the population status of avian and bat resources now enables a more precise definition of the geographic scope for the analysis. For golden eagles, the Local Area Population (LAP), which includes all golden eagles within a 109-mile radius from the project site, was considered. For birds other than golden eagles, USFWS evaluates population status and trends with regard to Bird Conservation Region (BCR) 32, which is one of 66 such regions established by the U.S. North American Bird Conservation Initiative (NABCI) Committee to monitor bird conservation efforts in North America. For the hoary bat, the geographic scope for hoary bat is western North America, based on information that indicates hoary bats in the APWRA are nearly all migratory, derived from this very large region.

The project would cause an estimated 31 burrowing owl fatalities per year (on an RSA basis; Table 5-1). Given that APWRA and MHWRA wind power operations are likely causing annual loss of approximately 5.3% of the BCR 32 population, and that since these fatalities are contributing to further declines in a species that is already uncommon in BCR 32 and is showing a long-term declining population trend, there is a cumulative impact on this species. The portion of the population change attributable to the proposed project is approximately 0.25% of the BCR 32 population (annually), which is an immeasurably small fraction. Thus the proposed project would not make a cumulatively considerable contribution to the cumulative impact.

The golden eagle within the APWRA has been the subject of extensive field studies and modeling to ascertain its population status and its likely long-term responses to fatalities caused by wind energy developments. This work was synthesized by Hunt et al. (2017), who estimated that an annual reproductive output of 216–255 breeding pairs would have been necessary to support published estimates of 55–65 turbine-caused fatalities per year in the APWRA, concluding that the area has “a stable breeding population, but one for which any further decrease in vital rates would require immigrant floaters [subadults and nonbreeding adults] to fill territory vacancies.” This estimate would indicate that the 280 territorial pairs present in the Diablo Range (Wiens et al. 2015) would likely be adequate to maintain the region’s golden eagle population, but with a long-term population reduction possible if fatalities were to exceed 55–65 eagles per year.

For the 450 MW PEIR alternative, there would be an estimated 27 golden eagle fatalities per year, while for the combined APWRA and MHWRA, there would be about 44 fatalities per year. Also, the work of Hunt et al. (2017) assumes that the Diablo Range eagles are a discrete population, but they acknowledge that up to 17% of radio transmitter-tagged eagles used in their study left the Diablo Range area or may have originated outside the area and migrated in. These “travelers” are predominately juvenile, subadult, or nonbreeding adult eagles, a group that also comprises a disproportionate fraction of the golden eagle mortalities in the APWRA. Thus, the eagles in the APWRA make up an anomalously small fraction of the reproductive eagles in the Diablo Range, as well as an anomalously large fraction of those eagles most likely to have come from or be migrant to areas outside the Diablo Range.

The removal of 27 eagles per year under the 450 MW PEIR alternative represents an annual loss equivalent to as much as 0.5% of the breeding population, which in itself is possibly sufficient to drive long-term population declines and therefore the contribution of the 450 MW PEIR alternative to this cumulative impact is cumulatively considerable. However, this is also such a small fraction that it would be nearly impossible to measure the effect, except for the fact that this species is closely studied in the Diablo Range and there are thus estimates not only of replacement by fledging of chicks, but also of immigration and emigration between the Diablo Range and the larger LAP. Provided that the golden eagle population in the Diablo Range continues to be closely monitored, it is likely that fatalities associated with the proposed project will likewise make a considerable contribution to cumulative effects on the golden eagle. However, since those impacts would be within the scope of the 450 MW PEIR alternative, there would be no substantial increase in the magnitude of the cumulative impact, relative to the conclusions in the PEIR.

The primary bats affected by wind energy development in the APWRA are Mexican free-tailed and hoary bats, which together account for more than 90% of the bat fatalities observed in Vasco Winds and Golden Hills monitoring; the two species make up approximately equal fractions of the observed mortality. The Mexican free-tailed bat is not a species of conservation concern, as it is extremely widespread and in most of its range is non-migratory. The hoary bat, however, is highly migratory, with a summer range that includes much of North America, and seasonal migrations to overwinter in southern California and Mexico (Cryan 2003). The species was early identified as the single most common bat fatality at wind farms at locations throughout the United States (Ellison 2012), both because it is a “tree bat” that is known to be attracted to forage at wind turbines (Arnett et al. 2016), and because it is highly migratory. Migrations in this species are not well understood, but it is likely that many of the fatalities observed at APWRA are derived from a large migratory population that summers north of the area.

As discussed in the analysis of impact BIO-14, most fatality surveys have substantially underestimated bat fatality rates. Based on data from recent surveys, it is likely that both APWRA and MHWRA facilities are causing bat fatalities at a rate of no less than 11/MW per year, and potentially, significantly higher. Using this rate of 11/MW per year, for the 450 MW PEIR alternative, there would be an estimated 4,950 bat fatalities per year, and for the combined APWRA and MHWRA, there would be 17,400 per year. Based on the fatality estimates summarized Chapter 5, Table 5-2, of the SEIR those fatalities would include approximately 1,150 hoary bats per year under the 450 MW PEIR alternative and approximately 5,030 hoary bats per year in the combined APWRA and MHWRA. Based on the detailed occurrence information summarized in Impact BIO-14, those fatalities would primarily accrue to migratory bats and would chiefly occur in August and September.

The possibility of an APWRA and MHWRA combined mortality of 5,030 bats per year represents 0.16% of a population of 2.5 million bats. However, the affected population is almost certainly smaller than 2.5 million. Some fraction of those bats are from the eastern U.S. and Canada, for instance. Even a change of 0.16% per year is a substantial impact on an animal with a population growth rate of only 1.5% per year, and the impact is greater if the affected population is smaller than 2.5 million bats. These fatalities are contributing to declines in a species that is already declining in the Pacific Northwest and may be declining in California; therefore, there is a cumulative impact. The impacts are large enough to cause or contribute to a long-term declining population trend. Wind power generation at APWRA and MHWRA are large enough to cause or contribute to a long-term declining population trend. The same conclusion applies, with lower confidence, to the 450 MW

PEIR alternative; therefore, the contribution of this alternative to the cumulative impact is cumulatively considerable.

Overall, the project would result in a significant and unavoidable cumulative impact on avian and bat mortality associated with turbine operations. For the burrowing owl and the golden eagle, the project contribution is not cumulatively considerable, but for hoary bats, it is cumulatively considerable because the impact is larger than estimated in the PEIR. There is limited confidence in this conclusion, however, due to the high level of uncertainty regarding hoary bat population status. There are no other feasible mitigation measures that can reduce these impacts to a less-than-significant level. As more fully explained in the Statement of Overriding Considerations contained in Exhibit C to the Resolution to which these CEQA Findings are attached, the County finds that there are environmental, economic, or other benefits of the project that override these cumulatively considerable impacts.

There are no other feasible mitigation measures that can reduce these impacts to a less-than-significant level. As more fully explained in the Statement of Overriding Considerations contained in Exhibit C to the Resolution to which these CEQA Findings are attached, the County finds that there are environmental, economic, or other benefits of the project that override these cumulatively considerable impacts.

Contributions to Cumulative Impacts that Can be Mitigated to a Less-Than-Significant Level

Aesthetics

The geographic scope considered for potential cumulative impacts on visual/aesthetic resources in the PEIR was the viewshed of the public and recreational users common to the program area. The PEIR concluded that the program would not result in a cumulative impact because the combined impacts of the projects would not create a new source of light, glare, or shadow flicker experienced by residents and businesses of sufficient magnitude that day or nighttime views in the area would be substantially degraded.

The characteristics of the proposed project with respect to construction activities and views during operation would be consistent with the evaluation of the project site in the PEIR. Existing Alameda and Contra Costa County policies would prevent the program from contributing to a cumulatively significant impact. Alameda County Policy ECAP 105, together with Mitigation Measures AES-2a, AES-2b, AES-c, AES-3, and AES-5, would prevent the proposed program from contributing to a cumulatively considerable impact.

Agricultural and Forestry Resources

The program area contains 24.21 acres of Prime Farmland and 0.36 acre of Farmland of Statewide Importance. PEIR Mitigation Measure AG-1 would ensure that no Prime Farmland or Farmland of Statewide Importance is converted to nonagricultural use. The characteristics of the proposed project with respect to construction activities and views during operation would be consistent with the evaluation of the project site in the PEIR, and PEIR Mitigation Measure Ag-1 would apply to the proposed project. Therefore, as described in the preceding section, no cumulative impact on farmland or forestry resources would occur.

Cultural Resources

Simultaneous construction of multiple repowering projects in the program area and other development and infrastructure projects in the vicinity of the program area could potentially result in significant impacts on historic resources, archaeological resources, and human remains, should they be present within the program area or the vicinity of the program area. However, the PEIR found that implementation of mitigation measures identified in the PEIR will ensure that impacts would not be such that they would result in or contribute to a cumulative impact. The characteristics of the proposed project with respect to construction activities and views during operation would be consistent with the evaluation of the project site in the PEIR. Therefore, as described in the preceding section, no cumulative impact on cultural resources would occur.

Energy

This topic was not addressed in the PEIR. Section 3.6, *Energy*, of this SEIR determined the project would generate no impact related to conflicting with or obstructing a state or local plan for renewable energy or energy efficiency. Project construction, which would be a short-term impact, would be reduced to less than significant by PEIR Mitigation Measure AQ-2a and AQ-2b. The residual impact related to energy use by construction equipment would be small, and would be far outweighed by the energy production of the repowered facilities described in the PEIR. No cumulative impact associated with the program or the project would occur.

Geology, Soils, and Paleontological Resources

The PEIR concluded that while the program could result in risks to life or property related to development on a site with active geologic and soil conditions there, implementation of PEIR Mitigation Measure GEO-1, which requires a site-specific geotechnical investigation and implementation of design recommendations from subsequent geotechnical report impacts related to geology and soils would be minimized and/or avoided. Therefore, the PEIR determined that the program's incremental, less-than-significant impacts related to geology and soils would not result in a cumulative impact. Simultaneous construction of multiple repowering projects in the program area and other development and infrastructure projects in the vicinity of the program area could potentially result in significant impacts on paleontological resources, should they be present within the program area or the vicinity of the program area. However, implementation of the mitigation measures to protect paleontological resources identified in the PEIR would ensure that project impacts would not be such that they would result in or contribute to a cumulative impact.

The characteristics of the proposed project with respect to construction activities and operation would be consistent with the evaluation of the project site in the PEIR. Therefore, as described in the preceding section, no cumulative impact on geology, soils, and paleontological resources would occur.

Greenhouse Gas Emissions

GHG emissions are inherently a cumulative concern, in that the significance of GHG emissions is determined based on whether such emissions would have a cumulatively considerable impact on global climate change. Although the geographic scope of cumulative impacts related to GHG emissions is global, the PEIR analysis focused on the state, the region, and the program's direct and/or indirect generation or offset of GHG emissions. The PEIR found that the program, the Golden Hills Project, and the Patterson Pass Project would result in a long-term net reduction of

approximately 96,049 metric tons of CO₂e per year, 18,727 metric tons of CO₂e per year, and 6,204 metric tons of CO₂e per year, respectively, and would not conflict with the State's GHG reduction goals. Wind energy generated by the project would reduce GHG emissions by approximately 26,006 metric tons CO₂e during its first year of operation. However, because the both the program and the project would contribute to a long-term net reduction in CO₂e, and each would implement mitigation to reduce impacts on policy compliance to less than significant, the contribution of the project to cumulative impacts would not be cumulatively considerable.

Hazards and Hazardous Materials

The PEIR determined that there would be no cumulative impact related to hazards and hazardous materials associated with program implementation. The characteristics of the proposed project with respect to construction activities and operation would be consistent with the evaluation of the project area in the PEIR. The project would be required to adhere to regulations that govern hazardous materials storage and handling, water quality BMPs, FAA regulations related to airspace, and fire prevention and management. Together, these measures would ensure that impacts related to exposure to hazardous materials would be minimized and/or avoided. Therefore, as described in the preceding section, no cumulative impact would occur.

Hydrology and Water Quality

The PEIR found that Mitigation Measure WQ-1 would ensure that through compliance with the National Pollution Discharge Elimination System, all impacts related to hydrology and water quality would be reduced to less than significant. Furthermore, other projects in the same watersheds would also be required to comply with NPDES requirements. Therefore, a cumulative impact would not occur.

The characteristics of the proposed project with respect to construction activities and operation would be consistent with the evaluation of the project site in the PEIR. Therefore, as described in the preceding section, no cumulative impact on hydrology or water quality would occur.

Noise

Implementation of PEIR Mitigation Measure NOI-1 would ensure compliance with County noise standards and would avoid significant cumulative operational noise impacts. Construction of multiple repowering projects simultaneously in the program area could potentially result in a cumulative construction noise impact at residences located near the construction activities. However, as concluded in the PEIR, the impact would be temporary and localized and implementation of PEIR Mitigation Measure NOI-2 would reduce cumulative impacts to a less-than-significant level. The characteristics of the proposed project with respect to construction and operation related noise would be consistent with the evaluation of the project site in the PEIR, and would be required to implement PEIR Mitigation Measures NOI-1 and NOI-2. Therefore, as described in the preceding section, no cumulative impact would occur.

Transportation/Traffic

The PEIR cumulative transportation analysis considered other projects in the program area vicinity that would involve concurrent construction activities and that could use the same access roadways to project sites and found potentially significant cumulative impacts on transportation. Similar to the PEIR, the project cumulative transportation analysis considers other projects in the program

area vicinity that would involve construction activities concurrent with those of the proposed project and that could use the same access roadways to project site. The project transportation analysis concludes that with implementation of PEIR Mitigation Measure TRA-1, all transportation impacts would be reduced to a less-than-significant level. Based on the relatively general information that was known at the time that the PEIR was prepared, the PEIR concluded that any repowering project with construction activities occurring concurrent with that of the Sand Hill Repowering Project site would result in a cumulatively considerable contribution to a cumulative traffic impact. Construction of the proposed project could occur concurrently with the Sand Hill Repowering Project; however, the Sand Hill Repowering Project as currently defined is smaller in scale and capacity than it was described in the PEIR. Furthermore, construction traffic associated with the proposed project would not share local roads with construction equipment that would be required for the Sand Hill Repowering Project, and any construction-related freeway traffic would use different off- and on-ramps. Therefore, the project would not make a cumulatively considerable contribution to the cumulative traffic impact previously identified in the PEIR.

Wildfire

Wildfire was addressed in the PEIR as a part of the assessment of PEIR Section 3.9 *Hazards and Hazardous Materials* impacts, and the cumulative impacts analysis for this topic was determined to be less than significant (described above). Although the program and project site are located in areas designated between moderate and very high fire hazard severity zones, the program area includes a network of maintenance and fire roads that can be utilized by the California Department of Forestry and Fire Prevention and the Alameda County Fire Department to rapidly access and suppress any fires that may arise in the program area. Furthermore, repowered wind turbines associated with the program have improved upon older models in terms of fire ignition risk and are anticipated to result in a reduction of potential fire ignitions compared to non-repowered conditions. Lastly, repowering projects must comply with the *Altamont Pass Wind Farms Fire Requirements* as described in Exhibit C of the 2005 Conditional Use Permits, which would also reduce fire risk, and construction activities associated with repowering projects must follow Occupational Safety and Health Administration requirements regarding the safe control and storage of combustible materials. Therefore, a cumulative impact associated with wildfire risk would not occur.

No Contribution to a Cumulative Impact

Based on the discussion in Chapter 5 of the SEIR and the entire record before the County, the County finds that the proposed project will not have a cumulatively considerable contribution to the following impact areas because the program and project, respectively, would generate no impact in these areas.

- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation

- Utilities and Service Systems

Findings for Alternatives Considered in the PEIR

Section 15091(a)(3) of the State CEQA Guidelines requires findings about the feasibility of project alternatives whenever a project within the responsibility and jurisdiction of the lead agency will have a significant environmental effect that has not been mitigated to a less-than-significant level.

Identification of Project Objectives

The State CEQA Guidelines state that the “range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant effects” of the project (CEQA Guidelines Section 15126[d][2]). Thus, an evaluation of the project objectives is key to determining which alternatives should be assessed in the SEIR.

As explained in Section 4.1.2 of the SEIR,

underlying purpose of the Mulqueeney Ranch Wind Repowering Project (project) is to repower a segment of the Program EIR (PEIR) program area with a commercially viable wind energy facility that would help meet the state’s Renewables Portfolio Standard (RPS), greenhouse gas (GHG) reduction, and carbon neutrality goals.

The fundamental objective of the proposed project is as follows:

- To site up to 36 new wind turbines that will produce and deliver 80 megawatts (MW) of commercially viable wind energy to the electrical grid through a long-term power purchase agreement with a local community choice aggregator.

The secondary objectives of the proposed project are as follows:

- To achieve the above fundamental objectives while avoiding and minimizing environmental impacts by:
 - Constructing the turbines and necessary infrastructure with the appropriate use of scientific observation to site turbines to avoid and minimize adverse effects and mortality of native plants, terrestrial species, bats and birds;
 - Applying an avian fatality monitoring protocol that is based on the latest science and monitoring results to determine whether applicable thresholds are exceeded, and, if needed, implementing adaptive management to reduce fatalities to the extent feasible; and
 - Contributing financial and scientific resources to the conservation and enhancement of protected bird and bat species in the Altamont Pass Wind Resource Area (APWRA) region, consistent with mitigation measures identified in the PEIR for repowering the APWRA.
- To increase local short-term and long-term employment opportunities.
- To contribute to repowering of the APWRA and provide economic benefits to Alameda County.

Alternatives Analyzed in the SEIR

The State CEQA Guidelines state that the “range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant effects” of the project. In addition, the SEIR must examine the No Project alternative. The County evaluated the alternatives listed below.

- No Project – No Repowering Alternative
- Micro-Sited Alternative
- Reduced Project Alternative

No Project—No Repowering Alternative

Under the No Project – No Repowering Alternative, no repowering would occur, and the project site would remain in its existing condition.

Finding: Based on the SEIR and the entire record before the County, the County rejects the No Project—No Repowering alternative as infeasible because it would not meet most of the objectives of the project.

Explanation: The No Project—No Repowering alternative would fail to meet most of the following project objectives and is therefore rejected as infeasible.

- *Fundamental objective:*

To site up to 36 new wind turbines that will produce and deliver 80 megawatts (MW) of commercially viable wind energy to the electrical grid through a long-term power purchase agreement with a local community choice aggregator.

Because no new turbines would be sited on the project site under this alternative, it will not produce and deliver wind energy.

- *Secondary objective:* to minimize environmental impacts by:
 - Constructing the turbines and necessary infrastructure with the appropriate use of scientific observation to site turbines to avoid and minimize adverse effects and mortality of native plants, terrestrial species, bats and birds

Because now new turbines would be sited under this alternative, there would no use of scientific observation to site turbines to avoid and minimize adverse effects and mortality of native plants, terrestrial species, bats and birds.

- *Secondary objective:* to minimize environmental impacts by:
 - Applying an avian fatality monitoring protocol that is based on the latest science and monitoring results to determine whether applicable thresholds are exceeded, and, if needed, implementing adaptive management to reduce fatalities to the extent feasible.

Without installation of new turbines, there would be no application of avian fatality monitoring based on the latest science, monitoring results, and adaptive management techniques, and there would be fewer opportunities for research on bird and bat mortality.

- *Secondary objective:* to minimize environmental impacts by:
 - Contributing financial and scientific resources to the conservation and enhancement of protected bird and bat species in the Altamont Pass Wind Resource Area (APWRA) region, consistent with mitigation measures identified in the PEIR for repowering the APWRA

Under this alternative, the County would not receive payments/fees from the project and would not contribute to the evolution of science around the conservation and enhancement of protected bird and bat species in the APWRA region.

- *Secondary objective:* to increase local short-term and long-term employment opportunities.

Without installation of new turbines, there would be no increase in employment opportunities associated with the construction and operation of wind facilities.

- *Secondary objective:* to contribute to repowering of the APWRA and provide economic benefits to Alameda County

Without installation of new turbines, there would be no contribution to repowering the APWRA or associated economic benefits to Alameda County.

Reduced Project Alternative

The Reduced Project Alternative would: (1) reduce the size of the project in terms of both RSA and the number of turbines; (2) increase turbine distance from eagle nests and eagle activity centers; (3) place turbines in consideration of the results of the micro-siting study (Appendix F) and supplemental micro-siting study (Appendix G); and (4) implement seasonal cut-in speed changes to attempt to reduce impacts on golden eagles and bats.

In total, the Reduced Project Alternative would eliminate one-third (12) of the project's 36 turbine sites while retaining an operational capacity of 80 MW,³ and would reduce the RSA from 40.7 to 32.8 total hectares, a 19% reduction compared to the project. This alternative would also place all turbines at least 0.5 mile from golden eagle nests and eagle activity centers. The number of turbines placed within 1 mile of eagle nests and eagle activity centers would be reduced to 7, compared to 13 turbines for the proposed project. In total, the Reduced Project Alternative would reduce the number of high-risk turbines as defined in the micro-siting studies to 2, compared to 11 under the proposed project. Furthermore, the cut-in speed during daylight hours year-round would increase to 5 meters/second (m/s) to reduce golden eagle fatality risk. During the fall migration for bats the cut-in speed would also increase to 5 meters/second (m/s). This would occur for an eight-week period from August 1 to September 30, from sunset to sunrise.

Finding: Based on the SEIR and the entire record before the County, the County finds that the Reduced Project Alternative would reduce some of the identified significant impacts and would meet most of the project's objectives.

Explanation: The Reduced Project Layout alternative would most of the following project objectives.

- *Fundamental objective:*

³ Although the nominal capacity (sum of turbine capacities) would be 83.16 MW under this alternative, operation of the turbines would be electronically limited to a maximum project nameplate capacity of 80 MW.

To site up to 36 new wind turbines that will produce and deliver 80 megawatts (MW) of commercially viable wind energy to the electrical grid through a long-term power purchase agreement with a local community choice aggregator.

The alternative would partially meet this objective; it would not develop 36 new wind turbines, but would retain the project's operational capacity.

- *Secondary objective:* to minimize environmental impacts by:
 - Constructing the turbines and necessary infrastructure with the appropriate use of scientific observation to site turbines to avoid and minimize adverse effects and mortality of native plants, terrestrial species, bats and birds

This alternative would generally meet this project objective; however, because the project would be reduced, there would be fewer opportunities to use of scientific observation to site turbines to avoid and minimize adverse effects and mortality of native plants, terrestrial species, bats and birds.

- *Secondary objective:* to minimize environmental impacts by:
 - Applying an avian fatality monitoring protocol that is based on the latest science and monitoring results to determine whether applicable thresholds are exceeded, and, if needed, implementing adaptive management to reduce fatalities to the extent feasible.

This alternative would meet this objective, because it would allow for application of science-based monitoring protocol.

- *Secondary objective:* to minimize environmental impacts by:
 - Contributing financial and scientific resources to the conservation and enhancement of protected bird and bat species in the Altamont Pass Wind Resource Area (APWRA) region, consistent with mitigation measures identified in the PEIR for repowering the APWRA

Under this alternative, the County would receive payments/fees from the project and the project would contribute to the evolution of science around the conservation and enhancement of protected bird and bat species in the APWRA region.

- *Secondary objective:* to increase local short-term and long-term employment opportunities.

This alternative would meet this objective, as it would still increase in employment opportunities associated with the construction and operation of wind facilities, although to a lesser extent than the proposed project.

- *Secondary objective:* to contribute to repowering of the APWRA and provide economic benefits to Alameda County

This alternative would meet this objective as it would contribute to repowering the APWRA or associated economic benefits to Alameda County.

Micro-Sited Alternative

Under the Micro-Sited Alternative, the applicant would install the same number of turbines as the project, but they would be placed at locations determined through the completed micro-siting study (Appendix F) that was prepared for the project with the objective to reduce avian impacts. Based on this study, this alternative would locate 31 of the project's 36 turbines at different sites to reduce

individual turbine bird strike risks, would continue to limit operational capacity to 80 MW, and would maintain the same RSA as the project at 40.7 hectare.

Finding: Based on the SEIR and the entire record before the County, the County finds that the Micro-Sited Alternative would result in similar impacts to the proposed project and would meet most of the project's objectives.

Explanation: The Micro-Sited Alternative would meet the following project objectives.

- *Fundamental objective:*

- To site up to 36 new wind turbines that will produce and deliver 80 megawatts (MW) of commercially viable wind energy to the electrical grid through a long-term power purchase agreement with a local community choice aggregator.

The alternative would meet this objective, as it would still develop 36 new wind turbines and retain the project's operational capacity.

- *Secondary objective:* to minimize environmental impacts by:

- Constructing the turbines and necessary infrastructure with the appropriate use of scientific observation to site turbines to avoid and minimize adverse effects and mortality of native plants, terrestrial species, bats and birds

This alternative would meet this project objective, as it would construct the turbines and associated infrastructure with the use of scientific observation to avoid and minimize effects on native plants, terrestrial species, bats, and birds.

- *Secondary objective:* to minimize environmental impacts by:

- Applying an avian fatality monitoring protocol that is based on the latest science and monitoring results to determine whether applicable thresholds are exceeded, and, if needed, implementing adaptive management to reduce fatalities to the extent feasible.

This alternative would meet this objective, because it would allow for application of science-based monitoring protocol.

- *Secondary objective:* to minimize environmental impacts by:

- Contributing financial and scientific resources to the conservation and enhancement of protected bird and bat species in the Altamont Pass Wind Resource Area (APWRA) region, consistent with mitigation measures identified in the PEIR for repowering the APWRA

Under this alternative, the County would receive payments/fees from the project and the project would contribute to the evolution of science around the conservation and enhancement of protected bird and bat species in the APWRA region.

- *Secondary objective:* to increase local short-term and long-term employment opportunities.

This alternative would meet this objective, as it would still increase in employment opportunities associated with the construction and operation of wind facilities.

- *Secondary objective:* to contribute to repowering of the APWRA and provide economic benefits to Alameda County

This alternative would meet this objective as it would contribute to repowering the APWRA or associated economic benefits to Alameda County.

Findings and Recommendations Regarding Significant Irreversible Changes

CEQA Section 21100(b)(2)(B) requires that an EIR identify any significant effect on the environment that would be irreversible if the project were implemented. Section 15126.2(c) of the State CEQA Guidelines characterizes irreversible environmental changes as those involving a large commitment of nonrenewable resources or irreversible damage resulting from environmental accidents. The State CEQA Guidelines describe three distinct categories of significant irreversible changes: changes in land use that would commit future generations to specific uses, irreversible changes from environmental actions, and consumption of nonrenewable resources. The project's significant and irreversible changes are discussed in Section 5.5 of the SEIR.

Findings: Based on the SEIR and the entire record before the County, the County finds that the Project would not result in any significant irreversible effect on the environment.

Explanation: The project area is currently developed as a windfarm, with coexisting grazing activities that would continue. The *East County Area Plan* (ECAP) designates the entire program area as Large Parcel Agriculture, which carries a zoning designation of Agriculture. According to the ECAP, a wind farm is a permitted use with a Conditional Use Permit. The program and the project would not commit future generations to or introduce changes in land use that would vary from the existing conditions.

The PEIR found that the program involved the construction and repowering of existing wind farms on approximately 50,000 acres in unincorporated eastern Alameda County, and that the commitment of nonrenewable resources, such as sand, gravel and other components of cement, metals and fossil fuels, necessary for construction and operation of the repowered wind farms would be irreversible. The project would similarly commit such materials for construction and operation of the repowered wind farm, although on much a smaller scale, but which would also constitute an irreversible commitment of nonrenewable resources.

The PEIR found that construction of repowered wind farms would require the consumption of nonrenewable resources, such as fuel for construction vehicles and equipment. However, such use would be limited to the short-term construction period. Operation and maintenance of the project would not increase the use of nonrenewable resources relative to existing conditions. The temporary, construction-related increase would not result in significant use of nonrenewable resources and would not commit future generations to similar uses. Moreover, the primary objective of the project is to provide an economically viable source of clean, renewable electricity generation that meets California's growing demand for power and fulfills numerous state and national renewable energy policies. The intent is to specifically reduce consumption of non-renewable sources of energy such as coal, natural gas, and other hydrocarbon-based fuels.

Findings and Recommendations Regarding Growth-Inducing Impacts

Section 21100(b)(5) of CEQA requires an EIR to discuss how a project, if implemented, may induce growth and the impacts of that induced growth (see also CEQA Guidelines Section 15126). CEQA requires the EIR to discuss specifically "the ways in which the project could foster economic or

population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment” (CEQA Guidelines Section 15126.2[d]). The CEQA Guidelines do not provide specific criteria for evaluating growth inducement and state that growth in any area is “necessarily beneficial, detrimental, or of little significance to the environment.” CEQA does not require separate mitigation for growth inducement as it is assumed that these impacts are already captured in the analysis of environmental impacts (see Chapter 3, *Impact Analysis*). Furthermore, the CEQA Guidelines require that an EIR “discuss the ways” a project could be growth inducing and to “discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment.”

Growth can be induced in a number of ways, such as elimination of obstacles to growth, stimulation of economic activity within the region, and precedent-setting action such as the provision of new access to an area or a change in a restrictive zoning or general plan land use designation. In general, a project could be considered growth-inducing if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way. However, the State CEQA Guidelines do not require a prediction or speculation of where, when, and in what form such growth would occur (State CEQA Guidelines, Section 15145). The project’s growth-inducing impacts are discussed in Section 5.3 of the SEIR.

Findings: Based on the SEIR and the entire record before the County, the County finds that the proposed project would not induce growth for the following reasons.

In general, a project could be considered growth-inducing if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way. However, the CEQA Guidelines do not require a prediction or speculation of where, when, and in what form such growth would occur (CEQA Guidelines Section 15145).

PEIR Section 5.2 provided a detailed description of the potential growth-inducing impacts of the program. The conclusion of the PEIR was that the program would not be expected to indirectly induce population growth through the construction of new service roads or electrical infrastructure and that the employment opportunities provided by program construction are not anticipated to induce indirect growth in the region. The analysis in Section 5.2 of the PEIR is incorporated here by reference. Similar to the findings of the PEIR regarding the two projects analyzed in that document, the Mulqueeney Ranch Repowering Project’s potential for growth inducement would be similar to the program but of a smaller scale. Therefore, the project would not be expected to indirectly induce population growth through the construction of new service roads or electrical infrastructure and the employment opportunities provided by project construction are not anticipated to induce indirect growth in the region.

Exhibit B

Mulqueeney Ranch Repowering Project Mitigation Monitoring and Reporting Program

Purpose of and Need for Monitoring

In compliance with CEQA, a Subsequent EIR (SEIR) has been prepared for the Mulqueeney Ranch Wind Repowering Project (project or proposed project). The SEIR identified potentially significant impacts in the resource areas listed below, as well as mitigation measures to reduce these impacts to a less-than-significant level where possible.

CEQA requires that a lead agency adopt a Mitigation Monitoring and Reporting Program (MMRP) for the measures the agency has proposed to avoid or mitigate significant environmental effects (CEQA Guidelines Section 15097). The purpose of the MMRP is to ensure that the mitigation measures identified in the SEIR are implemented. Table MMRP-1, which follows this introductory section, identifies the mitigation measures for the proposed project, the parties responsible for implementing and monitoring the measures, the timing of each measure, and a summary of the actions necessary to implement and monitor each measure.

Mitigation Monitoring and Reporting Program

The MMRP has been prepared for the proposed project in accordance with Public Resources Code 21081.6, which specifies that when a public agency makes findings required by paragraph (1) of subdivision (a) of Section 21081, it “shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.” Public Resources Code 21081.6 further specifies that the MMRP will “ensure compliance during project implementation.”

This MMRP is intended to ensure the effective implementation of mitigation measures that are within the County’s authority to implement, including monitoring where identified, throughout all phases of development and operation of the proposed project.

Table MMRP-1. Mitigation Monitoring and Reporting Plan

Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
Aesthetics				
<p>PEIR Mitigation Measure AES-1: Limit construction to daylight hours</p> <p>Major construction activities will not be undertaken between sunset and sunrise or on weekends. Construction activity is specifically prohibited from using high-wattage lighting sources to illuminate work sites after sunset and before sunrise, with the exception of nighttime deliveries under the approved transportation control plan or other construction activities that require nighttime work for safety considerations.</p>	During construction	County—adopt a Condition of Approval; Operator—ensure construction hours are maintained	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure AES-2b: Maintain site free of debris and restore abandoned roadways</p> <p>Project sites will be cleaned of all derelict equipment, wind turbine components not required for the project, and litter and debris from old turbines and past turbine operations. Such litter and debris may include derelict turbines, obsolete anemometers, unused electrical poles, and broken turbine blades. In addition, abandoned roads that are no longer in use on such parcels will be restored and hydroseeded to reclaim the sites and remove their visual traces from the viewscape, except in cases where the resource agencies (U.S. Fish and Wildlife Service and California Department of Fish and Wildlife) recommend that the features be left in place for resource protection. All parcels with new turbines will be maintained in such a manner through the life of project operations and until the parcels are reclaimed in accordance with the approved reclamation plan.</p>	During construction and operation	County—adopt a Condition of Approval; Operator—ensure that site conditions are maintained as required	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure AES-2c: Screen surplus parts and materials</p> <p>Surplus parts and materials that are kept onsite will be maintained in a neat and orderly fashion and screened from view. This can be accomplished by using a weatherproof camouflage material that can be draped over surplus parts and materials stockpiles. Draping materials will be changed out to accommodate for seasonal variations so that surplus materials are camouflaged in an effective manner when grasses are both green and brown.</p>	During construction and operation	County—adopt a Condition of Approval; Operator—ensure that site conditions are maintained as required	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
Air Quality				
<p>PEIR Mitigation Measure AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures</p> <p>The project proponents will require all contractors to comply with the following requirements for all areas with active construction activities.</p> <ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered as needed to maintain dust control onsite-approximately two times per day. • All haul trucks transporting soil, sand, or other loose material offsite will be covered. • All visible mud or dirt track-out onto adjacent public roads will be removed 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 will be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used. • Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points. • All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified visible emissions evaluator. • Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person will respond and take corrective action within 48 hours. The air district's phone number will also be visible to ensure compliance with applicable regulations. 	During construction	County—adopt a Condition of Approval; Operator—ensure compliance	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>PEIR Mitigation Measure AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures</p> <p>The project proponents will require all contractors to comply with the following requirements for all areas with active construction activities.</p> <ul style="list-style-type: none"> • During construction activities, all exposed surfaces will be watered at a frequency adequate to meet and maintain fugitive dust control requirements of all relevant air quality management entities. • All excavation, grading, and/or demolition activities will be suspended when average wind speeds exceed 20 mph, as measured at the Livermore Municipal Airport. • Wind breaks (e.g., trees, fences) will be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50% air porosity. • Vegetative ground cover (e.g., fast-germinating native grass seed) will be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. • If feasible and practicable, the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time will be limited. • Construction vehicles and machinery, including their tires, will be cleaned prior to leaving the construction area to remove vegetation and soil. Cleaning stations will be established at the perimeter of the construction area. • Site accesses to a distance of 100 feet from the paved road will be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel. • Sandbags or other erosion control measures will be installed to prevent silt runoff to public roadways from sites with a slope greater than 1%. • The idling time of diesel powered construction equipment will be minimized to 2 minutes. • The project will develop a plan demonstrating that the offroad equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20% NOX reduction and 45% PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions 	During construction	County—adopt a Condition of Approval; Operator—ensure compliance	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.</p> <ul style="list-style-type: none"> • Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings). • All construction equipment, diesel trucks, and generators will be equipped with BACT for emission reductions of NOX and PM. • All contractors will use equipment that meets ARB's most recent certification standard for offroad heavy duty diesel engines. 				
<p>2020 NEW Mitigation Measure AQ-2c: Reduce construction-related air pollutant emissions to below BAAQMD NOx thresholds</p> <p>The project proponents will ensure construction-related emissions do not exceed BAAQMD's construction NOX threshold of 54 pounds per day. In addition to implementing PEIR Mitigation Measures AQ-2a and AQ-2b, the project proponents will coordinate with BAAQMD (or the Clean Air Foundation) to purchase NOX credits to offset remaining NOX construction and operations emissions exceeding BAAQMD thresholds.</p> <p>The project proponents will track construction activity, estimate emissions, and enter into a construction mitigation contract with BAAQMD to offset NOX emissions that exceed BAAQMD NOX maximum daily threshold of 54 pounds per day.</p> <p>The maximum daily emissions will be calculated on a daily basis by determining total construction-related NOX emissions for each calendar day. BAAQMD will use the mitigation fees provided by the project proponents to implement emissions reduction efforts that offset project NOX emissions that exceed the BAAQMD threshold.</p> <p>This mitigation includes the following specific requirements:</p> <ul style="list-style-type: none"> • The project proponents will require construction contractors to provide daily construction activity monitoring data for all construction activities associated with the project to estimate actual construction emissions, including the effect of equipment emissions reduction measures. The project proponents will submit the daily construction activity monitoring data and an estimate of actual daily construction emissions to the lead agency and BAAQMD for review by the 15th day of each month for the 	During construction and until final mitigation fees are paid	County—track construction activity; BAAQMD/other governmental entity—ensure compliance with construction mitigation contract	County and BAAQMD/other government agency	Monitor compliance with Construction Mitigation Contract

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>prior construction month. The lead agency will examine the construction and operational activity monitoring to ensure it is representative, and BAAQMD will examine the emissions estimate to ensure it is calculated properly.</p> <ul style="list-style-type: none"> • After acceptance of the emissions estimates by BAAQMD for the prior month, the project proponents will submit mitigation fees to BAAQMD to fund offsets for the portion of daily emissions that exceed the maximum daily NOX threshold. The mitigation fees will be based on the mitigation contract with BAAQMD (see discussion below) but will not exceed the emissions-reduction project cost-effectiveness limit set for the Carl Moyer Program for the year in which mitigation fees are paid. The current Carl Moyer Program cost-effectiveness limit is \$30,000 per weighted ton of criteria pollutants (NOX + ROG + [20*PM]). An administrative fee of 5% will be paid by the project proponents to BAAQMD to implement the program. • The mitigation fees will be used by BAAQMD to fund projects that are eligible for funding under the Carl Moyer Program guidelines or other BAAQMD emissions-reduction incentive programs that meet the Carl Moyer Program cost-effectiveness threshold and are real, surplus, quantifiable, and enforceable. • The project proponents will enter into a mitigation contract with BAAQMD for the emissions-reduction incentive program. The mitigation contract will include the following: <ul style="list-style-type: none"> ○ Identification of appropriate offsite mitigation fees required for the project. ○ Timing for submission of mitigation fees. ○ Processing of mitigation fees paid by the project proponents. ○ Verification of emissions estimates submitted by the project proponents. ○ Verification that offsite fees are applied to appropriate mitigation programs within the SFBAAB. • The mitigation fees will be submitted within 4 weeks of BAAQMD acceptance of an emissions estimate provided by the project proponents showing that the maximum daily NOX threshold was exceeded (when measured on a daily basis). 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
Biological Resources				
<p>2020 Updated PEIR Mitigation Measure BIO-1a: Conduct surveys to determine the presence or absence of special-status plant species</p> <p>The project proponent will conduct surveys for the special-status plant species within and adjacent to all project sites. All surveys will be conducted by qualified biologists in accordance with the appropriate protocols.</p> <p>Special-status plant surveys will be conducted in accordance with <i>Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities</i> (California Department of Fish and Wildlife 2018) during the season that special-status plant species would be evident and identifiable—i.e., during their blooming season. No more than 3 years prior to ground-disturbing repowering activities and during the appropriate identification periods for special-status plants (Table 3.4-2), a qualified biologist (as determined by Alameda County) will conduct field surveys within proposed construction areas, and the immediately adjacent areas to determine the presence of habitat for special-status plant species. The project proponent will submit a report documenting the survey results to Alameda County for review and approval prior to conducting any repowering activities. The report will include the location and description of all proposed work areas, the location and description of all suitable habitat for special-status plant species, and the location and description of other sensitive habitats (e.g., vernal pools, wetlands, riparian areas). Additionally, the report will outline where additional species and/or habitat-specific mitigation measures are required. This report will provide the basis for any applicable permit applications where incidental take of listed species may occur.</p>	Within 3 years prior to site disturbance	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species</p> <p>The project proponent will ensure that the following BMPs, in accordance with practices established in the EACCS, will be incorporated into the final project design and construction documents.</p> <ul style="list-style-type: none"> Employees and contractors performing ground-disturbing activities, including construction and maintenance activities will receive environmental sensitivity training. Training will include review of environmental laws, mitigation measures, permit conditions, and other requirements that must be followed by all personnel to reduce or avoid effects on special-status species and sensitive habitats during construction activities. 	Prior to and during all construction activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<ul style="list-style-type: none"> Environmental tailboard trainings will take place on an as-needed basis in the field. These trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during construction and maintenance activities. Directors, managers, superintendents, and the crew leaders will be responsible for ensuring that crewmembers comply with the guidelines. Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable. Off-road vehicle travel outside the project footprint will be avoided and minimized to the extent possible within the project footprint. Material will be stockpiled only in areas that do not support special-status species or sensitive habitats. Grading will be restricted to the minimum area necessary. Prior to ground-disturbing activities in sensitive habitats, project construction boundaries and access areas will be flagged and temporarily fenced during construction to reduce the potential for vehicles and equipment to stray into adjacent habitats. Vehicles or equipment will not be refueled within 100 feet of a wetland, stream, or other waterway unless a bermed and lined refueling area (i.e., a created berm made of sandbags or other removable material) is constructed. Erosion control measures will be implemented to reduce sedimentation in nearby aquatic habitat when activities are the source of potential erosion. Plastic monofilament netting (erosion control matting) or similar material containing netting will not be used at the project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds. Significant earth moving-activities will not be conducted in riparian areas within 24 hours of predicted storms or after major storms (defined as 1-inch of rain or more). The following will not be allowed at or near work sites for project activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations). 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>PEIR Mitigation Measure BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones</p> <p>Where surveys determine that a special-status plant species is present in or adjacent to a project site, direct and indirect impacts of the project on the species will be avoided through the establishment of activity exclusion zones, within which no ground-disturbing activities will take place, including construction of new facilities, construction staging, or other temporary work areas. Activity exclusion zones for special-status plant species will be established around each occupied habitat site, the boundaries of which will be clearly marked with standard orange plastic construction exclusion fencing or its equivalent. The establishment of activity exclusion zones will not be required if no construction-related disturbances will occur within 250 feet of the occupied habitat. The size of activity exclusion zones may be reduced through consultation with a qualified biologist and with concurrence from CDFW based on site-specific conditions.</p>	Prior to and during all site disturbance	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>2020 Updated PEIR Mitigation Measure BIO-1d: Compensate for impacts on special-status plant species</p> <p>The project proponent will avoid or minimize temporary and permanent impacts on special-status plants that occur on the project site and will compensate for impacts on special-status plant species. Although all impacts on large-flowered fiddleneck, diamond-petaled California poppy, and caper-fruited tropidocarpum will be avoided, impacts on other special-status plant species will be avoided to the extent feasible, and any unavoidable impacts will be addressed through compensatory mitigation.</p> <p>Where avoidance of impacts on a special-status plant species is infeasible, loss of individuals or occupied habitat of a special-status plant species occurrence will be compensated for through the acquisition, protection, and subsequent management in perpetuity of other existing occurrences at a minimum 2:1 ratio (occurrences preserved:occurrences impacted). For focal species identified in the EACCS (San Joaquin spearscale, big tarplant, Congdon's tarplant, palmate-bracted bird's-beak, Livermore Valley tarplant, and recurved larkspur), loss of individuals and occupied habitat will be compensated at 5:1, consistent with the EACCS. The project proponent will provide detailed information to the County and CDFW on the location of the preserved occurrences, quality of the preserved habitat, feasibility of protecting and managing the areas in-perpetuity, responsibility parties, and other pertinent information. The preserved habitat will be confirmed to support populations of the impacted species and will be preserved in perpetuity via deed restriction, establishment of a conservation easement, or similar preservation</p>	Prior to and during all site disturbance; provide compensation as required by permit term	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
mechanism. A qualified botanist or plant ecologist will prepare a preservation plan or long-term management plan for the site containing at a minimum: a monitoring plan and performance criteria for the preserved plant population; a description of remedial measures to be performed in the event that performance criteria are not met; a description of maintenance activities to be conducted on the site, including weed control, trash removal, irrigation, and control of herbivory by livestock and wildlife; and an adequate funding mechanism to ensure long-term management of the preserved habitat. If suitable occurrences of a special-status plant species are not available for preservation, then the project will be redesigned to remove features that would result in impacts on that species.				
<p>PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas</p> <p>The project proponents will retain a qualified biologist (as determined by Alameda County) to conduct periodic monitoring of decommissioning, repowering, and reclamation activities that occur adjacent to sensitive biological resources (e.g., special-status species, sensitive vegetation communities, wetlands). Monitoring will occur during initial ground disturbance where sensitive biological resources are present and weekly thereafter or as determined by the County in coordination with a qualified biologist. The biologist will assist the crew, as needed, to comply with all project implementation restrictions and guidelines. In addition, the biologist will be responsible for ensuring that the project proponent or its contractors maintain exclusion areas adjacent to sensitive biological resources, and for documenting compliance with all biological resource–related mitigation measures.</p>	During all site disturbance	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure BIO-2: Prevent introduction, spread, and establishment of invasive plant species</p> <p>To avoid and minimize the introduction and spread of invasive nonnative plant species, the project proponent will implement the following BMPs.</p> <ul style="list-style-type: none"> Construction vehicles and machinery will be cleaned prior to entering the construction area. Cleaning stations will be established at the perimeter of the construction area along all construction routes or immediately offsite. Vehicles will be washed only at approved areas. No washing of vehicles will occur at job sites. To discourage the introduction and establishment of invasive plant species, seed mixtures and straw used within natural vegetation will be 	During all site disturbance	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>either rice straw or weed-free straw, as allowed by state and federal regulation of stormwater runoff.</p> <p>In addition, the project proponent will prepare and implement erosion and sediment control plans to control short-term and long-term erosion and sedimentation effects and to restore soils and vegetation in areas affected by construction activities (2020 Updated PEIR Mitigation Measure BIO-1b). Prior to initiating any construction activities that will result in temporary impacts on natural communities, a restoration and monitoring plan will be developed for temporarily affected habitats in each project area (PEIR Mitigation Measure BIO-5c). Restoration and monitoring plans will be submitted to the County and CDFW for approval. These plans will include methods for restoring soil conditions and revegetating disturbed areas, seed mixes, monitoring and maintenance schedules, adaptive management strategies, reporting requirements, and success criteria. Following completion of project construction, the project proponents will implement the revegetation plans to restore areas disturbed by project activities to a condition of equal or greater habitat function than occurred prior to the disturbance.</p>				
<p>PEIR Mitigation Measure BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species</p> <p>No more than 3 years prior to ground-disturbing repowering activities, a qualified biologist (as determined by Alameda County) will conduct field surveys within decommissioning, repowering, and restoration work areas and their immediate surroundings to determine the presence of habitat for special-status wildlife species. The project proponent will submit a report documenting the survey results to Alameda County for review prior to conducting any repowering activities. The report will include the location and description of all proposed work areas, the location and description of all suitable habitat for special-status wildlife species, and the location and description of other sensitive habitats (e.g., vernal pools, wetlands, riparian areas). Additionally, the report will outline where additional species- and/or habitat-specific mitigation measures are required. This report may provide the basis for any applicable permit applications where incidental take may occur.</p>	Prior to and during all site disturbance	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure BIO-3b: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-foot hygrotus diving beetle</p> <p>Where suitable habitat for listed vernal pool branchiopods and curved-foot</p>	During construction and operation	County—adopt a Condition of Approval; Operator—	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>hygrotus diving beetle are identified within 250 feet (or another distance as determined by a qualified biologist based on topography and other site conditions) of proposed work areas, the following measures will be implemented to ensure that the repowering projects do not have adverse impacts on listed vernal pool branchiopods or curved-foot hygrotus diving beetle. Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., ESA incidental take permit).</p> <ul style="list-style-type: none"> • Avoid all direct impacts on sandstone rock outcrop vernal pools. • Ground disturbance will be avoided from the first day of the first significant rain (1 inch or more) until June 1, or until pools remain dry for 72 hours and no significant rain is forecast on the day of such ground disturbance. • If vernal pools, clay flats, alkaline pools, ephemeral stock tanks (or ponds), sandstone pools, or roadside ditches are present within 250 feet of the work area (or another appropriate distance as determined by a qualified biologist on the basis of topography and other site conditions), the biologist will stake and flag an exclusion zone prior to construction activities. The width of the exclusion zone will be based on site conditions and will be the maximum practicable distance that ensures protection of the feature from direct and indirect effects of the project. Exclusion zones will be established around features whether they are wet or dry at the time. The exclusion zone will be fenced with orange construction zone and erosion control fencing (to be installed by construction crew). • No herbicide will be applied within 100 feet of exclusion zones, except when applied to cut stumps or frilled stems or injected into stems. No broadcast applications will be allowed. • Avoid modifying or changing the hydrology of aquatic habitats. • Minimize the work area for stream crossings and conduct work during the dry season (June 1 through the first significant rain of the fall/winter). • Install utility collection lines across perennial creeks by boring under the creek. <p>Where impacts cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the EACCS. In the event that an incidental take permit is required, compensatory mitigation will be undertaken in accordance with the terms of the permit in consultation with USFWS.</p>		implement		

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>PEIR Mitigation Measure BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle</p> <p>If it is determined through preconstruction surveys conducted pursuant to Mitigation Measure BIO-3a that elderberry shrubs are present within proposed work areas or within 100 feet of these areas, the following measures will be implemented to ensure that the proposed project does not have a significant impact on valley elderberry longhorn beetle.</p> <ul style="list-style-type: none"> • Avoid removal of elderberry shrubs. • Elderberry shrubs/clusters within 100 feet of the construction area that will not be removed will be protected during construction. A qualified biologist (i.e., with elderberry/species experience) will mark the elderberry shrubs and clusters that will be protected during construction. Orange construction barrier fencing will be placed at the edge of the buffer areas. The buffer area distances will be proposed by the biologist and approved by USFWS (if required by project permits). No construction activities will be permitted within the buffer zone other than those activities necessary to erect the fencing. Signs will be posted every 50 feet along the perimeter of the buffer area fencing. The signs will contain the following information: This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment. • Buffer area fences around elderberry shrubs will be inspected weekly by a qualified biological monitor during ground-disturbing activities and monthly after ground-disturbing activities until project construction is complete or until the fences are removed, as approved by the biological monitor and the resident engineer. The biological monitor will be responsible for ensuring that the contractor maintains the buffer area fences around elderberry shrubs throughout construction. Biological inspection reports will be provided to the project proponent and USFWS (if required by project permits). 	During all site disturbance	County—adopt a condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>2020 Updated PEIR Mitigation Measure BIO-4b: Compensate for direct and indirect effects on valley elderberry longhorn beetle</p> <p>If elderberry shrubs cannot be avoided and protected as outlined in PEIR Mitigation Measure BIO-4a, the project proponent will obtain an incidental take permit from USFWS and compensate for direct impacts on any elderberry shrubs</p>	According to terms through consultation with USFWS	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>(i.e., removed or trimmed). Surveys of elderberry shrubs to be transplanted will be conducted by a qualified biologist prior to transplantation or trimming. Surveys will be conducted in accordance with the <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle</i> (U.S. Fish and Wildlife Service 2017) and will document the following: (1) presence/absence of exit holes; (2) evaluation of riparian/ non-riparian habitat; and (3) suitability of shrubs to support valley elderberry longhorn beetle. Survey results and an analysis of the number of mitigation units that would be required based on the survey results will be submitted to USFWS in a biological assessment or an HCP. After receipt of an incidental take permit and before construction begins, the project proponent will compensate for direct effects on elderberry shrubs by transplanting shrubs that cannot be avoided to a USFWS-approved conservation area and planting additional elderberry shrubs and associated riparian habitat at a USFWS-approved conservation area. Any elderberry shrub containing stem(s) measuring 1 inch or more in diameter at ground level that is deemed suitable habitat and is adversely affected (i.e., trimmed, transplanted, or destroyed) will be mitigated by planting replacement habitat (i.e., elderberry shrub seedlings and associate plant species), in the conservation area, at a ratio ranging from 1:1 to 3:1 (mitigation unit to affected habitat). The number of mitigation units (1 unit = 0.041 acre) to be planted as replacement habitat are determined by either the acreage of habitat (elderberry shrub and associated riparian) removed or number of shrubs trimmed, as well as the presence or absence of exit holes and whether the shrub lies in a riparian or non-riparian habitat. Stock of either seedlings or cuttings would be obtained from local sources.</p> <p>At the discretion of USFWS, shrubs that are unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation. In cases where transplantation is not possible, mitigation ratios could be increased to offset the additional habitat loss.</p> <p>The relocation of the elderberry shrubs will be conducted according to USFWS-approved procedures outlined in the <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle</i> (U.S. Fish and Wildlife Service 2017), or the most current USFWS guidance. If possible, elderberry shrubs within the project construction area that cannot be avoided will be trans-planted during the plant's dormant phase (November through the first 2 weeks of February). A qualified biological monitor will remain onsite while the shrubs are being transplanted.</p> <p>Evidence of valley elderberry longhorn beetle occurrence in the conservation area,</p>				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
the condition of the elderberry shrubs in the conservation area, and the general condition of the conservation area itself will be monitored. Monitoring protocols and reporting timelines will be determined as part of the endangered species coordination/consultation with USFWS for the project. The project proponent will be responsible for funding and providing monitoring reports to USFWS in each of the years in which a monitoring report is required. As specified in the <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle</i> (U.S. Fish and Wildlife Service 2017), the report will include information on presence of exit holes, evaluation of success criteria, summary of weed control and site protection, assessment of threats to valley elderberry longhorn beetle on the site, and photo documentation of current habitat condition. Mitigation credits may be purchased at a USFWS-approved mitigation bank in lieu of the above monitoring requirements, as determined during coordination/consultation with USFWS for the project.				
<p>2020 Updated PEIR Mitigation Measure BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians</p> <p>The project proponent will ensure that BMPs and other appropriate measures, in accordance with measures developed for the EACCS, be incorporated into the appropriate design and construction documents. <i>Implementation of some of these measures will require that the project proponent obtain incidental take permits from USFWS (California red-legged frog and California tiger salamander) and from CDFW (California tiger salamander only) before construction begins.</i> Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., ESA or CESA incidental take authorization). The applicant will comply with the State Water Board NPDES construction general requirements for stormwater.</p> <ul style="list-style-type: none"> • Ground-disturbing activities will be limited to dry weather between April 15 and October 31. No ground-disturbing work will occur during wet weather. Wet weather is defined as when there has been 0.25 inch of rain in a 24-hour period. Ground disturbing activities halted due to wet weather may resume when precipitation ceases and the National Weather Service 72-hour weather forecast indicates a 30% or less chance of precipitation. No ground-disturbing work will occur during a dry-out period of 48 hours after the above-referenced wet weather. • Where applicable, barrier fencing will be installed around the worksite to prevent amphibians from entering the work area. Barrier fencing will be removed within 72 hours of completion of work. The need and location of barrier fencing will be identified by a qualified biologist in cooperation 	Prior to and during construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>with the County and/or any applicable resource agencies with the purpose of protecting dispersing special-status amphibians.</p> <ul style="list-style-type: none"> • Before construction begins, a qualified biologist will locate appropriate relocation areas and prepare a relocation plan for special-status amphibians that may need to be moved during construction. The proponent will submit this plan to USFWS and CDFW for review a minimum of 2 weeks prior to the start of construction. • A qualified biologist will conduct preconstruction surveys (i.e., visual surveys of the ground surface and areas within burrows visible from the surface) immediately prior to ground-disturbing activities (including equipment staging, vegetation removal, grading). The biologist will survey the work area and all suitable habitats within 300 feet of the work area. If individuals (including adults, juveniles, larvae, or eggs) are found, work will not begin until USFWS and/or CDFW is contacted to determine if moving these life-stages is appropriate. If relocation is deemed necessary, it will be conducted in accordance with the relocation plan. Incidental take permits are required for relocation of California tiger salamander (USFWS and CDFW) and California red-legged frog (USFWS). Relocation of western spadefoot toad requires a letter of permission or permit from CDFW authorizing this activity. • No monofilament plastic will be used for erosion control. • All project activity will terminate 30 minutes before sunset and will not resume until 30 minutes after sunrise during the migration/active season from November 1 to June 15. Sunrise and sunset times are established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area where the project is located. • Vehicles will not exceed a speed limit of 15 mph on unpaved roads within natural land cover types, or during offroad travel. • Trenches or holes more than 6 inches deep will be provided with one or more escape ramps constructed of earth fill or wooden planks and will be inspected by a qualified biologist prior to being filled. Any such features that are left open overnight will be searched each day prior to construction activities to ensure no covered species are trapped. Work will not continue until trapped animals have moved out of open trenches. • Work crews or the onsite biological monitor will inspect open trenches, pits, and under construction equipment and material left onsite in the 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>morning and evening to look for amphibians that may have become trapped or are seeking refuge.</p> <ul style="list-style-type: none"> If special-status amphibians are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist who is USFWS and/or CDFW-approved under a biological opinion and/or incidental take permit for the specific project, will trap and move special-status amphibians in accordance with the relocation plan. Relocation of western spadefoot toad requires a separate letter of permission or permit from CDFW authorizing this activity. 				
<p>PEIR Mitigation Measure BIO-5b: Compensate for loss of habitat for special-status amphibians</p> <p>Where impacts on aquatic and upland habitat for special-status amphibians cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the EACCS. In the event that take authorization is required, compensatory mitigation will be undertaken in accordance with the terms of the authorization in consultation with USFWS and/or CDFW.</p>	Prior to all construction activities; compensation paid according to terms of permit	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands</p> <p>Within 30 days prior to any ground disturbance, a qualified biologist will prepare a Grassland Restoration Plan in coordination with CDFW and subject to CDFW approval, to ensure that temporarily disturbed annual grasslands and areas planned for the removal of permanent roads and turbine pad areas are restored to preproject conditions. The Grassland Restoration Plan will include but not be limited to the following measures.</p> <ul style="list-style-type: none"> Gravel will be removed from areas proposed for grassland restoration. To the maximum extent feasible, topsoil will be salvaged from within onsite work areas prior to construction. Imported fill soils will be limited to weed-free topsoil similar in texture, chemical composition, and pH to soils found at the restoration site. Where appropriate, restoration areas will be seeded (hydroseeding is acceptable) to ensure erosion control. Seed mixes will be tailored to closely match that of reference site(s) within the program area and should include native or naturalized, noninvasive species sourced within the project area or from the nearest available location. Reclaimed roads will be restored in such a way as to permanently prevent 	Prior to all site disturbance and up to 3 years after construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
vehicular travel. The plan will include a requirement to monitor restoration areas annually (between March and October) for up to 3 years following the year of restoration. The restoration will be considered successful when the percent cover for restored areas is 70% absolute cover of the planted/seeded species compared to the percent absolute cover of nearby reference sites. No more than 5% relative cover of the vegetation in the restoration areas will consist of invasive plant species rated as "high" in California Invasive Plant Council's California Invasive Plant Inventory Database (http://www.cal-ipc.org). Remedial measures prescribed in the plan will include supplemental seeding, weed control, and other actions as determined necessary to achieve the long-term success criteria. Monitoring may be extended, if necessary, to achieve the success criteria or if drought conditions preclude restoration success. Other performance standards may also be required as they relate to special-status species habitat; these will be identified in coordination with CDFW and included in the plan. The project proponent will provide evidence that CDFW has reviewed and approved the Grassland Restoration Plan. Additionally, the project proponent will provide annual monitoring reports to the County by January 31 of each year, summarizing the monitoring results and any remedial measures implemented (if any are necessary) during the previous year.				
PEIR Mitigation Measure BIO-6: Conduct preconstruction surveys for western pond turtle and monitor construction activities if turtles are observed If it is determined through preconstruction surveys conducted pursuant to PEIR Mitigation Measure BIO-3a that suitable aquatic or upland habitat for western pond turtle is present within proposed work areas, the following measures, consistent with measures developed for the EACCS, will be implemented to ensure that the proposed project does not have a significant impact on western pond turtle. <ul style="list-style-type: none"> One week before and within 24 hours of beginning work in suitable aquatic habitat, a qualified biologist (one who is familiar with different species of turtles) will conduct surveys for western pond turtle. The surveys should be timed to coincide with the time of day and year when turtles are most likely to be active (during the cooler part of the day between 8 a.m. and 12 p.m. during spring and summer). Prior to conducting the surveys, the biologist should locate the microhabitats for turtle basking (logs, rocks, brush thickets) and determine a location to quietly observe turtles. Each survey should include a 30-minute wait time after arriving onsite to allow startled turtles to return to open basking areas. The survey should consist of a minimum 15-minute observation 	Prior to and during all site disturbance	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>period for each area where turtles could be observed.</p> <ul style="list-style-type: none"> If western pond turtles are observed during either survey, a biological monitor will be present during construction activities in the aquatic habitat where the turtle was observed. The biological monitor also will be mindful of suitable nesting and overwintering areas in proximity to suitable aquatic habitat and will periodically inspect these areas for nests and turtles. If one or more western pond turtles are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist will remove and relocate the turtle to appropriate aquatic habitat outside and away from the construction area. Relocation of western pond turtle requires a letter from CDFW authorizing this activity. 				
<p>2020 Updated PEIR Mitigation Measure BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles</p> <p>Where suitable habitat for Blainville's horned lizard, California glossy snake, Alameda whip-snake, or San Joaquin coachwhip is identified in proposed work areas, all project proponents will ensure that BMPs and other appropriate measures, in accordance with measures developed for the EACCS, be incorporated into the appropriate design and construction documents. Implementation of some of these measures may require that the project proponent obtain incidental take permits from USFWS and CDFW (Alameda whipsnake) before construction begins. Additional conservation measures or conditions of approval may be required in applicable project permits (i.e., ESA incidental take permit).</p> <ul style="list-style-type: none"> A qualified biologist will conduct preconstruction surveys immediately prior to ground-disturbing activities (e.g., equipment staging, vegetation removal, grading) associated with the program. If any Blainville's horned lizards, California glossy snake, Alameda whipsnakes, or San Joaquin coachwhips are found, work will not begin until they are moved out of the work area to a USFWS- and/ or CDFW-approved relocation site. Incidental take permits from USFWS and CDFW are required for relocation of Alameda whipsnake. Relocation of Blainville's horned lizard, California glossy snake, and San Joaquin coachwhip requires a letter from CDFW authorizing this activity. No monofilament plastic will be used for erosion control. Where applicable, barrier fencing will be used to exclude Blainville's horned lizard, California glossy snake, Alameda whipsnake, and San 	During project design, construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>Joaquin coachwhip. Barrier fencing will be removed within 72 hours of completion of work.</p> <ul style="list-style-type: none"> • Work crews or an onsite biological monitor will inspect open trenches and pits and under construction equipment and materials left onsite for special-status reptiles each morning and evening during construction. • Ground disturbance in suitable habitat will be minimized. • Vegetation within the proposed work area will be removed prior to grading. Prior to clearing and grubbing operations, a qualified biologist will clearly mark vegetation within the work area that will be avoided. Vegetation outside the work area will not be removed. Where possible hand tools (e.g., trimmer, chain saw) will be used to trim or remove vegetation. All vegetation removal will be monitored by the qualified biologist to minimize impacts on special-status reptiles. • If special-status reptiles are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist who is USFWS- and/or CDFW-approved under an incidental take permit for the specific project will trap and move the animal(s) to a USFWS and/or CDFW approved relocation area. Incidental take permits from USFWS and CDFW are required for relocation of Alameda whipsnake. Relocation of Blainville's horned lizard, California glossy snake, and San Joaquin coachwhip requires a letter or permit from CDFW authorizing this activity. 				
<p>PEIR Mitigation Measure BIO-7b: Compensate for loss of habitat for special-status reptiles</p> <p>Where impacts on habitat for special-status reptiles cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the EACCS. In the event that incidental take permits are required for Alameda whipsnake, compensatory mitigation will be undertaken in accordance with the terms of permits in consultation with USFWS and CDFW.</p>	According to terms through consultation with CDFW and USFWS	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>2020 Updated PEIR Mitigation Measure BIO-8a: Implement measures to avoid and minimize potential construction-related impacts on special-status and non-special-status nesting birds and raptors</p> <p>Where suitable habitat is present for raptors within 1 mile (within 2 miles for golden eagles) and for tree/shrub- and ground-nesting migratory birds (non-raptors) within 50 feet (1,300 feet for tricolored blackbird) of proposed work areas, the following measures will be implemented to ensure that the proposed</p>	During construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>project does not have a significant impact on nesting special-status and non-special-status birds.</p> <ul style="list-style-type: none"> Remove suitable nesting habitat (shrubs and trees) during the non-breeding season (September 1–January 31) for nesting birds. To the extent feasible, avoid construction activities in or near suitable or occupied nesting habitat during the breeding season of birds (generally February 1–August 31). If construction activities (including vegetation removal, clearing, and grading) will occur during the nesting season for migratory birds, a qualified biologist will conduct a total of three preconstruction nesting bird and raptor surveys. The construction area and a 1-mile buffer will be surveyed for tree-nesting raptors (except for golden eagles as addressed below), a 500-foot buffer will be surveyed for northern harrier, and a 1,300-foot buffer will be surveyed for tricolored blackbird if potential tricolored blackbird nesting substrates are present (i.e., flooded, thorny, or spiny vegetation such as cattails, tules, willows, blackberries, thistles, or nettles), and a 50-foot buffer will be surveyed for all other bird species. The first survey will be conducted within the areas described above between 30-60 days prior to the start of construction to identify potential nesting habitat that could be used by special-status and non-special-status birds and raptors within the survey area and to document any nesting behavior or activity. A second survey will be conducted no less than 14 days prior to starting construction to verify current occupancy status of nesting birds and raptors. A final survey will be conducted immediately prior to initiating ground-disturbing activities within disturbance areas and appropriate species buffers. The final surveys may be phased on the project site depending on which areas/components of the project would begin ground-disturbing activities, so that they are conducted immediately prior to ground disturbing activities within a specific area. Surveys to locate eagle nests within 2 miles of construction will be conducted during the breeding season prior to construction. A 1-mile no-disturbance buffer will be implemented for construction activities to protect nesting eagles from disturbance. Through coordination with USFWS, the no-disturbance buffer may be reduced to 0.5 mile if construction activities are not within line-of-sight of the nest. If an active nest (other than golden eagle) is identified near a proposed work area and work cannot be conducted outside the nesting season 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
(February 1–August 31), a no-activity zone will be established around the nest by a qualified biologist in coordination with USFWS and/or CDFW. Fencing and/or flagging will be used to delineate the no-activity zone. To minimize the potential to affect the reproductive success of the nesting pair, the extent of the no-activity zone will be based on the distance of the activity to the nest, the type and extent of the proposed activity, the duration and timing of the activity, the sensitivity and habituation of the species, and the dissimilarity of the proposed activity to background activities. The no-activity zone will be large enough to avoid nest abandonment and will be between 50 feet and 1 mile from the nest, or as otherwise required by USFWS and/or CDFW.				
<p>2020 Updated PEIR Mitigation Measure BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl</p> <p>Where suitable habitat for western burrowing owl is in or within 500 feet of proposed work areas, the following measures will be implemented to avoid or minimize potential adverse impacts on burrowing owls.</p> <ul style="list-style-type: none"> To the maximum extent feasible (e.g., where the construction footprint can be modified), construction activities within 500 feet of active burrowing owl burrows will be avoided during the nesting season (February 1–August 31). A qualified biologist will conduct a total of three preconstruction take avoidance surveys for burrowing owl. The first pre-construction survey will be conducted between 30-60 days prior to the start of construction to identify potential nest sites and to determine current occupancy status. A second survey will be conducted no less than 14 days prior to starting construction to verify current occupancy status. A final survey will be conducted within 24 hours of initiating ground-disturbing activities, or phased as discussed above (2020 Updated PEIR Mitigation Measure BIO-8a). The survey area will encompass the work area and a 500-foot buffer around this area. If an active burrow is identified near a proposed work area and work cannot be conducted outside the nesting season (February 1–August 31), a no-activity zone will be established by a qualified biologist in coordination with CDFW. The no-activity zone will be large enough to avoid nest abandonment and will extend a minimum of 250 feet around the burrow. 	During construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<ul style="list-style-type: none"> • If burrowing owls are present at the site during the non-breeding season (September 1–January 31), a qualified biologist will establish a no-activity zone that extends a minimum of 150 feet around the burrow. • If the designated no-activity zone for either breeding or non-breeding burrowing owls cannot be established, a wildlife biologist experienced in burrowing owl behavior will evaluate site-specific conditions and, in coordination with CDFW, recommend a smaller buffer (if possible) and/or other measure that still minimizes disturbance of the owls (while allowing reproductive success during the breeding season). The site-specific buffer (and/or other measure) will consider the type and extent of the proposed activity occurring near the occupied burrow, the duration and timing of the activity, the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity to background activities. • If burrowing owls are present in the direct disturbance area and cannot be avoided during the non-breeding season (generally September 1 through January 31), burrowing owls may be excluded from burrows through the installation of one-way doors at burrow entrances. A burrowing owl exclusion plan, prepared by the project proponent, must be approved by CDFW prior to exclusion of owls. One-way doors (e.g., modified dryer vents or other CDFW approved method), which will be left in place for a minimum of 1 week and monitored daily to ensure that the owl(s) have left the burrow(s). Excavation of the burrow will be conducted using hand tools. During excavation of the burrow, a section of flexible plastic pipe (at least 3 inches in diameter) will be inserted into the burrow tunnel to maintain an escape route for any animals that may be inside the burrow. Owls will be excluded from their burrows as a last resort and only if other avoidance and minimization measures cannot be implemented. • Avoid destruction of unoccupied burrows outside the work area and place visible markers near burrows to ensure that they are not collapsed. • Conduct ongoing surveillance of the project site for burrowing owls during project activities. If additional owls are observed using burrows within 500 feet of construction, the onsite biological monitor will determine, in coordination with CDFW, if the owl(s) are or would be affected by construction activities and if additional exclusion zones are required. 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>PEIR Mitigation Measure BIO-9: Compensate for the permanent loss of occupied habitat for western burrowing owl</p> <p>If construction activities would result in the removal of occupied burrowing owl habitat (determined during preconstruction surveys described in 2020 Updated PEIR Mitigation Measure BIO-8b), this habitat loss will be mitigated by permanently protecting mitigation land through a conservation easement or by implementing alternative mitigation determined through consultation with CDFW as described in its Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game 2012:11–13). The project proponent will work with the CDFW to develop the compensation plan, which will be subject to County review and approval.</p>	According to terms through consultation with CDFW	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>2020 Updated PEIR Mitigation Measure BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger</p> <p>Where suitable habitat is present for San Joaquin kit fox and American badger in and adjacent to proposed work areas, the following measures, consistent with measures developed in the EACCS, will be implemented to ensure that proposed project does not have a significant impact on San Joaquin kit fox or American badger. Implementation of some of these measures will require that the Project proponent obtain incidental take permits from USFWS and CDFW (San Joaquin kit fox) before construction begins. Implementation of state and federal requirements contained in such authorization may constitute compliance with corresponding measures in the PEIR.</p> <ul style="list-style-type: none"> • To the maximum extent feasible, suitable dens for San Joaquin kit fox and American badger will be avoided. • All project proponents will retain qualified approved biologists (as determined by USFWS) to conduct a preconstruction survey for potential San Joaquin kit fox dens. Resumes of biologists will be submitted to USFWS for review and approval prior to the start of the survey. • Preconstruction surveys for American badgers will be conducted in conjunction with San Joaquin kit fox preconstruction surveys. • The preconstruction survey will be conducted no less than 14 days and no more than 30 days before the beginning of ground disturbance, or any activity likely to affect San Joaquin kit fox. The biologists will conduct den searches by systematically walking transects through the project area and a buffer area to be determined in coordination with USFWS and CDFW. 	Prior to and during construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>Transect distance should be based on the height of vegetation such that 100% visual coverage of the project area is achieved. If a potential or known den is found during the survey, the biologist will measure the size of the den, evaluate the shape of the den entrances, and note tracks, scat, prey remains, and recent excavations at the den site. The biologists will also determine the status of the dens and map the features. Dens will be classified in one of the following four den status categories defined by USFWS.</p> <ul style="list-style-type: none"> ○ Potential den: Any subterranean hole within the species' range that has entrances of appropriate dimensions and for which available evidence is sufficient to conclude that it is being used or has been used by a kit fox. Potential dens include (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, ground squirrel) that otherwise has appropriate characteristics for kit fox use; or an artificial structure that otherwise has appropriate characteristics for kit fox use. ○ Known den: Any existing natural den or artificial structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records; past or current radiotelemetry or spotlighting data; kit fox sign such as tracks, scat, and/or prey remains; or other reasonable proof that a given den is being or has been used by a kit fox (USFWS discourages use of the terms active and inactive when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly). ○ Known natal or pupping den: Any den that is used, or has been used at any time in the past, by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two; therefore, for purposes of this definition either term applies. 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<ul style="list-style-type: none"> Known atypical den: Any artificial structure that has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings. <p>Written results of the survey including the locations of any potential or known San Joaquin kit fox dens will be submitted to USFWS within 5 days following completion of the survey and prior to the start of ground disturbance or construction activities.</p> <ul style="list-style-type: none"> After preconstruction den searches and before the commencement of repowering activities, exclusion zones will be established as measured in a radius outward from the entrance or cluster of entrances of each den. Repowering activities will be prohibited or greatly restricted within these exclusion zones. Only essential vehicular operation on existing roads and foot traffic will be permitted. All other repowering activities, vehicle operation, material and equipment storage, and other surface-disturbing activities will be prohibited in the exclusion zones. Barrier fencing will be removed within 72 hours of completion of work. Exclusion zones will be established using the following parameters. <ul style="list-style-type: none"> Potential and atypical dens: A total of four or five flagged stakes will be placed 50 feet from the den entrance to identify the den location. Known den: Orange construction barrier fencing will be installed between the work area and the known den site at a minimum distance of 100 feet from the den. The fencing will be maintained until construction-related disturbances have ceased. At that time, all fencing will be removed to avoid attracting subsequent attention to the den. Natal/pupping den: USFWS will be contacted immediately if a natal or pupping den is discovered in or within 200 feet of the work area. Any occupied or potentially occupied badger den will be avoided by establishing an exclusion zone consistent with a San Joaquin kit fox potential burrow (i.e., four or five flagged stakes will be placed 50 feet from the den entrance). In cases where avoidance is not a reasonable alternative, limited destruction of potential San Joaquin kit fox dens may be allowed as follows. <ul style="list-style-type: none"> Natal/pupping dens: Natal or pupping dens that are occupied will not be destroyed until the adults and pups have vacated the dens and then only after consultation with USFWS. Removal of natal/pupping dens requires incidental take authorization from USFWS and CDFW. 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<ul style="list-style-type: none"> ○ Known dens: Known dens within the footprint of the activity must be monitored for 3 days with tracking medium or an infrared camera to determine current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use. If kit fox activity is observed during this period, the den will be monitored for at least 5 consecutive days from the time of observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged by partially plugging its entrance(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied will the den be excavated under the direction of a biologist. If the fox is still present after 5 or more consecutive days of monitoring, the den may be excavated when, in the judgment of the biologist, it is temporarily vacant, such as during the fox's normal foraging activities. Removal of known dens requires incidental take authorization from USFWS and CDFW. ○ Potential dens: If incidental take permits have been received (from USFWS and CDFW), potential dens can be removed (preferably by hand excavation) by biologist or under the supervision of a biologist without monitoring, unless other restrictions were issued with the incidental take permits. If no take authorizations have been issued, the potential dens will be monitored as if they are known dens. If any den was considered a potential den but was later determined during monitoring or destruction to be currently or previously used by kit foxes (e.g., kit fox sign is found inside), then all construction activities will cease and USFWS and CDFW will be notified immediately. ● Nighttime work will be minimized to the extent possible. The vehicular speed limit will be reduced to 10 miles per hour during nighttime work. ● Pipes, culverts, and similar materials greater than 4 inches in diameter will be stored so as to prevent wildlife species from using these as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved. ● A representative appointed by the project proponent will be the contact for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured, or entrapped kit fox. The representative will be identified during environmental sensitivity training (2020 Updated PEIR Mitigation Measure BIO-1b) and his/her name and phone number 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>will be provided to USFWS and CDFW. Upon such incident or finding, the representative will immediately contact USFWS and CDFW.</p> <ul style="list-style-type: none"> The Sacramento USFWS office and CDFW will be notified in writing within 3 working days of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, and location of the incident, and any other pertinent information. 				
<p>PEIR Mitigation Measure BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger</p> <p>Where permanent impacts on habitat for San Joaquin kit fox and American badger cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the EACCS. In the event that incidental take permits are required for San Joaquin kit fox, compensatory mitigation will be undertaken in accordance with the terms of permits in consultation with USFWS and CDFW.</p>	According to terms of permits	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure BIO-11a: Prepare a project-specific avian protection plan</p> <p>All project proponents will prepare a project-specific avian protection plan (APP) to specify measures and protocols consistent with the program-level mitigation measures that address avian mortality. The project-specific APPs will include, at a minimum, the following components.</p> <ul style="list-style-type: none"> Information and methods used to site turbines to minimize risk. Documentation that appropriate turbine designs are being used. Documentation that avian-safe practices are being implemented on project infrastructure. Methods used to discourage prey for raptors. A detailed description of the postconstruction avian fatality monitoring methods to be used (consistent with the minimum requirements outlined in Mitigation Measure BIO-11g). Methods used to compensate for the loss of raptors (consistent with the requirements of 2020 Updated PEIR Mitigation Measure BIO-11h). <p>Each project applicant will prepare and submit a draft project-specific APP to the County. The draft APP will be reviewed by the technical advisory committee (TAC) for consistency and the inclusion of appropriate mitigation measures that are consistent with the PEIR and recommended for approval by the County. Each project applicant must have an approved Final APP prior to commercial operation.</p>	During project design and prior to construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>2020 Updated PEIR Mitigation Measure BIO-11b: Site turbines to minimize potential mortality of birds</p> <p>Consistent with PEIR Mitigation Measure BIO-11b, and in recognition that focused siting of turbines using analyses of landscape features and location-specific bird use and behavior data to identify locations with reduced collision risk may result in reduced fatalities (Smallwood et al. 2009), project proponents will conduct a siting process and prepare a micro-siting analysis to select turbine locations to minimize potential impacts on bird and bat species. The proponent has utilized existing data and collected new site-specific data as part of the siting analysis.</p> <p>The project proponent will utilize currently available guidelines published by the Alameda County Scientific Review Committee (SRC) for siting wind turbines (Alameda County SRC 2010) and/or other currently available research or guidelines to conduct siting analysis. Additionally, project proponents will use the results of previous siting efforts to inform the analysis and siting methods as appropriate such that the science of siting continues to be advanced. All project proponents will collect field data that identify or confirm the behavior, utilization, and distribution patterns of affected avian and bat species prior to the installation of turbines. Project proponents will collect and utilize available existing information, including but not necessarily limited to: siting reports and monitoring data from previously installed projects; published use and abundance studies and reports; topographic features known to increase collision risk (trees, riparian areas, water bodies, and wetlands); and changes to the landscape caused by grading for the placement of turbine foundations.</p> <p>Project proponents will also collect and utilize additional field data as necessary to inform the siting analysis for golden eagle. As required in 2020 Updated Mitigation Measure BIO-8a, surveys will be conducted to locate golden eagle nests within 2 miles of proposed project areas. Siting of turbines within 2 miles of an active or alternative golden eagle nest or active golden eagle territory will be based on a site-specific analysis of risk based on the estimated eagle territories, conducted in consultation with USFWS.</p> <p>Project proponents will utilize methods (i.e., computer models) to identify dangerous locations for birds and bats based on site-specific risk factors informed by the information discussed above. The project proponents will compile the results of the siting analyses for each turbine and document these in the project-level APP, along with the specific location of each turbine. Consistent with past practice for previously approved repowering projects, the proponent shall submit the siting analysis for review and recommendations to the Alameda County</p>	During project design and construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
Wind Repowering/Avian Protection Technical Advisory Committee, which includes representatives of the CDFW and the USFWS, prior to applying for any building or grading permit. The County planning director shall have the authority to approve or deny such permits on the basis of the siting analysis and the recommendations of the Technical Advisory Committee.				
<p>PEIR Mitigation Measure BIO-11c: Use turbine designs that reduce avian impacts</p> <p>Use of turbines with certain characteristics is believed to reduce the collision risk for avian species. Project proponents will implement the design-related measures listed below.</p> <ul style="list-style-type: none"> • Turbine designs will be selected that have been shown or that are suspected to reduce avian fatalities, based on the height, color, configuration, or other features of the turbines. • Turbine design will limit or eliminate perching opportunities. Designs will include a tubular tower with internal ladders; external catwalks, railings, or ladders will be prohibited. • Turbine design will limit or eliminate nesting or roosting opportunities. Openings on turbines will be covered to prevent cavity-nesting species from nesting in the turbines. • Lighting will be installed on the fewest number of turbines allowed by Federal Aviation Administration (FAA) regulations, and all pilot warning lights will fire synchronously. Turbine lighting will employ only red or dual red-and-white strobe, strobe-like, or flashing lights (U.S. Fish and Wildlife Service 2012a). All lighting on turbines will be operated at the minimum allowable intensity, flashing frequency, and quantity allowed by FAA (Gehring et al. 2009; U.S. Fish and Wildlife Service 2012a). Duration between flashes will be the longest allowable by the FAA. 	During project design, construction, and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure</p> <p>The project proponent will apply the following measures when designing and siting turbine-related infrastructure. These measures will reduce the risk of bird electrocution and collision.</p> <ul style="list-style-type: none"> • Permanent meteorological stations will avoid use of guy wires. If it is not possible to avoid using guy wires, the wires will be at least 4/0 gauge to 	During project design, construction, and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>ensure visibility and will be fitted with bird deterrent devices.</p> <ul style="list-style-type: none"> All permanent meteorological towers will be unlit unless lighting is required by FAA. If lighting is required, it will be operated at the minimum allowable intensity, flashing frequency, and quantity allowed by FAA. To the extent possible, all power lines will be placed underground. However, lines may be placed aboveground immediately prior to entering the substation. All aboveground lines will be fitted with bird flight diverters or visibility enhancement devices (e.g., spiral damping devices). When lines cannot be placed underground, appropriate avian protection designs must be employed. As a minimum requirement, the collection system will conform with the most current edition of the Avian Power Line Interaction Committee guidelines to prevent electrocutions. Lighting will be focused downward and minimized to limit skyward illumination. Sodium vapor lamps and spotlights will not be used at any facility (e.g., laydown areas, substations) except when emergency maintenance is needed. Lighting at collection facilities, including substations, will be minimized using downcast lighting and motion-detection devices. The use of high-intensity lighting; steady-burning or bright lights such as sodium vapor, quartz, or halogen; or other bright spotlights will be minimized. Where lighting is required it will be designed for the minimum intensity required for safe operation of the facility. Green or blue lighting will be used in place of red or white lighting. 				
<p>PEIR Mitigation Measure BIO-11e: Retrofit existing infrastructure to minimize risk to raptors</p> <p>Any existing power lines in a specific project area that are owned by the wind project operator and that are associated with electrocution of an eagle or other raptor will be retrofitted within 30 days to make them raptor-safe according to Avian Power Line Interaction Committee guidelines. All other existing structures to remain in a project area during repowering will be retrofitted, as feasible, according to specifications of PEIR Mitigation Measure BIO-11c prior to repowered turbine operation.</p>	During operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure BIO-11f: Discourage prey for raptors</p> <p>The project proponent will apply the following measures when designing and siting turbine-related infrastructure. These measures are intended to minimize opportunities for fossorial mammals to become established and thereby create a prey base that could become an attractant for raptors.</p>	During construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<ul style="list-style-type: none"> Rodenticide will not be utilized on the project site to avoid the risk of raptors scavenging the remains of poisoned animals. Boulders (rocks more than 12 inches in diameter) excavated during project construction may be placed in aboveground piles in the project area so long as they are more than 500 meters (1,640 feet) from any turbine. Existing rock piles created during construction of first- and second-generation turbines will also be moved at least 500 meters (1,640 feet) from turbines. Gravel will be placed around each tower foundation to discourage small mammals from burrowing near turbines. 				
<p>2020 Updated PEIR Mitigation Measure BIO-11g: Implement postconstruction avian fatality monitoring for all repowering projects</p> <p>A postconstruction monitoring program will be conducted at each repowering project for a minimum of 3 years beginning on the commercial operation date (COD) of the project. Monitoring may continue beyond 3 years if construction is completed in phases. Moreover, if the results of the first 3 years indicate that baseline fatality rates (i.e., non-repowered fatality rates) are exceeded, monitoring will be extended until the average annual fatality rate has dropped below baseline fatality rates for 2 years, and to assess the effectiveness of adaptive management measures specified in Mitigation Measure BIO-11i. An additional 2 years of monitoring will be implemented at year 10 (i.e., the tenth anniversary of the COD). Project proponents will provide access to qualified third parties authorized by the County to conduct any additional monitoring after the initial 3-year monitoring period has expired and before and after the additional 2-year monitoring period, provided that such additional monitoring utilizes scientifically valid monitoring protocols.</p> <p>A TAC will be formed to oversee the monitoring program and to advise the County on adaptive management measures that may be necessary if fatality rates substantially exceed those predicted for the project (as described below in Mitigation Measure BIO-11i). The TAC will have a standing meeting, which will be open to the public, every 6 months to review monitoring reports produced by operators in the program area. In these meetings, the TAC will discuss any issues raised by the monitoring reports and recommend to the County next steps to address issues, including scheduling additional meetings, if necessary.</p> <p>The TAC will comprise representatives from the County (including one or more technical consultants, such as a biostatistician, an avian biologist, and a bat</p>	During operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>biologist), and wildlife agencies (CDFW, USFWS). Additional TAC members may also be considered (e.g., a representative from Audubon, a landowner in the program area, a representative of the operators) at the discretion of the County. The TAC will be a voluntary and advisory group that will provide guidance to the County Planning Department. To maintain transparency with the public, all TAC meetings will be open to the public, and notice of meetings will be given to interested parties.</p> <p>The TAC will have three primary advisory roles: (1) to review and advise on project planning documents (i.e., project-specific APPs) to ensure that project-specific mitigation measures and compensatory mitigation measures described in this PEIR are appropriately and consistently applied, (2) to review and advise on monitoring documents (protocols and reporting) for consistency with the mitigation measures, and (3) to review and advise on implementation of the adaptive management plans.</p> <p>Should fatality monitoring reveal that impacts exceed the baseline thresholds established in the PEIR, the TAC will advise the County on requiring implementation of adaptive management measures as described in Mitigation Measure BIO-11i. The County will have the decision-making authority, as it is the organization issuing the CUPs. However, the TAC will collaboratively inform the decisions of the County.</p> <p>Operators are required to provide for avian use surveys to be conducted within the project area boundaries for a minimum of 30 minutes duration. Surveyors will be qualified and trained and subject to approval by the County.</p> <p>Carcass surveys will be conducted at every turbine for projects with 20 or fewer turbines. For projects with more than 20 turbines, such surveys will be required at a minimum of 20 turbines, and a sample of the remaining turbines may be selected for carcass searches. The operator will be required to demonstrate that the sampling scheme and sample size are statistically rigorous and defensible. Where substantial variation in terrain, land cover type, management, or other factors may contribute to significant variation in fatality rates, the sampling scheme will be stratified to account for such variation. The survey protocol for sets and subsets of turbines, as well as proposed sampling schemes that do not entail a search of all turbines, must be approved by the County in consultation with the TAC prior to the start of surveys.</p> <p>The search interval will not exceed 7 days for the minimum of 20 turbines to be surveyed; however, the search interval for the additional turbines (i.e., those exceeding the 20-turbine minimum) that are to be included in the sampling scheme</p>				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>may be extended up to 28 days or longer if recommended by the TAC.</p> <p>The estimation of detection probability is a rapidly advancing field. Carcass placement trials, broadly defined, will be conducted to estimate detection probability during each year of monitoring. Sample sizes will be large enough to potentially detect significant variation by season, carcass size, and habitat type.</p> <p>Operators will be required to submit copies of all raw data forms to the County annually, will supply raw data in a readily accessible digital format to be specified by the County, and will prepare raw data for inclusion as appendices in the annual reports. The intent is to allow the County to conduct independent analyses and meta-analyses of data across the APWRA, and to supply these data to the regulatory agencies if requested.</p> <p>Annual reports submitted to the County will provide a synthesis of all information collected to date. Each report will provide an introduction; descriptions of the study area, methods, and results; a discussion of the results; and any suitable recommendations. Reports will provide raw counts of fatalities, adjusted fatality rates, and estimates of project-wide fatalities on both a per MW and per turbine basis.</p>				
<p>2020 Updated PEIR Mitigation Measure BIO-11h: Compensate for the loss of avian species, including golden eagles, by contributing to conservation efforts</p> <p>Discussion</p> <p>Several options to compensate for impacts on avian species, including raptors as well as smaller birds, are currently available. Some are targeted to benefit certain species, but they may also have benefits for other species. For example, USFWS's Eagle Conservation Plan (ECP) Guidelines currently outline a compensatory mitigation strategy for golden eagles using the retrofit of high-risk power poles (poles known or suspected to electrocute and kill eagles). The goal of this strategy is to eliminate hazards for golden eagles. However, because the poles are also dangerous for other large raptors (e.g., red-tailed hawk, Swainson's hawk), retrofitting them can benefit such species as well as golden eagles.</p> <p>Conversely, although the retrofitting of electrical poles may have benefits for large raptors, such an approach may provide minimal benefits for smaller birds such as American kestrel or tricolored blackbird. Consequently, additional measures would be required in an overall mitigation package to compensate for impacts on avian species in general.</p> <p>The Secretary of the Interior issued Order 3330 in October 2013, outlining a "landscape-scale" approach to mitigation policies and practices of the U.S.</p>	Prior to start of operation and during operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>Department of the Interior to provide for mutual benefit to multiple species when adopting strategies aimed at individual species, thereby benefitting the ecological landscape as a whole. The Order was intended for use by federal agencies, and thus the County was not required to take any particular action; however, the PEIR indicated confidence that such an approach would likely have the greatest mitigation benefits, especially when considering ongoing and long-term impacts from wind energy projects. In 2017, then Secretary of the Interior Ryan Zinke, acting on a presidential executive order, revoked Order 3330 and several other related environmental directives, primarily to ensure that federal policy did not burden the development or use of domestic oil, natural gas, coal, or nuclear energy resources. However, while the current federal administration (under Secretary of the Interior Deb Haaland) is not known to have formally reversed the 2017 revocation of Order 3330, it is expected to have effectively restored it with a shift of priorities towards protection of ecological values while also accelerating the development of renewable energy production such as from wind, solar and geothermal projects. For this reason, the County considers it to be in its interest to promote policies that benefit one species that also have high potential for benefit to additional species, or to a whole ecological system or habitat.</p> <p>With Order 3330 in mind, the PEIR outlined several options that are deemed available to compensate for impacts on avian species. The options discussed below are currently considered acceptable approaches to compensation for such impacts. Although not every option is appropriate for all species, it is hoped that as time proceeds, a more comprehensive approach to mitigation will be adopted to benefit a broader suite of species than might benefit from more species-specific measures. The County recognizes that the science of wind energy impacts on avifauna is continuing to evolve and that the suite of available compensation options may consequently change during implementation of approved projects.</p> <p>Conservation Measures</p> <p>To promote the conservation of avian species, project proponents will compensate for avian fatalities estimated within their project areas. Mitigation will be provided in 10-year increments, with the first increment based on the estimates (fatalities/MW/year and fatalities/ha RSA/year) provided in this analysis for existing repowered projects (Table 3.4-8). Each project proponent will conduct postconstruction fatality monitoring for at least 3 years beginning at project startup (date of commercial operation) and again for 2 years at year 10, as required under Mitigation Measure BIO-11g, to estimate the average number of birds taken each year by each individual project. The project proponent will compensate for</p>				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>this number of birds in subsequent 10-year increments for the life of the project (i.e., three 10-year increments) as outlined below. Mitigation Measure BIO-11g also requires additional fatality monitoring at year 10 of the project. The results of the first 3 years of monitoring and/or the monitoring at year 10 may lead to revisions of the estimated average number of birds taken, and mitigation provided may be adjusted accordingly on a one-time basis within each of the first two 10-year increments, based on the results of the monitoring required by Mitigation Measure BIO-11g, in consultation with the TAC.</p> <p>Prior to the start of operations, project proponents will submit for County approval an avian conservation strategy, as part of the project-specific APP outlined in PEIR Mitigation Measure BIO 11a, outlining the estimated number of avian fatalities based on the number and type of turbines being constructed, and the type or types of compensation options to be implemented. Project proponents will use the avian conservation strategy to craft an appropriate strategy using a balanced mix of the options presented below, as well as considering new options suggested by the growing body of knowledge during the course of the project lifespan, as supported by a Resource Equivalency Analysis (REA) (see example in Appendix C4) or similar type of compensation assessment acceptable to the County that demonstrates the efficacy of proposed mitigation for impacts on avian species.</p> <p>The County Planning Director, in consultation with the TAC, will consider, based on the REA, whether the proposed avian conservation strategy is adequate, including consideration of whether each avian mitigation plan incorporates a landscape-scale approach such that the conservation efforts achieve the greatest possible benefits. Compensation measures as detailed in an approved avian conservation strategy must be implemented within 1 year of the date of commercial operations. Avian conservation strategies will be reviewed and may be revised by the County every 10 years, and on a one-time basis in each of the two 10-year increments based on the monitoring required by 2020 Updated PEIR Mitigation Measure BIO-11g.</p> <ul style="list-style-type: none"> Retrofitting high-risk electrical infrastructure. USFWS's ECP Guidelines outline a compensatory mitigation strategy using the retrofit of high-risk power poles (poles known or suspected to electrocute and kill eagles). USFWS has developed an REA (U.S. Fish and Wildlife Service 2013) as a tool to estimate the compensatory mitigation (number of retrofits) required for the take of eagles. The REA takes into account the current understanding of eagle life history factors, the effectiveness of retrofitting poles, the expected annual take, and the timing of implementation of the pole retrofits. The project proponents may need to contract with a utility 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>or a third-party mitigation account (such as the National Fish and Wildlife Foundation) to retrofit the number of poles needed as demonstrated by a project-specific REA. If contracting directly, the project proponent will consult with utility companies to ensure that high-risk poles have been identified for retrofitting. Proponents will agree in writing to pay the utility owner/operator to retrofit the required number of power poles and maintain the retrofits for 10 years and will provide the County with documentation of the retrofit agreement. The first retrofits will be based on the estimated number of eagle fatalities as described above in this measure or as developed in the project-specific EIR for future projects. Subsequent numbers of retrofits required for additional 10-year durations will be based on the results of project-specific fatality monitoring as outlined in PEIR Mitigation Measure BIO-11g. If fewer eagle fatalities are identified through the monitoring, the number of future required retrofits may be reduced through a project-specific REA. Although retrofitting poles has not been identified as appropriate mitigation for other large raptors, they would likely benefit from such efforts, as they (particularly red-tailed and Swainson's hawks) constitute the largest non-eagle group to suffer electrocution on power lines (Avian Power Line Interaction Committee 2006).</p> <ul style="list-style-type: none"> • Measures outlined in an approved Eagle Conservation Plan and Bird and Bat Conservation Strategy. Project proponents may elect to apply for eagle incidental take permits from USFWS. The eagle incidental take permit process currently involves preparation of an ECP and a Bird and Bat Conservation Strategy (BBCS). The ECP specifies avoidance and minimization measures, advanced conservation practices, and compensatory mitigation for eagles—conditions that meet USFWS's criteria for issuance of a permit. The BBCS outlines measures being implemented by the applicant to avoid and minimize impacts on migratory birds, including raptors. If eagle incidental take permits are obtained by project proponents, those permit terms, including the measures outlined in the approved ECP and BBCS, may constitute an appropriate conservation measure for estimated take of golden eagles and other avian species, provided such terms are deemed by the County to be comparable to or more protective of birds than the other options listed herein. • Contribute to avian conservation efforts. Project proponents will contribute funds, in an amount equal to the average cost to rehabilitate 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>one raptor at the California Raptor Center, affiliated with the UC Davis School of Veterinary Medicine—which receives more than 200 injured or ill raptors annually (Stedman pers. comm.). The funds would be paid prior to commercial operation based on the projected/anticipated, worst-case raptor fatalities indicated in Table 3.4-8a, and for this purpose defined as 95 raptors per year, in 10-year increments to local and/or regional conservation efforts designed to protect, recover, and manage lands for raptors, or to conduct research involving methods to reduce raptor fatalities or increase raptor productivity. Ten-year installments are more advantageous than more frequent installments for planning and budgeting purposes.</p> <p>The funds will be contributed to an entity or entities engaged in these activities, such as the East Bay Regional Park District and the Livermore Area Regional Park District. Conservation efforts may include constructing and installing nest boxes and perches, conducting an awareness campaign to reduce the use of rodenticide, and conducting research to benefit raptors and other birds. The specific conservation effort to be pursued will be submitted to the County for approval as part of the avian conservation strategy review process. The donation receipt will be provided to the County as evidence of payment.</p> <p>The first contributions for any given project will be based on the estimated number of avian fatalities as estimated in this EIR. Funds for subsequent 10-year installments will be provided on the basis of the average annual avian fatality rates determined through postconstruction monitoring efforts, allowing for a one-time adjustment within each 10-year increment after the results of the monitoring efforts are available. If fewer avian fatalities are detected through the monitoring effort, the second installment amount may be reduced to account for the difference between the first estimated numbers and the monitoring results. In the event of such an adjustment, and on each 10-year anniversary, projected costs shall be adjusted for inflation (from the base amount described above) according to the consumer price index (CPI) through the remainder of the 10-year term or the subsequent 10-year term. Review shall occur at the time that monitoring reports are accepted by the Planning Director showing a change in total avian fatalities for the project. All avian species listed in Table 3.4-4 shall be accounted for in estimating the payment.</p>				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<ul style="list-style-type: none"> Contribute to regional conservation of avian habitat. Project proponents may address regional conservation of habitat for raptors and other birds by funding the acquisition of conservation easements within the APWRA or on lands in the same eco-region outside the APWRA, subject to County approval, for the purpose of long-term regional conservation of raptor habitat. Lands proposed for conservation must provide habitat similar to and in area proportional to habitats on lands within the project site. Project proponents will fund the regional conservation and improvement of lands (through habitat enhancement, lead abatement activities, elimination of rodenticides, and/or other measures) using a number of acres equivalent to the conservation benefit of the avian recovery and conservation efforts described above, or as determined through a project-specific REA (see example REA in PEIR Appendix C4). The conservation lands must be provided for compensation of a minimum of 10 years of avian fatalities, as 10-year increments will minimize the transaction costs associated with the identification and conservation of lands, thereby increasing overall cost effectiveness. The conservation easements will be held by an organization whose mission is to purchase and/or otherwise conserve lands, such as The Trust for Public Lands, The Nature Conservancy, California Rangeland Trust, or the East Bay Regional Parks District. The project proponents will obtain approval from the County regarding the amount of conserved lands, any enhancements proposed to increase raptor and other avian habitat value, and the entity holding the lands and/or conservation easement. Contribute to efforts benefitting eagles and other raptors. In addition to the conservation of avian habitat, the project proponent will also contribute to additional efforts for the benefit of eagles and other raptors in an amount equal to \$12,500/MW of installed capacity. The mitigation contribution is based on the per MW amount (\$10,500/MW) established under the 2010 Settlement Agreement between NextEra Energy Resources and the California Attorney General, adjusted for inflation and rounded up to the nearest \$100 increment. The funds will be used to support efforts that USFWS accepts as mitigation for an eagle take permit for the project. Such efforts may include, but are not limited to: retrofit of high-risk power poles; efforts that contribute to the regional management of eagle and raptor habitat; efforts that support the additional conservation of lands for the benefit of eagles and other raptors; and efforts that support the 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>reduction of rodenticide use in wildlands, which can have negative effects on raptor populations.</p> <ul style="list-style-type: none"> Other Conservation Measures Identified in the Future. As noted above, additional conservation measures for raptors and other birds may become available in the future. Conservation measures for avian species are currently being developed by USFWS and nongovernmental organizations (e.g., American Wind Wildlife Institute). Additional options for conservation could include purchasing credits at an approved mitigation bank, credits for the retirement of windfarms that are particularly dangerous to birds, the curtailment of prey elimination programs (e.g., ceasing the use of rodenticide use), and hunter-education programs that remove sources of lead from the environment. Under this option, the project proponent may make alternative proposals to the County for conservation measures—based on an REA or similar compensation assessment—that the County may accept as mitigation if they are deemed by the County to be comparable to or more protective of raptor species than the other options described herein. 				
<p>2020 Updated PEIR Mitigation Measure BIO-11i: Implement an avian adaptive management program</p> <p>If fatality monitoring described in Mitigation Measure BIO-11g results in an estimate that exceeds the preconstruction baseline fatality estimates (i.e., estimates at the non-repowered turbines as described in this PEIR) for any focal species or species group (i.e., individual focal species, all focal species, all raptors, all non-raptors, all birds combined), project proponents will prepare a project-specific adaptive management plan within 2 months following the availability of the fatality monitoring results. These plans will be used to adjust operation and mitigation to the results of monitoring, new technology, and new research to ensure that the best available science is used to minimize impacts to below baseline. Project-specific adaptive management plans will be reviewed by the TAC, revised by project proponents as necessary, and approved by the County. The TAC will take current research and the most effective impact reduction strategies into account when reviewing adaptive management plans and suggesting measures to reduce impacts. The project-specific adaptive management plans will be implemented within 2 months of approval by the County. The plans will include a stepped approach whereby an adaptive measure or measures are implemented, the results are monitored for success or failure for a year, and additional adaptive measures are added as necessary, followed by another year of monitoring, until the success</p>	<p>Within 2 months following the availability of fatality monitoring results and during operation</p>	<p>County—adopt a Condition of Approval; Operator—implement</p>	<p>County</p>	<p>Monitor compliance with Conditions of Approval</p>

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>criteria are achieved (i.e., estimated fatalities are below the baseline). Project proponents should use the best measures available when the plan is prepared in consideration of the specific adaptive management needs. For example, if only one threshold is exceeded, such as golden eagle fatalities, the plan and measures used will target that species. As set forth in other agreements in the APWRA, project proponents may also focus adaptive management measures on individual or multiple turbines if those turbines are shown to cause a significantly disproportionate number of fatalities.</p> <p>In general, the following types of measures will be considered by the TAC, in the order they are presented below; however, the TAC may recommend any of these or other measures that are shown to be successful in reducing the impact.</p> <p>ADMM-1: Visual Modifications. The project proponent will paint a pattern on a proportion of the turbine blades. The proportion and the pattern of the blades to be painted will be determined by the County in consultation with the TAC. Previous laboratory work has shown that painting a turbine blade may reduce motion smear—the blurring of turbine blades due to rapid rotation that renders them less visible and hence more perilous to birds in flight (Hodos 2003). A test of blade painting, performed in Norway, suggests that the technique can reduce avian fatalities by 70% (May et al. 2020). Suggested techniques include painting blades with staggered stripes or painting one blade black. The project proponent will conduct fatality studies on a controlled number of painted and unpainted turbines. The project proponent will coordinate with the TAC to determine the location of the painted turbines, but the intent is to implement this measure in areas that appear to be contributing most to the high number of fatalities detected.</p> <p>ADMM-2: Anti-Perching Measures. The County will consult with the TAC regarding the use of anti-perching measures to discourage bird use of the area. The TAC will use the most recent research and information available to determine, on a case-by-case basis, if anti-perching measures will be an effective strategy to reduce impacts. If determined to be feasible, antiperching devices will be installed on artificial structures, excluding utility poles, within 1 mile of project facilities (with landowner permission) to discourage bird use of the area.</p> <p>ADMM-3: Prey Reduction. The project proponent will implement a prey reduction program around the most hazardous turbines. Examples of prey reduction measures may include changes in grazing practices to make the area less desirable for prey species, active reduction through direct removal of prey species, or other measures provided they are consistent with management goals for threatened and endangered species.</p>				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>ADMM-4: Implementation of Experimental Technologies. Project proponents can deploy experimental technologies at their facilities to test their efficacy in reducing turbine-related fatalities. Examples may include, but are not limited to, visual deterrents, noise deterrents, and active radar systems.</p> <p>ADMM-5: Turbine Curtailment. If postconstruction monitoring indicates patterns of turbine-caused fatalities—such as seasonal spikes in fatalities, topographic or other environmental features associated with high numbers of fatalities, fatalities related to proximity to raptor nesting sites (nest trees, lattice towers or burrowing owl colonies), or other factors that can potentially be manipulated and that suggest that curtailment of a specific turbine’s operation would result in reducing future avian fatalities—the project operator will curtail operations of the offending turbine or turbines. Curtailment restrictions would be developed in coordination with the TAC and based on currently available fatality data, use data, and research.</p> <p>ADMM-6: Cut-in Speed Study. Changes in cut-in speed could be conducted to see if changing cut-in speeds from 3 meters per second to 5 meters per second (for example) would significantly reduce avian fatalities. The proponent will coordinate with the TAC in determining the feasibility of the measure for the particular species affected as well as the amount of the change in the cut-in speed.</p> <p>ADMM-7: Real-Time Turbine Curtailment. The project proponent can employ a real-time turbine curtailment program designed in consultation with the TAC. The intent would be to deploy a biologist to monitor onsite conditions and issue a curtailment order when raptors are near operating turbines. Alternatively, radar, video, or other monitoring measures could be deployed in place of a biological monitor if there is evidence to indicate that such a system would be as effective and more efficient than use of a human monitor.</p> <p>ADMM-8: Condor Evaluation and Curtailment. On an annual basis, the project proponent will review the known distribution of the California condor, relative to the project area, by coordinating with USFWS, CDFW, and U.S. Geological Survey regarding data tracking condor movements, and will use this data to identify all condor overflights in the project area, as well as evaluating trends in condor use of neighboring areas. The project proponent will report their findings to the County. If those data show California condors flying over the project area, the project proponent will coordinate with USFWS and CDFW regarding the risk assessment, and if necessary, measures to minimize the risk of fatalities. These measures could include the use of regional electronic monitoring to inform project operators of condors flying into the area, with responses including curtailment or implementing a visual detection system to reduce risks to condors; other effective measures may</p>				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
also be proposed. Measures implemented would depend on the extent of condor use in the project area and the evaluation of the risk of a condor mortality. The project proponent will inform the County of discussions with USFWS and CDFW and efforts it will undertake to reduce the risk of condor mortality, if necessary.				
<p>PEIR Mitigation Measure BIO-12a: Conduct bat roost surveys</p> <p>Prior to development of any repowering project, a qualified bat biologist will conduct a roost habitat assessment to identify potential colonial roost sites of special-status and common bat species within 750 feet of the construction area. If suitable roost sites are to be removed or otherwise affected by the proposed project, the bat biologist will conduct targeted roost surveys of all identified sites that would be affected. Because bat activity is highly variable (both spatially and temporally) across the landscape and may move unpredictably among several roosts, several separate survey visits may be required. Surveys will be repeated at different times of year if deemed necessary by the bat biologist to determine the presence of seasonally active roosts (hibernacula, migratory stopovers, maternity roosts). Appropriate field methods will be employed to determine the species, type, and vulnerability of the roost to construction disturbance. Methods will follow best practices for roost surveys such that species are not disturbed, and adequate temporal and spatial coverage is provided to increase likelihood of detection.</p> <p>Roost surveys may consist of both daylight surveys for signs of bat use and evening/night visit(s) to conduct emergence surveys or evaluate the status of night roosts. Survey timing should be adequate to account for individual bats or species that might not emerge until well after dark.</p> <p>Methods and approaches for determining roost occupancy status should include a combination of the following components as the biologist deems necessary for the particular roost site.</p> <ul style="list-style-type: none"> • Passive and/or active acoustic monitoring to assist with species identification. • Guano traps to determine activity status. • Night-vision equipment. • Passive infrared camera traps. <p>At the completion of the roost surveys, a report will be prepared documenting areas surveyed, methods, results, and mapping of high-quality habitat or confirmed roost locations.</p>	Prior to and during construction activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
PEIR Mitigation Measure BIO-12b: Avoid removing or disturbing bat roosts <ul style="list-style-type: none"> Active bat roosts will not be disturbed and will be provided a minimum buffer of 500 feet where preexisting disturbance is moderate or 750 feet where preexisting disturbance is minimal. Confirmation of buffer distances and determination of the need for a biological monitor for active maternity roosts or hibernacula will be obtained in consultation with CDFW. At a minimum, when an active maternity roost or hibernaculum is present within 750 feet of a construction site, a qualified biologist will conduct an initial assessment of the roost response to construction activities and will recommend buffer expansion if there are signs of disturbance from the roost. Structures (natural or artificial) showing evidence of significant bat use within the past year will be left in place as habitat wherever feasible. Should such a structure need to be removed or disturbed, CDFW will be consulted to determine appropriate buffers, timing and methods, and compensatory mitigation for the loss of the roost. All project proponents will provide environmental awareness training to construction personnel, establish buffers, and initiate consultation with CDFW if needed. Artificial night lighting within 500 feet of any roost will be shielded and angled such that bats may enter and exit the roost without artificial illumination and the roost does not receive artificial exposure to visual predators. Tree and vegetation removal will be conducted outside the maternity season (April 1–September 15) to avoid disturbance of maternity groups of foliage-roosting bats. If a maternity roost or hibernaculum is present within 500 feet of the construction site where preexisting disturbance is moderate or within 750 feet where preexisting disturbance is minimal, a qualified biological monitor will be onsite during groundbreaking activities. 	During construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
2020 Updated PEIR Mitigation Measure BIO-14a: Site and select turbines to minimize potential mortality of bats The project proponent will use the best information available to site turbines and to select from turbine models in such a manner as to reduce bat collision risk. The siting and selection process will take into account bat use of the area (e.g., proximity to maternity colony sites, hibernacula, and cover types that provide	During project design and prior to construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>foraging habitat for bats). Procedures followed should be consistent with guidance provided by the California guidelines for reducing impacts on birds and bats from wind energy development (California Energy Commission and California Department of Fish and Game 2007).</p> <p>To generate site-specific “best information” to inform turbine siting and operation decisions, a bat habitat assessment and roost survey will be conducted in the project area to identify and map habitat of potential significance to bats, such as potential roost sites (trees and shrubs, significant rock formations, artificial structures) and water sources. Turbine siting decisions will incorporate relevant bat use survey data and bat fatality records published by other projects in the APWRA. Roost surveys will be carried out according to the methods described in PEIR Mitigation Measure BIO-12a.</p> <p>Consistent with past practice for previously approved repowering projects, the proponent shall submit the siting analysis for review and recommendations to the Alameda County Wind Repowering/Avian Protection Technical Advisory Committee, which includes representatives of the CDFW and the USFWS, prior to applying for any building or grading permit. The County planning director shall have the authority to approve or deny such permits on the basis of the siting analysis and the recommendations of the Technical Advisory Committee.</p>				
<p>2020 Updated PEIR Mitigation Measure BIO-14b: Implement postconstruction bat fatality monitoring program for all repowering projects</p> <p>A scientifically defensible, postconstruction bat fatality monitoring program will be implemented to estimate actual bat fatalities and determine if additional mitigation is required. Bat-specific modifications to the 3-year postconstruction monitoring program described in PEIR Mitigation Measure BIO-11g, developed in accordance with California Energy Commission and California Department of Fish and Game (2007) will be implemented.</p> <p>In addition to the requirements outlined in 2020 Updated PEIR Mitigation Measure BIO-11g, the following three bat-specific requirements will be added.</p> <ul style="list-style-type: none"> • Include on the TAC at least one biologist with significant expertise in bat research and wind energy impacts on bats. • Perform postconstruction bat fatality monitoring using trained dogs with handlers. In order to optimize monitoring success, these efforts should also include searching to a maximum radius around wind turbines that includes all deposited carcasses, searching along transects spaced closely together, and searching frequently. Recognizing that most bat fatalities in the 	During operation and 3 years post-construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>APWRA are recorded from September through November, it is appropriate to concentrate search efforts during that period, while still maintaining some level of search effort throughout the year.</p> <ul style="list-style-type: none"> Conduct bat acoustic surveys concurrently with fatality monitoring at the project site to estimate nightly, seasonal, or annual variations in relative activity and species use patterns, and to contribute to the body of knowledge on seasonal bat movements and relationships between acoustic bat activity and turbine fatality. Should emerging research support the approach, these data may be used to generate site-specific predictive models to increase the precision and effectiveness of mitigation measures (e.g., the season specific, multivariate models described by Weller and Baldwin 2011:11). Acoustic bat surveys will be designed, and data analysis conducted by qualified biologists with significant experience in acoustic bat survey techniques. Methods will be informed by the latest available guidelines (California Energy Commission and California Department of Fish and Game 2007), except where best available science supports technological or methodological updates. High-quality, sensitive acoustic equipment will be used to produce data of sufficient quality to generate species identifications. Survey design and methods will be scientifically defensible and will include, at a minimum, the following elements: <ul style="list-style-type: none"> Acoustic detectors will be installed at multiple stations to adequately sample range of habitats at the project site for both resident and migratory bats. The number of detector arrays installed per project site will incorporate emerging research on the density of detectors required to adequately meet sampling goals and inform mitigation approaches (Weller and Baldwin 2011:10). Acoustic detector arrays will sample multiple airspace heights including as close to the repowered rotor swept area as possible. Vertical structures used for mounting may be preexisting or may be installed for the project (e.g., temporary or permanent meteorological towers). Surveys will be conducted such that data are collected continuously from early July to early November to cover the activity transition from maternity to migration season and determine if there is elevated activity during migration. Survey season may be adjusted to more accurately reflect the full extent of the local migration season and/or season(s) of greatest local bat fatality risk, if scientifically sound data 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>support doing so.</p> <ul style="list-style-type: none"> Anticipated adaptive management goals, such as determining justifiable timeframes to reduce required periods of cut-in speed adjustments, will be reviewed with the TAC and incorporated in designing the acoustic monitoring and data analysis program. <p>Modifications to the fatality search protocol will be implemented to obtain better information on the number and timing of bat fatalities (e.g., Johnston et al. 2013:85). Modifications will include decreases in the transect width and search interval for a period of time coinciding with high levels of bat mortality, i.e., the fall migration season (roughly August to early November, or as appropriate in the view of the TAC). The nature of bat-specific transect distance and search intervals will be determined in consultation with the TAC and will be guided by scientifically sound and pertinent data on rates of bat carcass detection at wind energy facilities (e.g., Johnston et al. 2013:54–55) and site-specific data from APWRA repowering project fatality monitoring programs as these data become available.</p> <p>Other methods to achieve the goals of the bat fatality monitoring program while avoiding prohibitive costs may be considered subject to approval by the TAC, if these methods have been peer reviewed and evidence indicates the methods are effective. For example, if project proponents wish to have the option of altering search methodology to a newly developed method, such as searching only roads and pads, a statistically robust field study to index the results of the methodology against standard search methods will be conducted concurrently to ensure site-specific, long-term validity of the new methods.</p> <p>Finally, detection probability trials will utilize bat carcasses to develop bat-specific detection probabilities. Care should be taken to avoid introducing novel disease reservoirs; such avoidance will entail using onsite fatalities or using carcasses obtained from within a reasonably anticipated flight distance for that species.</p>				
<p>PEIR Mitigation Measure BIO-14c: Prepare and publish annual monitoring reports on the findings of bat use of the project area and fatality monitoring results</p> <p>Annual reports of bat use results and fatality monitoring will be produced within 3 months of the end of the last day of fatality monitoring. Special-status bat species records will be reported to CNDDB.</p>	Within 3 months of the end of the last day of fatality monitoring	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>2020 Updated PEIR Mitigation Measure BIO-14d: Develop and implement a bat adaptive management plan</p> <p>In concert with 2020 Updated PEIR Mitigation Measure BIO-14b, the project</p>	Prior to and during construction	County—adopt a Condition of Approval;	County	Monitor compliance with Conditions of

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>proponent will develop adaptive management plans to ensure appropriate, feasible, and current incorporation of emerging information. The goals of the adaptive management plans are to ensure that the best available science and emerging technologies are used to assess impacts on bats, and that impacts are minimized to the greatest extent possible while maximizing energy production.</p> <p>The project-specific adaptive management plans will be used to adjust operation and mitigation to incorporate the results of project area monitoring and new technology and research results when sufficient evidence exists to support these new approaches. These plans will be reviewed by the TAC and approved by the County. All adaptive management measures (ADMMs) will be implemented within a reasonable timeframe. Based on fatality rates recorded at Golden Hills and Golden Hills North, it is reasonably certain that the threshold fatality rate identified in the PEIR of 3.207 bats/MW/year will be exceeded at the proposed project¹. For this reason, ADMM-7 will be implemented at the commencement of project operations. If ADMM-7 is not successful in reducing bat fatalities to below threshold levels, ADMM-8 or ADMM-9 will be implemented within a timeframe sufficient to allow the measures to take effect in the first fall migration season following the year of monitoring in which the adaptive management threshold was crossed. The ADMMs may be modified by the County in consultation with the TAC to take into account current research, site-specific data, and the most effective impact reduction strategies. ADMMs will include a scientifically defensible, controlled research component and minimum post-implementation monitoring time to evaluate the effectiveness and validity of the measures.</p> <p>The TAC may also direct implementation of adaptive management measures for other appropriate reasons, such as an unexpectedly and markedly high fatality rate observed for any bat species, or special-status species being killed in unexpectedly high numbers.</p> <p>ADMMs for bats may be implemented using a stepped approach until necessary fatality reductions are reached, and monitoring methods must be revised as needed to ensure accurate measurement of the effectiveness of the ADMMs. Additional ADMMs for bats should be developed as new technologies or science supports doing so.</p> <p>ADMM-7: Seasonal Turbine Cut-in Speed Increase. Cut-in speed increases offer the most promising and immediately available approach to reducing bat fatalities at fourth-generation wind turbines. Reductions in fatalities of as much as 93% have been observed when increasing modern turbine cut-in speeds (Good et al. 2012:iii).</p>		Operator— implement		Approval

Table MMRP-1. Continued

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>A recent study in the APWRA documented significant reductions in fatalities using curtailment during the peak migration period (Smallwood and Bell 2019). Work at a site in Wisconsin has shown that a site-specific, real-time curtailment algorithm using wind speed and bat activity information (referred to as “smart-curtailment”) can yield 74-92% fatality reductions at a 3.2% cost in revenue from the turbines (Hayes et al. 2019). Other curtailment studies, also performed in sites outside the APWRA, have shown comparable effectiveness (e.g. Hein et al. 2014). The optimal cut-in speed increase is not yet well developed, and may vary between sites or regions, however most current research points to significant benefits using a cut in speed change of at least 5.0 m/s, with greater cut-in speed increases yielding improved benefit (Hayes et al. 2019).</p> <p>Cut-in speed increases will be implemented as outlined below, with effectiveness assessed annually.</p> <ul style="list-style-type: none"> Beginning with initial project operations, the project proponent will observe a cut-in speed of 5.0 m/s from sunset to sunrise from August 1 through October 31, which corresponds to the peak bat migration season in the APWRA. This measure shall apply for the first three full years of project operations. If, after the first three full years of project operations, fatalities are still exceeding established thresholds, the project proponent will: <ul style="list-style-type: none"> increase the cut in speed in 0.5 m/s increments (up to a maximum of a 6.0 m/s cut in speed change), or implement an additional 1-month spring cut in speed change to 5.0 m/s (with the timing to be determined based on the results of the initial 3 years of fatality monitoring), or a combination of cut in speed increases and the spring cut in speed change. At any time following the end of the first three full years of project operations, the project proponent may request modifications to the initial operational requirements, including a changed cut-in speed or a change in the dates of curtailment, or to implement a smart- 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>curtailment operations regime. The project proponent must present evidence in support of such changes, including evidence from fatality monitoring during the first three years of project monitoring, acoustic survey or other evidence documenting bat activity during the migration season, and such other evidence as the project proponent deems relevant. Should resource agencies and the TAC find there is sufficient evidence to authorize the proposed changes, the supporting evidence will be documented for the public record and the revised operational requirements may be implemented.</p> <ul style="list-style-type: none"> • When the project proponent requests a modification of operational requirements, the TAC shall also consider whether evidence from the APWRA or other sites supports the institution of additional requirements to further minimize bat fatalities. Such requirements may include further cut-in speed increases or changes to the timing or duration of curtailment. • The project proponent may request exceptions to cut-in speed increases for particular weather events or wind patterns if substantial evidence is available from onsite acoustic or other monitoring to support such exceptions (i.e., all available literature and onsite surveys indicate that bat activity ceases during specific weather events or other predictable conditions). <p>ADMM-8: Acoustic Deterrents. The project proponent shall present to the TAC a proposal for the evaluation of acoustic deterrents to reduce bat fatalities. Any such proposal shall incorporate a paired study in which at least 12 operational turbines are subject to monitoring under 2020 Updated PEIR Mitigation Measure BIO-14b, with half of the turbines carrying acoustic deterrents and half reserved as a control group. The study shall at a minimum include one spring and one fall migration season. The acoustic deterrents shall be of a design similar to those described by Weaver et al. (2020), who demonstrated bat fatality rate reductions of up to 78% for hoary bat, which is the second-most-commonly killed bat documented in surveys at the APWRA. Based on the results of this study the TAC may call for permanent implementation of acoustic deterrents on all project turbines.</p>				

Table MMRP-1. Continued

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>ADMM-9: Emerging Technology as Mitigation. The project proponent may request, with consultation and approval from agencies, replacement or augmentation of cut-in speed increases with developing technology or another mitigation approach that has been proven to achieve similar bat fatality reductions.</p> <p>The project proponent may also request the second tier of adaptive management to be the adoption of a promising but not fully proven technology or mitigation method. These requests are subject to review and approval by the TAC and must include a controlled research component designed by a qualified principal investigator so that the effectiveness of the method may be accurately assessed. Some examples of such emerging technologies and research areas that could be incorporated in adaptive management plans are listed below.</p> <ul style="list-style-type: none"> • The use of altitude-specific radar, night vision and/or other technology allowing bat use monitoring and assessment of at-risk bat behavior (Johnston et al. 2013: 90-91) if research in these areas advances sufficiently to allow effective application of these technologies. <p>Application of emerging peer-reviewed studies on bat biology (such as studies documenting migratory corridors or bat behavior in relation to turbines) that support specific mitigation methods.</p> <p>¹ The PEIR identified predicted total fatality rates of 1.679 fatalities/MW/year from the Vasco Winds repowering project. That fatality rate has been revised upwards to 3.207 fatalities/MW/year, taking into account the correction noted on page 3.4-69 of this Final SEIR.</p>				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>PEIR Mitigation Measure BIO-14e: Compensate for expenses incurred by rehabilitating injured bats</p> <p>The cost of reasonable, licensed rehabilitation efforts for any injured bats taken to wildlife care facilities from the program area will be assumed in full by project proponents.</p>	During operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure BIO-16: Compensate for the loss of riparian habitat</p> <p>If riparian habitat is filled or removed as part of a project, the project proponent will compensate for the loss of riparian habitat to ensure no net loss of habitat functions and values. Compensation ratios will be based on site-specific information and determined through coordination with state and federal agencies (CDFW, USFWS, USACE). The compensation will be at a minimum 1:1 ratio (1 acre restored or created for every 1 acre filled) and may be a combination of onsite restoration/creation, offsite restoration, and mitigation credits. A restoration and monitoring plan will be developed and implemented. The plan will describe how riparian habitat will be created and monitored.</p>	Prior to disturbance; compensation paid according to permit terms	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>2020 Updated PEIR Mitigation Measure BIO-18: Compensate for the loss of wetlands and streams</p> <p>If wetlands or streams are filled or disturbed as part of a project, the project proponent will compensate for the loss to ensure no net loss of habitat functions and values. Compensation ratios will be based on site-specific information and determined through coordination with state and federal agencies (CDFW, USFWS, USACE, Regional Water Board). The compensation will be at a minimum 1:1 ratio (1 acre restored or created for every 1 acre filled) and may be a combination of onsite restoration/creation, offsite restoration, and mitigation credits. A restoration and monitoring plan will be developed and implemented. The plan will describe how wetlands and streams will be created and monitored.</p>	Prior to disturbance; compensation paid according to permit terms	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>2020 New Mitigation Measure BIO-22a: Conduct a preconstruction habitat assessment and focused surveys for western bumble bee</p> <p>Prior to the start of construction, qualified biologist(s) will conduct botanical surveys in late spring/early summer to identify and map concentrations of flowering plants that provide food resources for western bumble bee. The areas containing higher densities and varieties of flowering plants will be evaluated by a qualified invertebrate biologist to determine if these areas provide suitable foraging habitat for western bumble bee. The habitat evaluation surveys would follow recommendations in the Rusty Patched Bumble Bee Habitat Assessment Form and Guide (Xerces Society for Invertebrate Conservation 2017).</p>	Prior to and during construction activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>If moderate to high quality foraging habitat for western bumble bee is identified in the project area based on the habitat assessment, these areas will be surveyed by qualified invertebrate biologist(s) (with experience conducting bumble bee surveys) within 1 year prior to the start of construction. Surveys would be conducted according to the methods in Thorp et al. (1983) or according to any future survey methodology specifically for western bumble bee proposed or approved by CDFW. The methods in Thorp et al. (1983) recommend surveys be conducted during four evenly spaced sampling periods during the flight season (March through September) (Thorp et al. 1983). For each sampling event, the biologist(s) would survey suitable habitat using nonlethal netting methods for 1 person-hour per 3 acres of the highest quality habitat or until 150 bumble bees are sighted, whichever comes first. If initial sampling of a given habitat area indicates that the habitat is of low quality or nonexistent, no further sampling of that area would be required. General guidelines and best practices for bumble bee surveys would follow USFWS' Survey Protocols for the Rusty Patched Bumble Bee (<i>Bombus affinis</i>) (U.S. Fish and Wildlife Service 2019b), which are consistent with other bumble bee survey protocols used by The Xerces Society (Hatfield et al. 2017; Washington Department of Fish and Wildlife et al. 2019).</p> <p>If western bumble bee is determined not to be present at the project site or a qualified invertebrate biologist (experienced with bumble bees) concludes that there is a very low likelihood that the species is present, then no additional mitigation is required. If western bumble bees are determined to be present at the project site, then the project proponent will implement 2020 New Mitigation Measure BIO-22b.</p>				
<p>2020 New Mitigation Measure BIO-22b: Implement protection measures to avoid and minimize effects on western bumble bee</p> <p>If it is determined through preconstruction surveys conducted pursuant to 2020 New Mitigation Measure BIO-22a that western bumble bees are present at the project site, the following measures will be implemented to ensure that the proposed project does not have a significant impact on western bumble bee. Implementation of some of these measures may require that the project proponent obtain incidental take permit from CDFW if western bumble bee remains a candidate or is formally listed under CESA before construction begins. Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., CESA incidental take permit).</p> <ul style="list-style-type: none"> If bumble bee surveys identify occupied western bumble bee habitat within the project area, the project biologist would then conduct additional 	Prior to and during construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>preconstruction surveys within the project disturbance footprint for active bee nest colonies and associated floral resources (i.e., flowering vegetation on which bees from the colony are observed foraging) no more than 30 days prior to any ground disturbance between March and September. The purpose of this preconstruction survey would be to identify active nest colonies and associated floral resources outside of permanent impact areas that could be avoided by construction personnel. The project biologist would establish, monitor, and maintain no-work buffers around nest colonies and floral resources identified during surveys. The size and configuration of the no-work buffer would be based on best professional judgment of the project biologist in coordination with the County. At a minimum, the buffer would provide at least 20 feet of clearance around nest entrances. Construction activities would not occur within the no-work buffers until the colony is no longer active (i.e., no bees are seen flying in or out of the nest for three consecutive days indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony). Monitoring of an active nest could be conducted using a motion-detecting wildlife trail camera.</p> <ul style="list-style-type: none"> • To minimize temporary disturbance of suitable foraging and nesting habitat for western bumble bee, ground disturbance within suitable annual grassland habitat will be restricted to the minimum area necessary to perform construction activities. • To encourage growth of additional nectar and pollen producing plants at the project site, disturbed grasslands that are revegetated in accordance with PEIR Mitigation Measure BIO-5c will use a seed mix combination that includes nectar and pollen producing plants commonly used as a food source by western bumble bee. Plants of the following genus are appropriate: <i>Cirsium</i> sp., <i>Erigeron</i> sp., <i>Solidago</i> sp., <i>Aster</i> sp., <i>Centaurea</i> sp., and <i>Penstemon</i> sp. These annual plants would be incorporated into the seed mix, as applicable for the existing habitat conditions. • To minimize impacts on bees from herbicide drift, herbicide application around tower foundations will be performed using handheld equipment and will be restricted to a 20-foot radius buffer area around the tower foundations. The contractor will use an herbicide that has been shown to be less toxic to amphibians and invertebrates, such as 2, 4 D. Herbicides containing the surfactant POEA (polyoxyethylene tallow amine) will not be used at the project site. The most current information on herbicide toxicity 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
on wildlife will be used to inform future decisions about herbicide use during operations.				
Cultural Resources				
PEIR Mitigation Measure CUL-2c: Conduct worker awareness training for archaeological resources prior to construction Prior to the initiation of any site preparation and/or the start of construction, the project applicant will ensure that all construction workers receive training overseen by a qualified professional archaeologist who is experienced in teaching nonspecialists, to ensure that forepersons and field supervisors can recognize archaeological resources (e.g., areas of shellfish remains, chipped stone or groundstone, historic debris, building foundations, human bone) in the event that any are discovered during construction.	Prior to construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
PEIR Mitigation Measure CUL-2d: Stop work if cultural resources are encountered during ground-disturbing activities The project applicant will ensure that construction specifications include a stop-work order if prehistoric or historic-era cultural resources are unearthed during ground-disturbing activities. If such resources are encountered, the project applicant will immediately halt all activity within 100 feet of the find until a qualified archaeologist can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil (“midden”) containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If the find is determined to be potentially significant, the archaeologist, in consultation with the Native American representative (if appropriate), will develop a treatment plan that could include site avoidance, capping, or data recovery.	During construction ground-disturbing activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
PEIR Mitigation Measure CUL-3: Stop work if human remains are encountered during ground-disturbing activities The project applicant will ensure the construction specifications include a stop-work order if human remains are discovered during construction or demolition. There will be no further excavation or disturbance of the site within a 100-foot radius of the location of such discovery, or any nearby area reasonably suspected to overlie adjacent remains. The Alameda County Coroner will be notified and will	During construction ground-disturbing activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to the coroner's authority, the coroner will notify the Native American Heritage Commission, who will attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this state law, then the landowner will re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. A final report will be submitted to Alameda County. This report will contain a description of the mitigation program and its results, including a description of the monitoring and testing resources analysis methodology and conclusions and a description of the disposition/curation of the resources.				
Geology, Soils, Mineral Resources, and Paleontological Resources				
PEIR Mitigation Measure GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report Prior to construction activities at any site, the project proponent will retain a geotechnical firm with local expertise in geotechnical investigation to prepare a site-specific geotechnical report. This report will be prepared by a licensed geotechnical engineer or engineering geologist and will be submitted to the County building department as part of the approval process. This report will be based on data collected from subsurface exploration, laboratory testing of samples, and surface mapping and will address the following issues. <ul style="list-style-type: none"> • Potential for surface fault rupture and turbine site location: The geotechnical report will investigate the Greenville, Corral Hollow-Carnegie, and the Midway faults (as appropriate to the location) and determine whether they pose a risk of surface rupture. Turbine foundations and power collection systems will be sited according to recommendations in this report. • Strong ground shaking: The geotechnical report will analyze the potential for strong ground shaking at the project site and provide turbine foundation design recommendations, as well as recommendations for power collection systems. • Slope failure: The geotechnical report will investigate the potential for slope failure (both seismically and nonseismically induced) and develop site-specific turbine foundation and power collection system plans engineered for the terrain, rock and soil types, and other conditions 	Prior to construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>present at the project site in order to provide long-term stability.</p> <ul style="list-style-type: none"> Expansive soils: The geotechnical report will assess the soil types at the project site and determine the best engineering designs to accommodate the soil conditions. Unstable cut or fill slopes: The geotechnical report will address geologic hazards related to the potential for grading to create unstable cut or fill slopes and make site-specific recommendations related to design and engineering. 				
<p>PEIR Mitigation Measure GEO-7a: Retain a qualified professional paleontologist to monitor significant ground-disturbing activities</p> <p>The applicant will retain a qualified professional paleontologist as defined by the SVP's <i>Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources</i> (2010) to monitor activities with the potential to disturb sensitive paleontological resources. Data gathered during detailed Project design will be used to determine the activities that will require the presence of a monitor. In general, these activities include any ground-disturbing activities involving excavation deeper than 3 feet in areas with high potential to contain sensitive paleontological resources. Recovered fossils will be prepared so that they can be properly documented. Recovered fossils will then be curated at a facility that will properly house and label them, maintain the association between the fossils and field data about the fossils' provenance, and make the information available to the scientific community.</p>	During project design and construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure GEO-7b: Educate construction personnel in recognizing fossil material</p> <p>The applicant will ensure that all construction personnel receive training provided by a qualified professional paleontologist experienced in teaching non-specialists to ensure that they can recognize fossil materials in the event any are discovered during construction.</p>	Prior to construction activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure GEO-7c: Stop work if substantial fossil remains are encountered during construction</p> <p>If substantial fossil remains (particularly vertebrate remains) are discovered during earth disturbing activities, activities within 100 feet of the find will stop immediately until a state-registered professional geologist or qualified professional paleontologist can assess the nature and importance of the find and a qualified professional paleontologist can recommend appropriate treatment. Treatment may include preparation and recovery of fossil materials so that they can be housed in</p>	During construction activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The applicant will be responsible for ensuring that recommendations regarding treatment and reporting are implemented.				
Greenhouse Gas Emissions				
<p>PEIR Mitigation Measure GHG-2a: Implement best available control technology for heavy-duty vehicles</p> <p>The applicant will require existing trucks/trailers to be retrofitted with the best available technology and/or CARB-approved technology consistent with the CARB Truck and Bus Regulation (California Air Resources Board 2019). The CARB Truck and Bus Regulation applies to all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds.</p> <p>Starting January 1, 2015, the applicant must replace lighter trucks (GVWR of 14,001 to 26,000 pounds) with engines that are 20 years or older with newer trucks. The Applicant has the option to install a PM filter retrofit on a lighter truck by 2014 to make the truck exempt from replacement until January 1, 2020, and any lighter truck equipped with a PM filter retrofit prior to July 2011 would receive credit toward the compliance requirements for a heavier truck or bus in the same fleet.</p> <p>Starting January 1, 2012, the applicant is required to meet the engine model year schedule shown below for heavier trucks (GVWR greater than 26,000 pounds). To comply with the schedule, the applicant will install the best available PM filter on 1996 model year and newer engines and would replace the vehicle 8 years later. The Applicant will replace trucks with 1995 model year and older engines starting in 2015. Replacements with 2010 model year or newer engines meets the final requirements, but the applicant could also replace trucks with used trucks that would have a future compliance date on the schedule. For example, a replacement with a 2007 model year engine complies until 2023. By 2023 all trucks and buses must have 2010 model year engines with few exceptions.</p>	During construction and during operation if applicable	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
Engine Model Year Schedule for Heavier Trucks				
Engine Year	Requirement from January 1			
Pre-1994	No requirements until 2015, then 2010 engine			
1994–1995	No requirements until 2016, then 2010 engine			
1996–1999	PM filter from 2012 to 2020, then 2010 engine			
2000–2004	PM filter from 2013 to 2021, then 2010 engine			
2005–2006	PM filter from 2014 to 2022, then 2010 engine			
2007–2009	No requirements until 2023, then 2010 engine			
2010	Meets final requirements			

In addition, the applicant could comply with a phase-in option that would allow the applicant to decide which vehicles to retrofit or replace, regardless of engine model year. The applicant must report information about all heavier trucks starting January 31, 2012, to use this option.

The Applicant could comply by demonstrating that trucks have met the percentage requirement each year as shown in the table below. For example, by 2012 the applicant's fleet would need to have PM filters on 30% of the heavier trucks in the fleet. This option counts 2007 model year and newer engines originally equipped with PM filters toward compliance and would reduce the overall number of retrofit PM filters needed. Any engine with a PM filter regardless of model year would be compliant until at least 2020. Beginning January 1, 2020, all heavier trucks would need to meet the requirements specified in the Compliance Schedule for Heavier Trucks.

Phase-In Option for Heavier Trucks	
Compliance Date	Vehicles with PM Filters
1-Jan-12	30%
1-Jan-13	60%
1-Jan-14	90%
1-Jan-15	90%
1-Jan-16	100%

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>PEIR Mitigation Measure GHG-2b: Install low SF₆ leak rate circuit breakers and monitoring</p> <p>The applicant will ensure that any new circuit breaker installed at a substation has a guaranteed SF₆ leak rate of 0.5% by volume or less. The applicant will provide Alameda County with documentation of compliance, such as specification sheets, prior to installation of the circuit breaker. In addition, the applicant will monitor the SF₆-containing circuit breakers at the substation consistent with Scoping Plan Measure H-6 for the detection and repair of leaks.</p>	During construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure GHG-2c: Require new construction to use building materials containing recycled content</p> <p>The applicant will require the construction of all new substation and other permanent buildings to incorporate materials for which the sum of post-consumer recycled content plus one-half of the post-industrial content constitutes at least 10% of the total value of the materials in the Project.</p>	During construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure GHG-2d: Comply with construction and demolition debris management ordinance</p> <p>The applicant will comply with the County's revised Green Building Ordinance regarding construction and demolition debris as follows: (1) 100% of inert waste and 50% wood/vegetative/scrap metal not including Alternative Daily Cover (ADC) and unsalvageable material will be put to other beneficial uses at landfills, and (2) 100% of inert materials (concrete and asphalt) will be recycled or put to beneficial reuse.</p>	During construction and demolition	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
Hazards and Hazardous Materials				
<p>PEIR Mitigation Measure HAZ-4: Perform a Phase I Environmental Site Assessment prior to construction activities and remediate if necessary (only including the portion of the mitigation measure relevant to the proposed project)</p> <p>If contamination is uncovered as part of Phase I or II environmental site assessments, remediation will be required. If materials such as asbestos-containing materials, lead-based paint, or PCB-containing equipment are identified, these materials will be properly managed and disposed of prior to or during the demolition process.</p>	Prior to and during construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>Any contaminated soil identified on a project site must be properly disposed of in accordance with DTSC regulations in effect at the time. Hazardous wastes generated by the proposed project will be managed in accordance with the California Hazardous Waste Control Law (HSC, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulation (Title 22, CCR, Division 4.5).</p> <p>If, during construction/demolition of structures, soil or groundwater contamination is suspected, the construction/demolition activities will cease and appropriate health and safety procedures will be implemented, including the use of appropriate personal protective equipment (e.g., respiratory protection, protective clothing, helmets, goggles).</p>				
Hydrology and Water Quality				
<p>PEIR Mitigation Measure WQ-1: Comply with NPDES requirements</p> <p>Project contractors will obtain coverage under the Construction General Permit before the onset of any construction activities, because the Project would disturb 1 acre or more. A SWPPP will be developed by a qualified engineer or erosion control specialist in accordance with the appropriate Water Board's requirements for NPDES compliance and implemented prior to the issuance of any grading permit. The SWPPP will be kept onsite during construction activities and will be made available upon request to representatives of the Regional Water Boards.</p> <p>Compliance and coverage with the local stormwater management programs and Construction General Permit will require controls of pollutant discharges that utilize BMPs and technology to reduce erosion and sediments to meet water quality standards. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other nonpoint-source runoff. Measures range from source control, such as reduced surface disturbance, to the treatment of polluted runoff, such as detention basins.</p> <p>BMPs to be implemented as part of the Storm Water Management Program and Construction General Permit (and SWPPP) may include the following practices.</p> <ul style="list-style-type: none"> • Temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) will be employed to control erosion from disturbed areas. • Use a dry detention basin (which is typically dry except after a major rainstorm, when it will temporarily fill with stormwater), designed to 	Prior to and during all construction activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>decrease runoff during storm events, prevent flooding, and allow for off-peak discharge. Basin features will include maintenance schedules for the periodic removal of sediments, excessive vegetation, and debris that may clog basin inlets and outlets.</p> <ul style="list-style-type: none"> • Cover or apply nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more) that could contribute sediment to waterways. • Enclose and cover exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways. • Ensure that no earth or organic material will be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water. • Prohibit the following types of materials from being rinsed or washed into the streets, shoulder areas, or gutters: concrete, solvents and adhesives, thinners, paints, fuels, sawdust, dirt, gasoline, asphalt and concrete saw slurry, and heavily chlorinated water. • Ensure that grass or other vegetative cover will be established on the construction site as soon as possible after disturbance. <p>The contractor will select a combination of BMPs (consistent with the Construction General Permit) that is expected to minimize runoff and remove contaminants from stormwater discharges. The final selection of BMPs will be subject to approval by the San Francisco Bay Regional Water Board and the Central Valley Water Board.</p> <p>The contractor will verify that a notice of intent has been filed with the State Water Board and that a SWPPP has been developed before allowing construction to begin. The contractor will perform inspections of the construction area, to verify that the BMPs specified in the SWPPP are properly implemented and maintained. The contractor will notify the appropriate Regional Water Board immediately if there is a noncompliance issue and will require compliance. If necessary, the contractor or their agent will require that additional BMPs be designed and implemented if those originally constructed do not achieve the identified performance standard.</p>				
Transportation/Traffic				
<p>PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan</p> <p>Prior to starting construction-related activities, the Applicant shall prepare and implement a Traffic Control Plan (TCP) that will reduce or eliminate impacts</p>	Prior to and during all construction activities	County—adopt a Condition of Approval; Operator—	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>associated with the proposed project. The TCP shall adhere to Alameda County, San Joaquin County, and Caltrans requirements, and must be submitted for review and approval of the County Public Works Department prior to implementation. The TCP shall include the following elements. The County and Caltrans may require additional elements to be identified during their review and approval of the TCP.</p> <ul style="list-style-type: none"> • Schedule construction hours to minimize concentrations of construction workers commuting to/from the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.). • Limit truck access to the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.). • Require that written notification be provided to contractors regarding appropriate haul routes to and from the project site, as well as the weight and speed limits on local county roads used to access the project site. • Provide access for emergency vehicles to and through the project site at all times. • When lane/road closures occur during delivery of oversized loads, provide advance notice to local fire, police, and emergency service providers to ensure that alternative evacuation and emergency routes are designated to maintain service response times. • Provide adequate onsite parking for construction trucks and worker vehicles. • Require suitable public safety measures in the project site and at the entrance roads, including fences, barriers, lights, flagging, guards, and signs, to give adequate warning to the public of the construction and of any dangerous conditions that could be encountered as a result thereof. • Complete road repairs on local public roads as needed during construction to prevent excessive deterioration. This work may include construction of temporary roadway shoulders to support any necessary detour lanes. • Repair or restore the road right-of-way to its original condition or better upon completion of the work. • Coordinate project-related construction activities, including schedule, truck traffic, haul routes, and the delivery of oversized or overweight materials, with Alameda County, Caltrans, and affected cities and counties to identify and minimize overlap with other area construction projects. 		implement		

Exhibit C

Mulqueeney Ranch Wind Repowering Project Statement of Overriding Considerations

Pursuant to the requirements of Public Resources Code Sections 21002, 21002.1, and 21081, and Section 15093 of the State CEQA Guidelines, the East County Board of Zoning Adjustments (EBZA) finds that approval of the proposed Mulqueeney Ranch Wind Repowering Project (project or proposed project), whose potential environmental impacts have been evaluated in the Final SEIR, and as indicated in the findings presented in Exhibit A, will result in the occurrence of significant effects that are not avoided or substantially lessened, as described in Exhibit A. These significant effects are listed below.

- **Project Impact BIO-11:** Avian mortality resulting from interaction with wind energy facilities
- **Project Impact BIO-14:** Turbine-related fatalities of special-status and other bats
- **Project Impact BIO-19:** Potential impact on the movement of any native resident or migratory wildlife species or established native resident or migratory wildlife corridors, and the use of native wildlife nursery sites
- **Air Quality (Cumulative):** Construction-related emissions of ROG and NOx would be substantial, resulting in a cumulatively considerable contribution to a cumulative impact.
- **Biological Resources (Cumulative):** Mortality of hoary bats from interaction with wind energy facilities would result in a cumulatively considerable contribution to a cumulative impact.

Further, as required by CEQA Section 21081(b) and State CEQA Guidelines Section 15093, the EBZA finds that the unavoidable significant effects listed above are outweighed by specific overriding economic, legal, social, technological, or other benefits offered by the project. Specifically, the project will provide the benefits described below.

Environmental Benefits

California's Renewables Portfolio Standard (RPS) requires all electricity retailers in the state, including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators, to adopt RPS goals of obtaining 33% by the end of 2020, 40% by 2024, 50% by 2026, 60% by 2030, and 100% by 2045. Originally established in 2002 under Senate Bill (SB) 1078 and amended in 2006 and 2011 by SBs 107 and X1-2, respectively, the current RPS was codified at its current level by SB 100 in 2018.

Wind energy is a renewable energy source. The project will assist California in meeting the legislated RPS for the generation of renewable electric energy in the state both by maintaining renewable energy output and by enabling and accelerating the repowering of old-generation turbines, which are known to be hazardous to avian species.

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, establishes a statewide goal of reducing greenhouse gas (GHG) emissions to 1990 levels by 2020 and requires ARB and other state agencies to develop and enforce regulations and other initiatives for reducing GHG emissions. This statute also requires ARB to develop a “Scoping Plan” that describes the specific programs that California will employ to meet this goal. The Scoping Plan was first considered by ARB in 2008 and its first update was adopted on May 22, 2014. The RPS program is an integral part of the suite of GHG emissions reduction programs that are relied upon by the Scoping Plan. Therefore, the program will assist California in maintaining its legislated Global Warming Solutions Act criteria that require reductions in carbon dioxide and other GHG emissions, which in turn represent benefits in the region. Approval of the program will aid the County in meeting energy needs in an efficient and environmentally sound manner, as provided in the County General Plan, which encourages utilization of renewable energy resources.

Economic Benefits

The proposed project will provide new full-time jobs during construction. The project will provide economic benefits to the County and its residents by increased spending in the community as a result of construction and development-related work. In addition, the program is compatible with the existing agricultural use. It will promote the long-term economic viability of grazing in unincorporated Alameda County by providing financial support to property owners through a second income stream from ground leases within the project area. The property owners can use the funding to enhance or continue agricultural operations. Project road maintenance will also enhance agricultural operations by improving access throughout the project properties.

Technological Benefits

The project will contribute to technological benefits through the replacement of large numbers of existing wind energy collection systems with a smaller number of more technologically advanced systems. Although the new turbines are larger, the available evidence indicates that repowering with the improved technology could substantially reduce turbine-related avian fatalities (although fatalities remain a significant impact).

Safety Benefits

The project would install up to 36 new wind turbine generators, towers, and installation of a new power collection system. This would result in public safety benefits for several reasons: reductions in fire hazard, the underground placement of new collection lines, and improved turbine technology that reduces the risk of blade throw. Sections 3.9 and 3.19 of the SEIR provides a discussion of fire risks, and indicates that the most common causes of wildland fire at windfarms are hardware and/or conductor failures of power collection lines, dropping of collection lines, turbine malfunction or mechanical failure, and avian-related incidents. Because of their age, design, and large number, the existing turbines present a greater risk of fire ignition than do the proposed new turbines. The project, by replacing old turbines with new, fourth-generation turbines and undergrounding the electrical collection system, would therefore reduce the likelihood of fire ignition associated with

hardware failure, electrical line failure, and avian electrocutions. Installation of new turbines would also greatly reduce the potential and probability of blade throw or failure associated with existing wind turbines. Most fourth-generation turbines, such as those proposed for the project, are equipped with newer safety and engineering features to reduce the risk of blade failure and are designed for safe operation under normal conditions. The rotors of these turbines are provided with blade pitch controls that regulate the angle of the rotor blade into the wind, as well as redundant brake mechanisms that can control speed and shutdown or slowdown in response to excessive wind speed. Overall, the project would reduce the probability of blade throw, which in any case is far lower for new generation than for old-generation turbines.

Benefits to the Knowledge Base

Postconstruction monitoring, which will be required once the new turbines are in operation, will provide data to quantify the actual change in the extent of avian fatalities from repowering and the extent of avian fatalities for projects in the project area. This will contribute to the body of knowledge about avian fatalities in the Altamont Pass region and will support future environmental analyses and mitigations.

Summary

The County is obligated by Section 15093 of the State CEQA Guidelines to balance the competing interests of identified project benefits against the unavoidable environmental risks when determining whether to approve a project. The County finds that the project, with all the mitigation measures proposed, would best balance the advancement of wind technology, while also reducing the unavoidable impacts on protected or special-status avian wildlife species, including bats, golden eagles and other raptors, to the lowest acceptable level.

**RESOLUTION NO. Z-21-13 OF
THE EAST COUNTY BOARD OF ZONING ADJUSTMENTS ADOPTED AT THE
HEARING OF APRIL 22, 2021
CERTIFYING THE FINAL SUBSEQUENT ENVIRONMENTAL IMPACT REPORT
FOR THE MULQUEENEY RANCH WIND PROJECT,
CONDITIONAL USE PERMIT PLN2019-00226,
IN COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT**

WHEREAS, Mulqueeney Wind Energy, LLC (Mulqueeney Wind), a subsidiary of Brookfield Power US Holding America Co., filed an application for Conditional Use Permit, PLN2019-00226 (Project) in December 2019 to replace 518 old generation wind turbines to install up to 36 new turbines with a maximum production capacity of 80 (MW), and more completely described in Resolution Z-21-14 that accompanies this Resolution; and

WHEREAS, the Project is part of an overall program to repower the entire portion of the Altamont Pass Wind Resource Area (APWRA) that is within Alameda County, by replacing older generation turbines with newer, larger turbines that serve to improve turbine efficiency and reduce operating costs, but which also have the potential benefit of substantially reducing avian mortality, especially for raptor species, that was a documented characteristic of the older generation turbines; and

WHEREAS, the repowering of the APWRA (hereinafter referring only to the Alameda County portion thereof) was the subject of a Program Environmental Impact Report (PEIR) which the East County Board of Zoning Adjustments (“Board of Zoning Adjustments” or “Board”) certified by adoption of Resolution Z-14-40 on November 12, 2014 as being in compliance with the California Environmental Quality Act (CEQA); and

WHEREAS, the PEIR evaluated two repowering alternatives for a maximum capacity of either 417 megawatts (MW) or 450 MW of combined nameplate capacity of new turbines within the APWRA, in order to serve the objective of increasing the output of clean energy and meeting state energy portfolio goals, in recognition that the APWRA has been the site of privately-owned wind energy projects in operation since the 1980s, after the State of California designated the area for production of renewable energy, while further recognizing that within the APWRA the number of MWs generally has a direct and proportional relationship to the mortality of protected avian and bat species; and

WHEREAS, the Board of Zoning Adjustments previously approved in September 2003 the Diablo Winds repowering project that began operations in 2004 and represents 20.5 MW of capacity, based on a prior Program EIR for Repowering the APWRA certified in 1998; and

WHEREAS, the existence of the Diablo Winds project represented a baseline condition for the 2014 PEIR and not a potential new project to be evaluated in the PEIR, because the PEIR was an evaluation of all current and future applications (submitted since the Notice of Preparation for the PEIR was circulated in 2010) for repowering a maximum of either 417 or 450 MW of combined new repowering development; and

WHEREAS, the PEIR further included two specific projects in its analysis which represented partial repowering of the APWRA, known as Golden Hills and Patterson Pass which together represented 108.2 MW of capacity, and which were approved by the Board of Zoning Adjustments at the time of the certification of the PEIR on November 12, 2014, and the PEIR was intended to provide for tiered review of other specific repowering projects that were anticipated to be proposed, consistent with the provisions for program EIRs in Section 15168 of the CEQA Guidelines using checklists to determine if such projects were adequately covered or anticipated in the PEIR; and

WHEREAS, Section 15162 of the CEQA Guidelines provides direction as to the circumstances in which a subsequent EIR shall be prepared including when, based on substantial evidence in light of the whole record, the lead agency determines that substantial changes are proposed in the project or program described and addressed in a prior EIR, or changes in the circumstances under which the project will be undertaken, that together would involve new significant environmental effects or more severe significant effects than previously identified, such that major revisions of the prior EIR are required; and

WHEREAS, the Project has been reviewed in accordance with the provisions of CEQA and it was determined that while the Project's scope was described generally as part of the PEIR, the Project proposes individual turbines with a nameplate capacity from 2.2 MW to 4.2 MW, and therefore with 40 percent more MW yield per turbine than the 3.0 MW turbines used in the PEIR to estimate environmental impacts of a typical individual future repowering project, and physically increased dimensions of roughly 9% longer rotor blades, 9% additional total rotor diameter, and a resulting 19% expansion of rotor swept area, such that the potential or likely effect would be increased avian and bat mortality on a per turbine basis, which supports the County's decision to prepare a subsequent EIR; and

WHEREAS, the Project is proposed in the context of new information including additional monitoring reports from similar repowering projects in both Alameda and Contra Costa Counties and further information regarding bat mortality, that combined with the physically larger and greater MW output together support the County's decision to prepare a subsequent EIR; and

WHEREAS, in the time since the Golden Hills project was approved in November 2014 for 88.4 MW and 52 turbines, it was constructed in 2015 with a capacity of approximately 85.9 MW (2.5 less MW and 48 turbines), and the Patterson Pass project, approved for up to 12 turbines with a capacity of 19.8 MW has not been constructed but remains an approved project; and

WHEREAS, in the time since the PEIR was certified and on the basis of analyses using environmental checklists pursuant to CEQA (Section 15168), the Board of Zoning Adjustments has approved three more repowering projects amounting to an additional 365 MW

of capacity, including the Golden Hills North project (40.8 MW), the Summit Wind project (54 MW), and the Sand Hill Wind Repowering project (50 MW); and

WHEREAS, in the time since the Golden Hills North project was approved in November 2015 for 40.8 MW and 24 turbines, it was constructed in 2016 instead with a name-plate capacity of 46 MW (5.2 more MW and 20 turbines with a capacity of 2.3 MW each); and

WHEREAS, in the time since the Summit Wind project was approved in January 2016 for 54 MW and up to 27 turbines, its owners have begun construction of 23 turbine sites only and propose to use turbines rated with a capacity of 2.5 MW each such that capacity would be increased to 57.5 MW if approved by the Board of Zoning Adjustments as a modified Conditional Use Permit (CUP); and

WHEREAS, the City of Santa Clara, which has jurisdiction over a single wind energy project site known as Rooney Ranch within the APWRA, approved in June 2019 the application of sPower for its repowering project of 25.1 MW of capacity on Rooney Ranch using an environmental checklist tiering from the PEIR in accord with Section 15168 of the CEQA Guidelines; and

WHEREAS, due to the changes in approved and constructed repowering projects as described hereinabove, the total number of MW currently in operation or approved for construction in the APWRA, including the Diablo Wind project, is 285 MW; and

WHEREAS, combined with the approved 80 MW approved for the Mulqueeny Ranch Project, the total number of MW of currently operating, constructed approved and proposed repowered wind energy projects in the APWRA would amount to 365 MW; and

WHEREAS, a Notice of Preparation (NOP) of a Subsequent Environmental Impact Report (DSEIR) was issued on April 6, 2020 soliciting public input regarding the environmental analysis of the repowering Project; and

WHEREAS the Draft Mulqueeny Ranch Project Subsequent Environmental Impact Report (DSEIR) was prepared and circulated for public comment between November 6, 2020 and December 21, 2020, and then extended for comment through January 8, 2021; and

WHEREAS the DSEIR describes the effects of the Project on the environment at a detailed level, identifies mitigation measures applicable to the Project and previously identified in the PEIR which would reduce each significant impact to the greatest extent possible or feasible, in most cases to a level that is less than significant but in other cases without reducing it to a less than significant level, including adverse impacts on protected avian and bat species including golden eagle, red-tailed hawk, American kestrel, burrowing owl and other focal raptor species; and

WHEREAS, a Notice of Availability (NOA) of the DSEIR was prepared on November 6, 2020 and copies of the DSEIR provided to the state Office of Planning and Research – State Clearinghouse (SCH) for distribution to state Responsible Agencies, and was also provided to or made available to other interested agencies, organizations and area property owners and residents to solicit comment on the DSEIR during a 45-day comment period ending on December 21, 2020 that was extended for another eighteen (18) days to January 8, 2021 at 5:00 p.m., and the DSEIR was made available at the offices of the Alameda County Planning Department at 224 West Winton Avenue, Hayward, California, 94544, and made available on the Planning Department’s public website on November 6, 2020; and

WHEREAS, a virtual public hearing to take verbal comment on the DSEIR was held on Tuesday, the 8th day of December, 2020 at the hour of 1:30 p.m. by way of video conference, where no comments were made; and

WHEREAS seven letters of comment on the DSEIR were received by the County including six received before January 8, 2021, and the seventh letter received on January 14, 2021, raising numerous substantial issues such as the cumulative impact analysis in the SEIR of Project effects on avian and bat species, the “micro-siting” of individual turbines, and including a request to analyze additional Project alternatives and mitigation measures; and

WHEREAS, in accordance with the CEQA Guidelines Section 15132, the Final Subsequent EIR (FSEIR) document was prepared which includes the full text of the DSEIR, as revised by the lead agency in response to public comments or to otherwise improve the draft, all comments received on the DSEIR, a list of persons, organizations and agencies commenting on the SEIR, and responses to each comment, and said FSEIR was provided on April 9, 2021 to interested agencies, organizations and persons who commented on the SEIR, and made available on the County’s public website; and

WHEREAS, it satisfactorily appears from the record that proper notice of said public hearings were given in all respects as required by law; and

WHEREAS, this Board, as the decision making-body for the certification of this FSEIR, did hold a virtual public hearing regarding the FSEIR at the hour of 1:30 p.m. on Thursday, the 22nd day of April 2021 by way of video conference; and

WHEREAS, the FSEIR did not include any additional significant new information or identify any new significant environmental impacts, a substantial increase in the severity of an environmental impact, or any other factors under CEQA Guidelines 15088.5 that would require recirculation of the SEIR; and

NOW, THEREFORE, BE IT RESOLVED that this Board certifies that the Final Subsequent EIR for the Mulqueeneey Ranch Wind Repowering Project has been completed in compliance with CEQA; and

RESOLUTION NO. Z-21-13

CERTIFYING FINAL SUBSEQUENT EIR FOR THE MULQUEENEY RANCH WIND
REPOWERING PROJECT – PLN2019-00226

APRIL 22, 2021

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BE IT FURTHER RESOLVED as follows:

1. The Board certifies that it has been presented with all of the information described in the above recitals and has reviewed and considered this information and the Final Subsequent EIR prior to adopting this Resolution and considering approval of the Project.
2. The Board certifies that the above recitals are true and correct.
3. The Board certifies that the Final Subsequent EIR reflects the County's independent judgment and analysis and has been completed in compliance with CEQA.
4. Notice of the Board's hearings on the Draft Subsequent EIR and Final Subsequent EIR have been given as required by law and the actions were conducted pursuant to the State Planning and Zoning Law, CEQA, the State CEQA Guidelines and the County's CEQA Guidelines.
5. The Board is a non-elected decision-making body within the local lead agency, and the certification of the Final Subsequent EIR may be appealed to the Board of Supervisors of the County of Alameda.
6. All individuals, groups and agencies desiring to comment were given adequate opportunity to submit oral and written comments on the Final Subsequent EIR which met or exceeded the requirements of State Planning and Zoning Law and CEQA.
7. All comments submitted during the public review and comment period on the Draft Subsequent EIR were responded to adequately in the Final Subsequent EIR.
8. No new comments or information has been submitted during the hearing on the Final Program EIR that would substantially change the analysis or conclusions of the Final Subsequent EIR.

**EAST COUNTY BOARD OF ZONING ADJUSTMENTS
ALAMEDA COUNTY PLANNING DEPARTMENT**

**RESOLUTION NO. Z-21-14 OF
THE EAST COUNTY BOARD OF ZONING ADJUSTMENTS
ADOPTED AT THE HEARING OF APRIL 22, 2021
APPROVING CONDITIONAL USE PERMIT PLN2019-00226**

WHEREAS, MULQUEENEY WIND ENERGY, LLC, a wholly-owned subsidiary of Brookfield Power US Holding America Co., filed an application for CONDITIONAL USE PERMIT, PLN2019-00226 (“Project”) in December 2019, to allow repowering of 518 existing or previously existing old generation wind turbine sites to install and operate up to 36 new turbines with a maximum production capacity of 80 megawatts (MW), using turbines rated between 2.2 to 4.2 MW per turbine, and to make improvements to related infrastructure, on twenty-nine (29) parcels in an area designated in the A (Agriculture) zone district located on roughly 4,600 acres in total area in the southeastern quadrant of the Alameda County portion of the Altamont Pass Wind Resource Area, north and south of Patterson Pass Road, between approximately one-third and four miles west of Midway Road, and between one and five miles south of Interstate 580, including the following Assessor's Parcel Numbers:

99A-1800-2-3; 99A-1800-2-4; 99B-7890-2-4; 99B-7890-2-5; 99B-7890-2-6;
99B-7890-4; 99B-7900-1-3; 99B-7900-1-4; 99B-7900-1-5; 99B-7900-1-6;
99B-7900-1-7; 99B-7900-2; 99B-7910-1-1; 99B-7910-1-2; 99B-7925-2-1;
99B-7925-2-2; 99B-7925-2-3; 99B-7925-2-4; 99B-7925-2-5; 99B-7925-3;
99B-7950-2; 99B-7975-1; 99B-7980-1; 99B-7985-1-3; 99B-7985-1-4;
99B-7985-1-5; 99B-7985-1-6; 99B-8050-1; and 99B-8100-1-1.

WHEREAS, the subject Project is part of an overall program to repower the entire Altamont Pass Wind Resource Area (APWRA) by replacing older generation turbines with newer, larger turbines that serve to improve turbine efficiency but also have the potential to substantially reduce avian mortality, especially for raptor species; and

WHEREAS, this application has been reviewed in accordance with the provisions of the California Environmental Quality Act (CEQA) and it was determined that the proposed Project would result in potentially significant adverse environmental impacts and therefore is a project subject to CEQA, and that the Project was described generally as part of the APWRA Program Environmental Impact Report (PEIR) certified by the East County Board of Zoning Adjustments on November 12, 2014; and

WHEREAS, in compliance with Section 15091 of the CEQA Guidelines, the Planning Department has prepared Written Findings of Significant Effects, attached herein as Exhibit A, to provide a brief explanation of the rationale for each finding, supported by substantial evidence in the record, that changes or alterations have been required in or incorporated into the Project, including by identified mitigation measures which would avoid or substantially lessen some but not all identified significant environmental effects, and furthermore that certain mitigation measures or project alternatives identified in the Final Program EIR are infeasible due to specified economic, legal, social, technological, or other considerations; and

WHEREAS the Final Program EIR indicates that activities anticipated under the APWRA Repowering Program, which include the subject Project, would result in significant and

unavoidable adverse impacts on avian wildlife species including golden eagle and other focal raptor species; and

WHEREAS, on November 12, 2014, the East County Board of Zoning Adjustments adopted Resolution Z-14-40 which certified the Final Program EIR as being in compliance with CEQA, that the Final Program EIR was presented to the Board, which has reviewed and considered the information in the Final Program EIR prior to adopting said Resolution, and that the Final Program EIR reflects the County's independent judgment and analysis; and

WHEREAS, on April 22, 2021, said Board held a virtual public hearing on the Conditional Use Permit application and the Final Subsequent Environmental Impact Report (SEIR) for the Mulqueeneey Ranch Wind Repowering Project by way of video conference due to the Covid-19 pandemic; and

WHEREAS, on April 22, 2021, said Board adopted Resolution Z-21-13 which certified the Final SEIR for the Mulqueeneey Ranch Wind Repowering Project, as being in compliance with CEQA, that the Final Subsequent EIR was presented to the Board, which has reviewed and considered the information in the Final Subsequent EIR prior to adopting said Resolution, and that the Final Subsequent EIR reflects the County's independent judgment and analysis; and

WHEREAS, in compliance with Section 15091(d) of the CEQA Guidelines, the Planning Department has prepared a Mitigation Monitoring and Reporting Program, attached herein as Exhibit B, which is required to be implemented by the Permittee and by the County as a condition of approval of the Project and that are fully enforceable through permit conditions, agreements, or other measures; and

WHEREAS, further in compliance with Section 15093 of the CEQA Guidelines the Planning Department has prepared a Statement of Overriding Considerations, attached herein as Exhibit C, which states specific reasons, supported by substantial evidence in the record, why the Planning Department and the Board would approve the Project although certain significant adverse environmental effects of the Project would not be avoided or substantially lessened by the identified mitigation measures; and

WHEREAS, the East County Board of Zoning Adjustments has determined that approval of the Project as conditioned herein, including the implementation of the Mitigation Monitoring and Reporting Program attached herein as Exhibit B, would provide for all of the significant effects on the environment to have been eliminated or substantially lessened where feasible, as indicated in the Written Findings of Significant Effects, attached herein as Exhibit A, and that there are certain significant effects on the environment found to be unavoidable which are acceptable due to overriding concerns as indicated in the Statement of Overriding Considerations attached herein as Exhibit C; and

WHEREAS, adoption of the programs, requirements, procedures, legal and financial commitments and all other specifications as set forth in the conditions of approval for the conditional use permit is found to be necessary for the public health and safety and as a necessary

prerequisite to ensure that the proposed decommissioning, construction and operation of the facilities are managed in such a way as to serve the goals and objectives of the Alameda County General Plan; and

WHEREAS, the Staff Report was submitted recommending the application be approved subject to the proposed conditions of approval and adoption of the draft Resolution and associated Exhibits; and

WHEREAS a representative present on behalf of the Applicant appeared at said public hearings and presented testimony in support of the application; and

WHEREAS members of the public appeared at said public hearing and presented testimony in support of and in opposition to the application; and

WHEREAS the Board did hear and consider all reports, recommendations and testimony as hereinabove set forth and asserts the information contained in the attached Exhibits reflects the independent judgment of the Board;

NOW THEREFORE

BE IT RESOLVED that the Board finds that:

1. The use is required by the public need in that wind energy production in the Altamont Pass Wind Resource Area (APWRA) represents a major source of renewable energy that is currently under-utilized by aged, underperforming or defunct wind turbines with documented adverse effects on avian species. The proposed Project would replace existing turbines with more efficient turbines, with the potential to reduce avian impacts. The Project would generate and supply 100% emissions-free electricity to California, would support California's renewable energy goals, and would help reduce dependence on fossil fuels, a primary factor in global warming or climate change.
2. The use will be properly related to other land uses and transportation and service facilities in the vicinity in that as an existing wind farm, the Project site is well-suited from a planning and practical perspective for continued use as a windfarm. The Project parcels have been developed with wind power project uses for over 30 years and are located a substantial distance away from substantial residential, commercial and industrial uses. Existing supporting facilities will continue to be utilized to transmit the power generated to satisfy the electricity needs of California.
3. The use, if permitted, under all the circumstances and conditions of this particular case, will not materially affect adversely the health or safety of persons residing or working in the vicinity, or be materially detrimental to the public welfare or injuries to property or improvements in the neighborhood. The proposed Project would serve the goals and objectives of the Alameda County East County Area Plan and other County economic development and

environmental objectives, would have limited impacts on County services and infrastructure, and as mitigated with the measures to be adopted under the Mitigation Monitoring and Reporting Program attached herein as Exhibit B and the conditions of approval, would not negatively impact the surrounding community or environment. As the site is currently occupied by wind turbines and supporting facilities, once construction is complete and the wind turbines have been repowered, environmental conditions as they currently exist would be maintained, if not improved.

Furthermore: a) the subject turbines would be sited in a manner that reduces risks to avian and bat species and according to specified minimum setbacks to reduce any health, safety or aesthetic concerns to any residents in close proximity; b) proper maintenance and operation efforts would be in effect to ensure the safe operation of the turbines; c) fire prevention and security measures would be in place to protect the public and local property; d) construction activities will be conducted in a manner that reduces potential health, safety and environmental concerns; e) the proposed use would not substantially hinder the continued use of the Project sites and surrounding land for cattle grazing as the primary property use; f) any access roads improved for the proposed use would provide improved access to the grazing lands; g) land owners would benefit from the lease payments made by the applicant, which further supports grazing operations; and h) other improvements, such as roadways, railroads, electrical substations and landfills are not adversely affected by the presence of wind turbines and their associated infrastructure because the proposed Project would replace and/or continue to use existing facilities.

4. The use will not be contrary to the specific intent clauses or performance standards established for the District in which it is to be considered in that the proposed Project is located in the A (Agriculture) zoning district, which has as its stated intent: "to promote implementation of General Plan land use policies for agriculture and other nonurban uses; to conserve and protect existing agricultural uses; and to provide space for and encourage such uses in places where more intensive development is not desirable or necessary for the general welfare." The proposed Project would be consistent with this intent because the development of wind power projects is both allowed and encouraged in the APWRA by the East County Area Plan, the Project removes minimal land from agricultural production, and the use is appropriately located in non-urban areas and serves the public welfare.

BE IT FURTHER RESOLVED that the Board adopts the Written Findings of Significant Effects contained in Exhibit A of this Resolution, the Mitigation Monitoring and Reporting Program contained in Exhibit B of this Resolution; and the Statement of Overriding Considerations contained in Exhibit C of this Resolution, which Exhibits are incorporated herein as if fully set forth.

BE IT FURTHER RESOLVED that the Board does hereby approve the said application in the form of the Reduced Project Alternative as defined in the Project Final SEIR including Figure 4-2, Reduced Project Alternative Conceptual Site Plan, on file with the Alameda County Community Development Agency, Planning Department, 224 West Winton, Rm. 111, Hayward, CA, 94544), subject to the following conditions:

AUTHORIZATION

1. Approval. Approval of this Permit authorizes Mulqueeney Wind Energy, LLC (Mulqueeney Wind), a subsidiary of Brookfield Power US Holding America Co., to replace 518 old generation wind turbine sites previously removed from the subject parcels to install and operate up to 24 new turbines with a maximum production capacity of 80 (MW), using turbines rated between 2.2 to 4.2 MW per turbine, sited and operated to conform to the Reduced Project Alternative as defined in the Subsequent Environmental Impact Report for the Project, on 29 parcels or parts of parcels, extending over roughly 4,600 acres within the southeastern quadrant of the Alameda County portion of the Altamont Pass Wind Resource Area, north and south of Patterson Pass Road, between approximately one-third and four miles west of Midway Road, and between one and five miles south of Interstate 580, including the following Assessor Parcel Numbers:

99A-1800-2-3; 99A-1800-2-4; 99B-7890-2-4; 99B-7890-2-5; 99B-7890-2-6;
99B-7890-4; 99B-7900-1-3; 99B-7900-1-4; 99B-7900-1-5; 99B-7900-1-6;
99B-7900-1-7; 99B-7900-2; 99B-7910-1-1; 99B-7910-1-2; 99B-7925-2-1;
99B-7925-2-2; 99B-7925-2-3; 99B-7925-2-4; 99B-7925-2-5; 99B-7925-3;
99B-7950-2; 99B-7975-1; 99B-7980-1; 99B-7985-1-3; 99B-7985-1-4;
99B-7985-1-5; 99B-7985-1-6; 99B-8050-1; and 99B-8100-1-1.

In the event that larger, 4.2 MW turbines are available to and selected by the project proponent at the time suited for ordering turbines to be delivered, the proponent shall reduce the total number of turbines to nineteen (19) turbines only. Final site location and capacity shall be subject to Planning Director approval and recommendations of the County's avian protection Technical Advisory Committee (TAC; see Condition 95).

2. Compliance and Conditions. Permittee agrees to comply with all applicable laws, regulations, rules and requirements of the County of Alameda and its Agencies, all subdivisions and departments of such agencies, and to comply with specific conditions of approval described herein by the representatives of said agencies, including but not limited to:
 - a. Community Development Agency, Planning Department
 - b. Public Works Agency, Building Inspection Department
 - c. Public Works Agency, Land Development Department
 - d. Public Works Agency, Grading Division
 - e. Alameda County Fire Department
 - f. County Sheriff
 - g. Health Services Agency, Environmental Health Department

Failure to act in compliance with the conditions herein will be construed as a violation of Zoning and enforcement proceedings shall commence as provided for by Section 17.58 of the Alameda County Zoning Ordinance.

Permittee further agrees to comply with all applicable regulations, rules, requirements and laws of the State of California and United States and their agencies, including but not limited to the following:

- | | |
|--|---|
| h. California Public Utilities Commission | k. California Energy Commission |
| i. California State Department of Fish and Wildlife | l. Bay Area Air Quality Management District |
| j. California State Water Quality and Control Board - San Francisco and Central Valley Regions | m. United States Fish and Wildlife Service |
| | n. Federal Aviation Administration |
3. Insurance: A Comprehensive General Liability insurance policy in the minimum amount of \$1,000,000 and in the form prescribed in the document "INSURANCE REQUIREMENTS, ALAMEDA COUNTY PLANNING DEPARTMENT, November 12, 2014," in addition to insurance requirements of other agencies listed in Condition 2 shall be provided to the County within 20 business days following approval of this Conditional Use Permit and provided again within 20 business days of each annual anniversary thereof.
4. Utility Tax Compliance. Within 60 days of this approval, the Permittee shall submit to the Alameda County Planning Department evidence of business registration with the Alameda County Business Tax Unit in the form of a valid business certificate to ensure compliance with the County's utility tax regulations.
5. Liability. By exercise of this Conditional Use Permit, the Permittee agrees to defend, indemnify and hold harmless the County of Alameda, its officers, employees, agents and servants for any and all liability caused by the negligence or wrongful act of the Permittee arising out of the exercise of this Conditional Use Permit, and to pay all claims, damages, judgments, legal costs, adjuster fees, and attorney fees related thereto.
6. Indemnification. The Permittee shall defend, indemnify, and hold harmless the County of Alameda and its agents, officers, and employees from any claim, action, or proceeding against the County of Alameda or its agents, officers or employees to attack, set aside, void, or annul Conditional Use Permit, PLN2019-00226, the associated Subsequent Environmental Impact Report (SEIR), California Environmental Quality Act findings, determination of significant impacts, statement of overriding considerations, Mitigation Monitoring and Reporting Program (MMRP), or any combination thereof. Such indemnification shall include, but not be limited to, an award of costs and attorney's fees incurred by Alameda County in its defense. The County shall promptly notify Permittee of any such challenge.

7. Planning Review and Permit Administration Costs. The Permittee shall be responsible for payment of all additional Planning Department and Public Works Agency staff and material costs for completing these agencies' reviews up to the time of this approval, including costs billed against the original application deposit, costs which exceeded the deposit and for a deposit of an additional \$2,000.00 for similar costs associated with administration and enforcement of the conditions herein, independently of Inspection Costs as required below (Condition 8). If all or any part of said cash deposit is depleted by such administration activities, the Permittee shall restore the balance of the deposit to the original \$2,000.00.

The Permittee shall compensate the County for expenditures to retain a biological and avian resource consultant necessary to monitor implementation of these conditions and the Project MMRP during Planning Department review of the building permit, during construction, not to exceed \$15,000 for the Project plus \$100.00 per proposed MW.

The Permittee shall compensate the County for expenditures to retain a County technical representative to the Technical Advisory Committee, as necessary to review monitoring reports and advise the County regarding implementation of these conditions and the Project MMRP during each year of post-construction monitoring as specified in Conditions 92, 93 and 94 (Mitigation Measures BIO-11g, BIO-14b and BIO-14c). Such compensation shall be paid annually in proportion to the installed or rated MW capacity of the facility (as a proportional percentage of all wind repowering projects, which may be prorated on a monthly basis), not to exceed \$15,000 for all repowering projects (adjusted annually for inflation).

8. Inspections and Cost Recovery. The Permittee shall allow staff of the Alameda County Planning Department, Alameda County Public Works Agency, the California Department of Fish & Wildlife, and any other responsible agency to conduct site inspections during construction and operation of the Project in order to ensure compliance with approved permits, plans, and conditions of approval. Inspections shall be conducted at the discretion of said agencies. Discovery of noncompliance may be cause for commencement of proceedings to revoke this Conditional Use Permit, and for payment of applicable bonds. Public Works Agency staff is also authorized to inspect structural and pavement conditions of County roads serving the construction site prior to and after construction to identify needed repairs and to assess cost recovery requirements.

The Permittee or its successors shall be responsible for payment of all reasonable costs associated with necessary inspections of the facility, including costs incurred by the Planning Department, the County Fire Department, the Building Inspection Division, the Public Works Agency or any other applicable Federal, State or County department or agency. Each County Agency shall have the authority to require deposits of \$4,000.00 prior to plan review, for plan review, inspections or other necessary costs. State and federal agencies shall be responsible for collecting established fees and related compensation where required by statute.

9. Bonds. Application for Building Permits to implement any portion of this Conditional Use Permit shall be accompanied by the following bonds:
- a. A \$2,000.00 cash bond shall be deposited to be used in the investigation and evaluation of a noise complaint as provided in Condition 88 herein below. If all or any part of said cash bond is depleted by such activities, the Permittee shall restore the balance of the bond to the original \$2,000.00.
 - b. A security bond or other acceptable instrument shall be recorded with the Director of Public Works to guarantee repair and restoration of roads serving the Project area that may be damaged in the course of construction of the Project, consistent with the requirements of the Transportation Control Plan as set forth in Condition 48 below.
 - c. A surety bond or other acceptable security instrument shall be recorded with the Director of Public Works to guarantee implementation of the restoration and reclamation plan as required by Conditions 11 and 12 below.
10. Mitigation Monitoring and Reporting Program. The Permittee shall implement all applicable mitigation measures identified in the Mitigation Monitoring and Reporting Program (MMRP) attached herein as Exhibit B, and as specified individually herein. These conditions of approval incorporate the individual mitigation measures and present them either in summarized form or by reference only, and in certain cases provide additional clarification and guidance on the manner, timing and responsibility for implementation of the mitigation measures. The incorporation of the mitigation measures into the conditions of approval (i.e., their replication and representation herein) is not intended to revise, modify or add to any mitigation measure, or add any new obligation to the Permittee under CEQA, but only to augment the understanding of how each mitigation measure shall be implemented. Each mitigation measure is presented within the applicable phase of Project development used herein, beginning with design, and continuing through permit applications, pre-construction tasks, obligations during construction, performance during operation, and for periodic review through the life of the permit.
- These conditions of approval are intended to and shall be interpreted by reading Exhibit B and the enumerated conditions together, as a whole, in a manner that gives the maximum effect to both and, to the extent necessary, harmonizes them to avoid any inconsistencies or superfluous terms. If the Permittee, the County or other public agency responsible for implementation of a mitigation measure finds any discrepancy between Exhibit B and these conditions, Exhibit B shall be relied upon unless the conditions herein provide greater clarification of the time or performance or the manner of implementation of the MMRP, when determined to be necessary for the effective implementation of the MMRP. Any remaining questions of interpretation shall be resolved by the Planning Director.
11. Restoration and Reclamation Plan: Prior to issuance of building permits the Permittee shall submit for review and approval by the County Planning Director and the Director of

Public Works, a reclamation plan for removal at the end of this permit term (or by major default by the Permittee as described below) of all wind turbines, foundations and ground equipment to a depth of three feet below finished grade. Roads and above-ground facilities installed pursuant to this permit shall also be removed unless the property owner has requested in writing as part of the reclamation plan that they be left in place, subject to approval of the Planning Director. The reclamation plan shall include provisions for:

- a. Removal of roads and staging areas within the subject property or properties not needed for maintenance and operations or for other allowed property uses by the property owner;
- b. Re-grading and re-vegetation to return the subject property or properties to rangeland or pre-windfarm use conditions, with site-specific characteristics of topography, vegetation, drainage and other unique environmental features, subject to approval of the California Department of Fish and Wildlife;
- c. Repair of County roadways from damage that may result from off-haul of materials, movement of oversized loading or heavy-haul vehicle, traffic management and a substantial increase in volume of vehicle trips;
- d. A transportation control plan for conveyance of oversize turbine components.

The reclamation plan shall include a cost estimate of labor and material costs, prepared by a licensed contractor to implement the proposed reclamation plan, and the Planning Director shall have the authority to request additional details of specific cost elements. The reclamation plan shall include a guarantee by the Permittee to carry out the reclamation plan upon determination by the Planning Director and Director of Public Works that the permitted wind farm operations have been abandoned or have produced less than 5 percent of the rated output of the wind farm in one year.

The Planning Director and Director of Public Works may instead make a determination that more than 50% of the turbines are in disrepair and there is no other demonstrated plan, satisfactory to the Planning Director, to restore the equipment to a productive operating condition. Under such circumstances the Planning Director may order the Permittee or property owners to execute the reclamation plan.

12. Restoration and Reclamation Bond. Prior to issuance of building permits, and based on County approval of the reclamation plan as above, the Permittee shall post a security in the form of a surety bond. The security shall remain with the County for the life of the Project, except upon replacement as provided below and upon replacement shall be adjusted for inflation using the appropriate construction price index, as determined by the Director of the Public Works Agency. In the event ownership of the turbines changes from the current Permittee to another person or entity, the new owner shall replace the surety bond of the original Permittee with a surety bond in the name of the new owner within 30 days of the change of ownership.

13. Changes to Power Purchase Agreements. Permittee agrees that, at least six (6) months prior to the expiration, renewal or extension of any Power Purchase Agreements (PPA) made by the Permittee, the Permittee shall inform the Planning Director of such changes and provide the County of Alameda and any Community Choice Aggregation joint powers authority or equivalent program (CCA) in which the County participates, a right of first offer to establish a PPA between the Permittee and the County or the CCA.
14. Ten Year Review. No more than ninety (90) calendar days after the tenth anniversary of the initial approval and within ninety (90) days of the subsequent twentieth anniversary, the Planning Director shall, after notice as provided for in the initial hearing and except as provided for under Conditions 88 and 101 below, set this matter for public hearing by the East County Board of Zoning Adjustments for the purpose of reviewing and verifying compliance with the conditions of approval so as to validate the findings of this conditional use permit.
15. Post-Construction Monitoring Review. Upon completion of the post-construction avian fatality monitoring program required by Mitigation Measures 11g, the post-construction bat fatality monitoring program required by Mitigation Measures 14b, and if required, after implementation of adaptive management program review required by Mitigation Measure BIO-11i, this matter may be set by the Planning Director for a public hearing, after notice as provided for in the initial hearing, for the purpose of assessing the effectiveness of avian protection plans, adaptive management measures, conservation or other strategies to improve or mitigate avian species safety concerns raised in the Program Environmental Impact Report (PEIR). This review may allow the Planning Director to modify conditions previously imposed or add conditions directly related to the results of the post-construction avian fatality monitoring program (Mitigation Measure BIO-11g) and the recommendations of the Technical Advisory Committee.
16. Commencement Date. Pursuant to Section 17.52.050, building permits shall be obtained and construction activity commenced within 3 years of approval or this permit shall be of no force or effect.

PRIOR TO DESIGN SUBMITTAL

17. Preconstruction Surveys for Special-Status Plant Species (MM BIO-1a). As required by Mitigation Measure BIO-1a in the MMRP, no more than 3 years prior to ground-disturbing repowering activities, and during the appropriate identification periods for special-status plants as specified in the MMRP and the PEIR, the Permittee shall have a qualified biologist (as determined by the Alameda County Planning Director) conduct field surveys to identify special-status plant species within and adjacent to the Project site. The Permittee shall submit a report documenting the survey results to the Planning Director for review and approval, meeting the requirements of Mitigation Measure BIO-1a, prior to ground-disturbing activities and before issuance of building permits.

18. Preconstruction Surveys for Habitat for Special-Status Wildlife Species (MM BIO-3a). As required by Mitigation Measure BIO-3a in the MMRP, no more than 3 years prior to ground-disturbing repowering activities, the Permittee shall have a qualified biologist (as determined by Alameda County) conduct field surveys within decommissioning, repowering, and restoration work areas and their immediate surroundings to determine the presence of habitat for special-status wildlife species. The Permittee shall submit a report documenting the survey results and meeting the requirements of Mitigation Measure BIO-3a to the Planning Director for review and approval, prior to conducting any ground-disturbing repowering activities and before issuance of building permits.
19. Preconstruction Bat Roost Surveys (MM BIO-12a). As required by Mitigation Measure BIO-12a in the MMRP, prior to any ground-disturbing activity the Permittee shall have a roost habitat assessment prepared by a qualified bat biologist to identify potential colonial roost sites of special-status and common bat species within 750 feet of the construction area. If suitable roost sites are to be removed or otherwise significantly affected by the proposed Project, the bat biologist will conduct targeted roost surveys of all identified sites that would be affected. Surveys shall conform to the protocols and guidelines set forth in Mitigation Measure BIO-12a in the MMRP, and a report shall be submitted to the Planning Director following such surveys as specified by Mitigation Measure BIO-12a of the MMRP and prior to issuance of building permits.
20. Avoid Loss of Historic Resources and Record if Necessary (MMs CUL-1a and -1b). As required by Mitigation Measure CUL-1a in the MMRP, the Permittee shall avoid historic resources in the design and layout of the Project wherever feasible. As required by Mitigation Measure CUL-1b, if avoidance of resources in accordance with Mitigation Measure CUL-1a is determined to be infeasible, the significantly affected historic resource shall be recorded prior to site disturbance and before issuance of building permits, consistent with Mitigation Measure CUL-1b requirements.
21. Preconstruction Survey and Planning for Cultural Resources (MMs CUL-2a and CUL-2b). As required by Mitigation Measure CUL-2a in the MMRP, prior to ground-disturbing activities and issuance of the building permit, the Permittee shall have qualified personnel conduct an archaeological field survey of the Project area to determine whether significant cultural resources exist within the Project area. Documentation of the field survey results shall comply with Mitigation Measure CUL-2a.

As required by Mitigation Measure CUL-2b, if any significant resources are identified through the preconstruction survey, a treatment plan with measures that could include site avoidance, capping, or data recovery will be developed and implemented by the Permittee and approved by the Planning Director subject to applicable requirements.
22. Environmental Site Assessment to Identify Possible Site Contamination (MM HAZ-4). As required by mitigation measure HAZ-4 in the MMRP, the Permittee shall have a Phase I Environmental Site Assessment (ESA) prepared for any Project area proposed for

ground-disturbing activities and submit it to the Alameda County Health Services Agency – Environmental Health Department, as the authorized regulatory oversight agency. The Phase I ESA shall be in conformance with the minimum requirements described in Mitigation Measure HAZ-4 in the MMRP.

If the Phase I ESA indicates likely soil contamination a Phase II ESA shall be prepared by a qualified environmental professional under a work plan approved by the Environmental Health Director, including proposed soil sampling, remediation and disposal of contaminants if necessary. The Phase II ESA shall include the components outlined in Mitigation Measure HAZ-4, and shall be provided to the Planning Director and Environmental Health Director, the latter of which may require remediation of soil or groundwater or disposal of hazardous building materials subject to a work plan approved by the Environmental Health Director. Review of a work plan and Phase II ESA will require a deposit of \$6,000.00 (as of this approval date) with the County Health Services Agency – Environmental Health Department, and may require opening a Site Cleanup Program (SCP) file. Any contaminated soil identified on a Project site must be properly disposed of in accordance with the State Department of Toxic Substance Control (DTSC) regulations in effect at the time the Phase II ESA is submitted to the Environmental Health Director.

23. Preconstruction Noise Studies (MM NOI-1). As required by Mitigation Measure NOI-1 in the MMRP, if any turbine is proposed to be located within 2,000 feet of a noise sensitive receptor, such as a residence, school, church or public recreational trail, the Permittee shall have a qualified acoustic engineering consultant prepare a report to evaluate the Project-specific noise impacts associated with operation of the proposed wind turbine(s). This evaluation shall conform to the requirements of mitigation measure NOI-1. If operation of the turbine(s) is predicted to result in noise level of 55 dBA (Ldn) or greater where noise is currently less than 55 dBA (Ldn) or result in a 5 decibel (dB) increase where noise is currently greater than 55 dBA (Ldn), the Permittee shall modify the Project to select new specific installation sites or turbine designs within the Project boundary to ensure that these performance standards will not be exceeded.

Other methods that can be used to ensure compliance with these performance standards include but are not limited to increasing the distance between proposed turbines and noise sensitive uses, or use of alternative turbine operational modes to reduce noise. Upon completion of the noise study, the Permittee shall submit a report to the Alameda County Planning Director demonstrating how the Project will comply with these performance standards. After review and approval of the report by the Planning Director, the Permittee shall incorporate measures as necessary into the Project design to ensure compliance with these performance standards.

24. Safety Setbacks. New wind turbines shall have a minimum setback from other land uses as stated below.
- a. From a parcel boundary on which a separate windfarm operation is proposed or approved: 1.1 times (or 110% of) the rotor length.
 - b. From a parcel boundary on which no windfarm operation is proposed or approved: 1.25 times (or 125% of) the total turbine height.
 - c. From a Dwelling Unit: three times (or 300% of) the total turbine height.
 - d. From a public road, interstate highway, public trail, commercial or residential zoning: 2.5 times (or 250% of) the total turbine height.
 - e. From a recreation area or property approved for an outdoor recreation use: 1.25 times (or 125% of) the total turbine height.
 - f. From a high-tension electrical transmission line: 2 times (or 200% of) the total turbine height.

The setbacks specified above shall be increased by one (1) percent of the total turbine height (to the top of the rotor blade at the 12:00 o'clock position) per ten (10) feet of elevation that the turbine's ground elevation is above the ground elevation of the affected parcel or use, specifically the nearest affected parcel boundary, recreation area or property, dwelling unit, road or highway right-of-way, trail, commercial or residential zone district boundary, or the center of a transmission or conductor line. The setback may be decreased by one (1) percent of such total turbine height per ten (10) feet of elevation that the turbine's ground elevation is below the ground elevation of affected parcels or uses.

Furthermore, the setbacks specified above, as adjusted according to turbine elevation above or below an affected parcel or use, may be reduced by 50% to an alternative minimum (i.e., to one-half the resulting setback), if a notarized agreement or a recorded easement from the affected property owner (except in the case of setbacks from a public road, interstate highway or transmission line) is approved by the Planning Director, with the following exceptions and conditions:

- i. The setback from a parcel on which no windfarm operation is proposed or approved may be reduced to no less than 1.1 times (or 110% of) the rotor length.
- ii. The setback from a recreation area or property approved for an outdoor recreation use shall not be reduced to less than 1.0 times (100% of) the total turbine height.
- iii. The setback from a public road, interstate highway, public trail, commercial or residential zoning, or high-tension transmission line shall only be reduced to such minimum with the submittal of a report by a qualified professional, to be approved by the Planning Director with substantial evidence that public safety will not be compromised, and property owner agreement or easements shall be required only from private properties with commercial or residential zoning.

Adjustments based on the ground elevation of a turbine shall be limited to whole ten-foot increments, disregarding any smaller portion. Total turbine height shall always be measured from ground elevation to the top of the rotor at the 12:00 o'clock position (i.e., at the furthest upward reach of the rotor blade). For adjoining parcels under the same windfarm use permit, no setback is required. Knowledge of existing, proposed or approved windfarm use permits on adjacent parcels shall be based on the best available information at the time of the subject application. The Planning Director shall reserve the right to reject all or part of an alternative minimum setback based on substantial evidence that a wind turbine will have adverse noise, safety or visual impacts on a dwelling unit that have not been previously disclosed publicly, or that a required report requires additional information before such a minimum is approved.

25. Safety Setbacks for Meteorological Towers. New temporary and permanent meteorological towers (met towers) shall have a minimum setback from the exterior Project boundary shown in the permit application, equal to the total height of the met tower plus 25 feet.
26. Undergrounding of Utility Lines. All electrical utility collection and distribution connection lines shall be installed underground, except as required by the utility company for final connections to major substations.
27. Site Development Review for Previously Undeveloped Ridgelines (MM AES-2a). Site Development Review pursuant to Section 17.54.230 et. seq. of the County Zoning Ordinance shall be required for new turbines proposed on a ridgeline or hilltop which has not previously been developed with commercial-scale wind turbines (over 25 kW rated capacity). Such Site Development Review shall not be approved unless the Planning Director determines that the visual effects will be substantially avoided by distance from public view points (e.g., over 2,000 feet), intervening terrain, screening landscaping, or compensatory improvements to equivalent and nearby (radius of 1 mile) scenic features, as approved by the Planning Director.
28. Analyze Shadow Flicker Distance and Mitigate Effects (MM AES-5). Where shadow flicker could result from the installation of wind turbines near residences (i.e., within 500 meters or about 1,600 feet in a broadly easterly or westerly direction, accounting for all seasons of the year), the Permittee shall prepare a graphic model and study to evaluate the potential for shadow flicker impacts on residences for review and acceptance by the Planning Director. No shadow flicker in excess of 30 minutes in a given day or 30 hours (net or total) in a given year will be permitted unless it has been mitigated subject to the approval of the Planning Director.

If any residence is nonetheless affected by shadow flicker within the 30-minute/30-hour thresholds, the Permittee shall implement one or more measures to avoid or minimize the effect, such as providing opaque window coverings, window awnings, landscape buffers or a combination of these features to reduce flicker to acceptable limits for the affected receptor, or shutting down the turbine during the period shadow flicker would occur.

Such measures shall be undertaken in consultation with the owner of the affected residence, and may be confirmed by preparation of a shadow flicker study at the Permittee's expense. If the shadow flicker study indicates that any given turbine would result in shadow flicker exceeding the 30-minute/30-hour thresholds and the affected property owner is not amenable to window coverings, window awnings, or landscaping and the turbine cannot be shut down during the period of shadow flicker, then the turbine operations would be set back or limited to avoid shadow flicker to the satisfaction of the affected owner of the residence.

29. Color Treatment. All wind turbines, blades, towers and structures shall be treated and maintained with a generally uniform off-white paint scheme in order to blend with the surroundings and minimize adverse visual effect. Exceptions may include experimental measures if recommended by the avian protection Technical Advisory Committee (TAC, as described in Condition 95) and approved by the Planning Director to allow any turbine to be painted as a mitigation for bird collisions.
30. Lighting Guidelines. Lighting design for turbine tower entries, substations and permanent operations and maintenance buildings shall be submitted for review and approval by the Planning Director and included in the building permit application. New lighting shall be downward casting and shielded, utilizing motion detection systems if appropriate and shall not unnecessarily "wash out" into surrounding areas. Lenses and bulbs shall not protrude from light fixtures. Fixtures intended to be lit for long periods of time shall utilize low-pressure sodium lamps or devices with similar properties (i.e., long-lasting and energy efficient). Fixtures shall be mounted at the lowest feasible height. If industrial design standards or FAA safety protocols require lighting designs that conflict with the requirements of this condition, such standards and protocols shall take precedence subject to approval by the Planning Director and Building Official with respect to other applicable conditions and mitigation measures.

Lighting required by FAA shall be shrouded, directed upward, or utilize other technology to minimize lighting at ground level. If FAA safety protocols require lighting designs that conflict with the requirements of this condition, such protocols shall take precedence subject to approval by the Planning Director and Building Official with respect to other applicable conditions and mitigation measures.
31. Tower Access. Each wind turbine tower shall be fully enclosed with interior access controlled by the Permittee with security measures approved by the Building Official, and ladder or lift safety measures.
32. Operational Safety. Each turbine generator shall be equipped with both manual and automatic controls to limit the rotational speed of the blade within the design limits of the overall turbine. Generators shall be designed, installed and operated to prevent emissions of electromagnetic interference that are disruptive to adjacent land uses.

33. Meteorological Tower Design Standards. Temporary meteorological towers (met towers) shall be shown on site plans submitted for building permits, and may be guyed (supported by guy-wires) with colored avian marker balls or spirals at appropriate intervals. Met towers installed for operation of more than two years (24 months) shall be free-standing and not supported by guy-wires. Permanent or temporary met towers in excess of 200 feet (or 60 meters) shall be referred to the Federal Aviation Administration for consideration of lighting requirements and paint treatment (e.g., aviation orange). Lighting required by FAA shall be shrouded, directed upward, or utilize other technology to minimize lighting at ground level. If FAA safety protocols require lighting designs that conflict with the requirements of this condition, such protocols shall take precedence subject to approval by the Planning Director and Building Official with respect to other applicable conditions and mitigation measures.
34. Permanent Signage. Permittee shall provide signage on the entry gates to the subject property(ies) providing basic contact information for use in case of an emergency, including the name of the Project, names, titles, and phone numbers of individuals responsible for operations, non-emergency phone numbers, and the Planning Department general contact information. The turbine towers, rotors, cabinets, or mountings shall not be used for advertising.
35. Turbine and Infrastructure Design and Siting to Reduce Avian Mortality (MMs BIO-11b, BIO-11c and BIO-11d). As required by Mitigation Measures BIO-11b, BIO-11c and BIO-11d in the MMRP, the Permittee shall utilize a siting process and prepare a siting analysis, using analyses of landscape features and location-specific bird use and behavior data to determine the specific turbine site locations with the potential to reduce avian collision risk and fatalities and otherwise minimize potential impacts on bird and bat species. Proponents will utilize existing data as well as collect new site-specific data as part of the siting analysis. Permittee shall implement Mitigation Measure BIO-11b as set forth in the Project MMRP.

Permittee shall use turbines with certain characteristics recognized to reduce the collision risk for avian species. Permittee shall implement the design-related measures set forth by Mitigation Measure BIO-11c as set forth in the Project MMRP. Permittee shall also apply specific measures outlined in Mitigation Measure 11d when designing and siting turbine-related infrastructure in order to reduce the risk of bird electrocution and collision.

Upon determining that the information in the siting analysis is sufficiently detailed for Technical Advisory Committee (TAC) consideration and recommendations, the Planning Director shall schedule a meeting for TAC review of the Project's compliance with mitigation measures BIO-11a and BIO-11b.

36. Retrofit Existing Infrastructure to Minimize Risk to Raptors (MM BIO-11e). As required by Mitigation Measure BIO-11e, the Permittee shall have any existing power lines in its Project area, that are owned or operated by the Permittee and that are associated with electrocution of an eagle or other raptor retrofitted within 30 days of any recorded

electrocution, or prior to the start of commercial operation, to make them raptor-safe according to Avian Power Line Interaction Committee guidelines. All other existing structures to remain in a Project area during repowering will be retrofitted, as feasible, according to specifications of Condition 35 and Mitigation Measure BIO-11c prior to repowered turbine operation.

37. Site Management to Discourage Prey for Raptors (MM BIO-11f). As required by Mitigation Measure BIO-11f in the MMRP, the Permittee shall prevent the use of rodenticides, allow rock piles only over 500 meters from any new turbine, and use gravel around turbine foundations, when designing and siting turbine-related infrastructure and other site improvements, and operating the wind turbines, in order to minimize opportunities for fossorial mammals to become established and thereby create a prey base that could become an attractant for raptors.
38. Turbine Siting and Selection to Minimize Potential Bat Mortality (BIO-14a). Permittee shall use the best information available to site turbines and to select from turbine models in such a manner as to reduce bat collision risk. The siting and selection process will take into account bat use of the area and landscape features known to increase collision risk (trees, edge habitats, riparian areas, water bodies, and wetlands). Measures include but are not limited to siting turbines the greatest distance feasible up to 500 meters (1,640 feet) from still or flowing bodies of water, riparian habitat, known roosts, and tree stands. Permittee shall implement Measure BIO-14a as set forth in the Project MMRP.
39. Design of Circuit Breakers to Minimize Sulfur Hexafluoride (SF₆) Leakage (MM GHG-2b). The Permittee shall ensure that any new circuit breaker installed at a substation has a guaranteed Sulfur Hexafluoride (SF₆) leak rate of 0.5% by volume or less. The Permittee shall provide the Building Official with documentation of compliance, such as specification sheets, prior to installation of the circuit breaker. In addition, the Permittee shall monitor SF₆-containing circuit breakers at the substation consistent with the California Air Resources Board's Scoping Plan Measure H-6 for the detection and repair of leaks.

CONSTRUCTION PERMIT REQUIREMENTS

40. Building Permit Application Requirements (including MM GHG-2d). The Permittee shall apply for and obtain approval for separate building permits for the removal and demolition of existing turbines and associated facilities, and the construction of new turbines, and shall conform to the following requirements.
 - a. Soils report and/or geological/geotechnical study will be required.
 - b. Comply with building codes and submittal requirements in effect at the time of submitting for building permits.
 - c. A California licensed architect or engineer shall be designated as the design professional responsible and in charge of the Project submittal. Submittal documents may be signed and sealed by multiple licensed architects or engineers.

- d. The Permittee's designated California-licensed land surveyor shall be responsible for the property information filed with the Building Permit application.
 - e. The demolition and construction debris diversion plan shall comply with applicable policies of the Public Works Agency's Construction & Demolition Debris Management Program. In particular, the Permittee shall implement Mitigation Measure GHG-2d as set forth in the MMRP, to comply with the County's revised Green Building Ordinance regarding construction and demolition debris to achieve the following minimum standards: 1) 100% of inert waste and 50% wood/vegetative/scrap metal not including Alternative Daily Cover (ADC) and unsalvageable material will be put to other beneficial uses at landfills; and 2) 100% of inert materials (concrete and asphalt) will be recycled or put to beneficial reuse.
 - f. Plans filed for the Building Permit application shall obtain Zoning Approval (i.e., Planning Department approval for consistency determination that the plans are consistent with this permit), and shall be drawn to scale, indicating the location of each wind turbine, the location and function of all structures within 1,000 feet of any wind turbine, as well as all trailers and major ground equipment to be put in place for use during construction.
 - g. Evidence of a proposed interconnection agreement and any technical requirements and specifications required by the interconnection authority.
 - h. Evidence of filing a notice of proposed construction with the Federal Aviation Administration (FAA) and the required referral to the Alameda County Airport Land Use Commission.
41. Use of Recycled Content in New Building Materials (MM GHG-2c). The Permittee shall require the construction of all new substation and other permanent buildings to incorporate materials for which the sum of post-consumer recycled content plus one-half of the post-industrial content constitutes at least 10% of the total value of the materials in the Project.
42. Fire Department Approval Requirements. Permittee shall contact the Alameda County Fire Department, Fire Prevention Bureau, to obtain a fire clearance certificate. The Bureau may be reached by telephone at (510) 670-5853. The Permittee shall install a Knox Box at all entry gates, provide an emergency contact to the Department, and maintain a fire extinguisher in each ground equipment area. Water tanks meeting NFPA 1142 standards shall be provided at each construction staging area and shown on Building Permit application site plans. Permittee shall be responsible for compliance with Exhibit D, the Altamont Pass Windfarms Fire Requirements dated September 22, 2005 and as updated or revised herein.
43. Grading Permit Application and Geotechnical Investigation Requirements (MM GEO-1). Prior to any grading, ground-disturbing or construction activities on the Project site, the

Permittee shall submit a preliminary grading plan and a site-specific geotechnical investigation to the County Grading Department. The geotechnical investigation/report shall be prepared by a qualified geotechnical firm in conformance with Chapter 15.36.320 and subsequent applicable sections of the Alameda County Grading Ordinance, for review by the County for the purpose of obtaining a grading permit in accordance with the provisions of the Grading Ordinance and the following requirements.

- a. The site-specific geotechnical/geologic report shall be prepared by a licensed geotechnical engineer or engineering geologist with local expertise in geotechnical investigation and design, based on data collected from subsurface exploration, laboratory testing of samples, and surface mapping. The report shall contain all of the elements listed under the Alameda County Grading Ordinance Chapter 15.36.350, as required, and address the following and any additional issues as required by the Director of Public Works.
 - Potential for surface fault rupture and turbine site location: The geotechnical report will investigate the Greenville, Corral Hollow-Carnegie, and the Midway faults (as appropriate to the location) and determine whether they pose a risk of surface rupture. Turbine foundations and power collection systems will be sited according to recommendations in this report.
 - Strong ground shaking: The geotechnical report will analyze the potential for strong ground shaking at the project site and provide turbine foundation design recommendations, as well as recommendations for power collection systems.
 - Slope failure: The geotechnical report will investigate the potential for slope failure (both seismically and nonseismically induced) and develop site-specific turbine foundation and power collection system plans engineered for the terrain, rock and soil types, and other conditions present at the project site in order to provide long-term stability.
 - Expansive soils: The geotechnical report will assess the soil types at the project site and determine the best engineering designs to accommodate the soil conditions.
- b. Unstable cut or fill slopes: The geotechnical report will address geologic hazards related to the potential for grading to create unstable cut or fill slopes and make site-specific recommendations related to design and engineering. The geotechnical/geologic report may be subject to a professional review by the County's consulting geotechnical engineer/geologist. It shall be the Permittee's responsibility to provide sufficient funds to the County for this professional review service if required.
- c. Permittee shall implement the design recommendations in the geotechnical report, including revised recommendations resulting from the professional review, if such a review is required.
- d. No grading work will be allowed during the rainy season, from October 1 to April 30, except upon a clear demonstration, to the satisfaction of the Director of the Public

- Works Agency, that at no stage of the work will there be any substantial risk of increased sediment discharge from the site.
- e. Any proposal for grading work associated with fire access roads must be reviewed and approved by the Alameda County Fire Department prior to issuance of a grading permit.
 - f. The grading permit shall be subject to approval of the Alameda County Flood Control and Water Conservation District.
44. Stormwater Control Plan. Permittee shall prepare a Stormwater Control Plan (SCP) in compliance with the technical requirements of Provisions C.3 and C.6 of the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (Municipal Regional Permit, or MRP) and the County Building and Stormwater Management and Discharge Control Ordinances for the purpose of long-term (post-construction) stormwater control. The SCP shall be submitted to the Director of Public Works for approval prior to issuance of a County Stormwater Permit. The SCP shall include:
- a. Plan drawings showing the locations, sizing and Drainage Management Areas discharging to the proposed stormwater treatment system(s), the planned site design and source control measures, and any required hydromodification management (HM) facilities or devices.
 - b. A preliminary written plan that describes the operation and maintenance (O&M) (including inspection) of all installed stormwater treatment systems and HM controls both during construction and following construction.
 - c. A draft of a statement from the Permittee and property owner accepting long-term responsibility for the O&M of the installed stormwater treatment systems and HM controls, along with continuing upkeep of any required source control and site design measures, until such responsibility is legally transferred to another entity.
 - d. A draft of an agreement to include written conditions in any sales or lease agreements or deed for the Project that requires a buyer or lessee to assume long-term responsibility for the O&M of the installed stormwater treatment systems and HM controls, and the upkeep of the source control and site design measures, until such responsibility is legally transferred to another entity.
 - e. A signed statement from the Permittee and property owner(s) granting site access to all representatives of the County, local mosquito and vector control agency staff, and Water Board staff, for the sole purpose of performing O&M inspections of the installed stormwater protection systems (treatment systems, HM controls, source controls and site design measures).
 - f. A written statement from the Permittee and property owner(s) and successors acknowledging that the County may conduct annual inspections of all installed stormwater protection systems and that the Permittee agrees to pay for those inspection costs on a time and materials basis.

- g. The plan shall specify that all new or modified drainage facilities shall be designed to ensure no net increase in stormwater discharge rates, flow velocities, or sediment transport would result from Project implementation.
- h. Discharges from these facilities shall be designed so as to avoid concentration of flow and subsequent downstream scouring or sedimentation in natural creek beds.
- i. Proposed roadways shall be designed so as to ensure that potential for slope failure and erosion is minimized.
- j. The Stormwater Control Plan shall be incorporated into all design drawings and specifications as appropriate, and shall meet the following standards:
 - i. The Permittee shall design and construct all storm drainage facilities in compliance with the County Public Works Design Standards.
 - ii. The Permittee shall prevent storm drainage from draining across driveway(s) or onto adjacent properties in a concentrated manner.
 - iii. The Permittee shall obtain a drainage permit under applicable County Ordinances for the installation of new drainage culverts.

A Stormwater Control Plan, Waste Discharge Identification (WDID) Number, Notice of Intent (NOI) and a Storm Water Pollution Prevention Plan (SWPPP) must be submitted to the Public Works Agency prior to issuance of the County Grading and Stormwater Permits.

45. NPDES Permit Requirements to Prevent Stormwater Pollution During Construction (MM WQ-1). As required by Mitigation Measure WQ-1 in the MMRP, the Permittee shall submit a Notice of Intent (NOI) and obtain coverage under the Construction General Permit (CGP) authority of the National Pollutant Discharge Elimination System (NPDES) for both the Central Valley and San Francisco Bay Regional Water Boards, before the onset of any construction activities for the purpose of preventing stormwater pollution during construction. The Permittee shall have a specific Project Storm Water Pollution Prevention Plan (SWPPP) prepared by a Qualified SWPPP Developer and ready for implementation prior to construction. This SWPPP shall be kept onsite during construction activity and provided upon request to representatives of the County and Water Board staffs.

Permittee shall apply for a County Stormwater Permit prior to the start of any construction; this application shall include proof of coverage under the CGP and a copy of the Project SWPPP. This SWPPP must provide for the implementation of pollutant discharge controls that utilize Best Management Practices (BMPs) and technology to reduce erosion, sedimentation, and other discharges to the water quality standards of the CGP and the County Stormwater Permit. BMPs may consist of a wide variety of protective measures taken to reduce pollutants in stormwater and other nonpoint-source runoff, including but not limited to, the following practices:

- a. Installation of temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) to control erosion and sedimentation from disturbed areas.
- b. Construction of dry detention basins (typically dry except after a major rainstorm, when it will temporarily fill with stormwater), designed to decrease runoff from the work site during storm events and to prevent flooding of the construction areas. Basin BMPs must include maintenance schedules for the periodic removal of sediments, excessive vegetation, and debris that may clog basin inlets and outlets.
- c. The application of covers or nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more) that could contribute sediment to waterways.
- d. The enclosure and coverage of exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways.
- e. The control of run-on that could deposit sediment or other materials from areas adjacent to the work site.
- f. The assurance that no earth or organic material will be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water.
- g. The application of controls that would preclude the following types of materials from being rinsed or washed into the County stormdrain system, the “waters of the United States,” or adjacent properties: concrete, concrete wash, solvents and adhesives, thinners, paints, fuels, sawdust, dirt, gasoline, asphalt and concrete saw slurry, and heavily chlorinated water.
- h. The establishment of grass or other vegetative cover on the construction site as soon as possible after disturbance.

The Permittee (and the selected contractor) shall select a combination of appropriate BMPs, consistent with the above and with the requirements of the CGP and the County Stormwater Permit, which is expected to minimize runoff and remove contaminants from stormwater discharges. The final selection of BMPs will be subject to approval by the County and by the San Francisco Bay Regional Water Board or the Central Valley Water Board.

The Permittee (and the selected contractor) shall verify that a Notice of Intent (NOI) has been filed with the appropriate State Water Board having jurisdiction, that the said Water Board has issued a Waste Discharge Identification (WDID) Number, that a project SWPPP has been prepared, and that a County Stormwater Permit has been issued before allowing construction to begin. The selected contractor shall perform regular inspections of the construction area, to verify that the BMPs specified in the SWPPP are properly implemented and maintained. The contractor will notify the appropriate Regional Water

Board and the County immediately if there is a noncompliance issue. If necessary, the contractor shall require that additional BMPs be designed and implemented if those originally constructed do not achieve the identified performance standard of the CGP or the County Permit.

46. Roadway Encroachment Permit. Permittee shall apply to the Public Works Agency for separate roadway encroachment permits for temporary and permanent access and facilities. Improvement plans shall be prepared by a registered Civil Engineer for approval by the Director of Public Works, accompanied by the required review and inspection fees, as well as insurance and security deposits if required by the Public Works Agency.
47. Gate Entries. The Permittee shall provide designs to the Director of Public Works for roadway widening, pavement transitions, shoulder widening, necessary longitudinal and transverse drainage, and any driveway profile adjustments in conformance with County Roadway Standards. The new pavement section shall match, at a minimum, the full roadway section of each affected County roadway. No gates or fences shall be located within any County road right-of-way, and gates shall not swing out towards the public road.
48. Construction Traffic Control Plan (MM TRA-1). Prior to starting construction-related activities, the Applicant shall prepare and implement a Traffic Control Plan (TCP) that will reduce or eliminate impacts associated with the proposed project. The TCP shall adhere to Alameda County, San Joaquin County, and Caltrans requirements, and must be submitted for review and approval of the County Public Works Department prior to implementation. The TCP shall include the following elements. The County and Caltrans may require additional elements to be identified during their review and approval of the TCP.
 - Schedule construction hours to minimize concentrations of construction workers commuting to/from the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.).
 - Limit truck access to the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.).
 - Require that written notification be provided to contractors regarding appropriate haul routes to and from the project site, as well as the weight and speed limits on local county roads used to access the project site.
 - Provide access for emergency vehicles to and through the project site at all times.
 - When lane/road closures occur during delivery of oversized loads, provide advance notice to local fire, police, and emergency service providers to ensure that alternative evacuation and emergency routes are designated to maintain service response times.
 - Provide adequate onsite parking for construction trucks and worker vehicles.
 - Require suitable public safety measures in the project site and at the entrance roads, including fences, barriers, lights, flagging, guards, and signs, to give adequate

warning to the public of the construction and of any dangerous conditions that could be encountered as a result thereof.

- Complete road repairs on local public roads as needed during construction to prevent excessive deterioration. This work may include construction of temporary roadway shoulders to support any necessary detour lanes.
- Repair or restore the road right-of-way to its original condition or better upon completion of the work.

Coordinate project-related construction activities, including schedule, truck traffic, haul routes, and the delivery of oversized or overweight materials, with Alameda County, Caltrans, and affected cities and counties to identify and minimize overlap with other area construction projects.

49. Watercourse Protection Ordinance. If any ground disturbing work is proposed within or near a watercourse, a watercourse encroachment permit or a grading permit shall be secured from the Public Works Agency in accordance with the Alameda County Watercourse Protection Ordinance. Watercourse setbacks shall be delineated on the exhibit plan per the provisions of Article V of the Watercourse Ordinance. The Ordinance establishes a setback of 20 feet from the top of the creek bank. However, for existing bank slopes at 2 horizontal to 1 vertical, or steeper, establish the setback by drawing a line on a cross-section at a 2 horizontal to 1 vertical slope from the toe of the existing bank to a point where it intercepts the ground surface and then add 20 feet. As provided by the Watercourse Protection Ordinance (Section 13.12.310, item G), the Director of Public Works shall make the determination as to setback limits and any permitted development within a setback.
50. Other Watercourse Requirements. The Permittee shall be responsible, prior to any work near or within a recognized watercourse, for securing other permits (e.g., Streambed Alteration Agreement) or other approvals required for work which is regulated by any other public agency (i.e., the California Department of Fish and Wildlife, Army Corp of Engineers, etc.).
51. Project-Specific Avian Protection Plan (BIO-11a). The Permittee shall prepare a Project-specific Avian Protection Plan (APP) as required by Mitigation Measure BIO-11a in the MMRP to specify measures and protocols consistent with the program-level mitigation measures that address avian mortality. The Project-specific APP will include, at a minimum, the following components.
 - a. Information and methods used to site turbines to minimize risk.
 - b. Documentation that appropriate turbine designs are being used.
 - c. Documentation that avian-safe practices are being implemented on Project infrastructure.
 - d. Methods used to discourage prey for raptors.

- e. A detailed description of the postconstruction avian fatality monitoring methods to be used (consistent with the minimum requirements outlined in Mitigation Measure BIO-11g).
- f. Methods used to compensate for the loss of raptors (consistent with the requirements of Mitigation Measure BIO-11h).

The Permittee shall prepare and submit a draft Project-specific APP to the County within 10 days of submitting the Building Permit application. The draft APP will be reviewed by the TAC for consistency and the inclusion of appropriate mitigation measures that are consistent with the PEIR and recommended for approval by the County. The Permittee must obtain approval from the Planning Director of the draft APP prior to commercial operation, and obtain recommendations from the TAC for preparation of the Final APP within six months of commercial operations. The Final APP shall be subject to approval by the Planning Director.

52. Stop Work Procedures for Encounters With Cultural Resources, Human Remains and Paleontological Resources During Ground-Disturbing Activities (MMs CUL-2d, CUL-3 and GEO-7c). Permittee shall ensure that construction specifications include a stop-work order if paleontological, prehistoric, or historic-era cultural resources, or human remains are unearthed during ground-disturbing activities. Specific procedures are set forth in Conditions 69, 70 and 71.

PRIOR TO ISSUING BUILDING PERMIT

53. Implement Best Management Practices (BMPs) to Avoid and Minimize Impacts on Special-Status Plant and Animal Species (MMs BIO-1b, BIO-5a and BIO-7a). The Permittee shall ensure that the BMPs described in Mitigation Measures BIO-1b, BIO-5a, and BIO-7a, in accordance with practices established in the East Alameda County Conservation Strategy (EACCS), will be incorporated into the Project design and construction documents.
54. Measures to Avoid, Minimize and Mitigate Impacts On Special-Status Wildlife Species (MMs BIO-3b, BIO-4a, BIO-5a, BIO-6, BIO-7a, BIO-8a, BIO-8b, BIO-9 and BIO-10a). The Permittee shall implement Mitigation Measures BIO-3b, BIO-4a, BIO-5a, BIO-6, BIO-7a, BIO-8a, BIO-9 and BIO-10a, as identified in the Project MMRP to address special-status invertebrates, amphibians, reptiles, nesting birds and mammals, which are based on the EACCS and which have been modified and supplemented in the Project MMRP. The MMRP measures shall address the following species:
- a. Vernal pool branchiopods (invertebrates, including longhorn fairy shrimp, vernal pool fairy shrimp and vernal pool tadpole shrimp)
 - b. Curved-footed hygrotus diving beetle
 - c. Valley elderberry longhorn beetle
 - d. California tiger salamander
 - e. Western spadefoot

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|---|---|
| f. California red-legged frog | k. Western burrowing owl |
| g. Foothill yellow-legged frog | l. Tri-colored blackbird Other non-special-status migratory birds |
| h. Western pond turtle Blainville's horned lizard | m. San Joaquin kit fox |
| i. Alameda whipsnake | n. American badger |
| j. San Joaquin coachwhip | |

Where impacts cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements provided in the EACCS (Appendix C2 in the Final PEIR). In the event that an incidental take permit is obtained, compensatory mitigation will be undertaken in accordance with the terms of the permit in consultation with United States Fish and Wildlife Service (USFWS).

Implementation of some Mitigation Measures identified in the MMRP will require that the Permittee obtain incidental take permits from USFWS and CDFW (e.g., Alameda whipsnake) before construction begins. Additional conservation measures may be required in applicable Project permits (i.e., ESA incidental take permit).

55. Implement Best Available Control Technology for Heavy-Duty Vehicles (MM GHG-2a). The Permittee shall require existing trucks/trailers to be retrofitted with the best available technology and/or ARB-approved technology and/or CARB-approved technology consistent with the CARB Truck and Bus Regulation (California Air Resources Board 2019). The CARB Truck and Bus Regulation applies to all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. The Permittee shall comply with the specific requirements of Mitigation Measure GHG-2a as set forth in the MMRP to mitigate for potentially significant cumulative construction and operations and maintenance contributions to greenhouse gas emissions.

PRIOR TO GROUND-DISTURBING ACTIVITIES

56. Establish Activity Exclusion Zones for Special-Status Plant Species (BIO-1c). As required by Mitigation Measure BIO-1c in the MMRP, where pre-construction surveys determine that a special-status plant species is present in or adjacent to a Project area, the Permittee shall establish activity exclusion zones to avoid direct and indirect impacts of the Project on such species. No ground-disturbing activities shall take place within these designated activity exclusion zones, including construction of new facilities, construction staging, or other temporary work areas. Activity exclusion zones for special-status plant species will be established around each occupied habitat site, the boundaries of which will be clearly marked with standard orange plastic construction exclusion fencing or its equivalent. The establishment of activity exclusion zones will not be required if no construction-related disturbances will occur within 250 feet of the occupied habitat. The size of activity exclusion zones may be reduced through consultation with a qualified biologist and with concurrence from CDFW based on site-specific conditions.

57. Best Management Practices to Avoid and Minimize Effects on Special-Status Amphibians (MM BIO-5a). The Permittee shall implement BMPs and other appropriate measures consistent with Mitigation Measure BIO-5a in the Project MMRP to address special-status amphibians and shall ensure that, in accordance with measures developed for the EACCS, such BMPs are incorporated into the appropriate design and construction documents. Implementation of some of these measures will require that the Project proponent obtain incidental take permits from USFWS (e.g., California red-legged frog and California tiger salamander) and from CDFW (California tiger salamander only) before construction begins. Additional conservation measures or conditions of approval may be required in applicable Project permits (e.g., ESA or CESA incidental take authorization). Permittee shall comply with the specific requirements of Mitigation Measure BIO-5a in the MMRP to mitigate for effects on amphibians, including, but not limited to limits on the season in which ground-disturbing activities may occur, installation of barrier fencing, identifying appropriate relocation areas and preparing a relocation plan.

Permittee shall have a qualified biologist conduct preconstruction surveys immediately prior to ground-disturbing activities (including equipment staging, vegetation removal, grading). The biologist will survey the work area and all suitable habitats within 300 feet of the work area. If individuals (including adults, juveniles, larvae, or eggs) are found, work will not begin until USFWS and/or CDFW is contacted to determine if moving these life-stages is appropriate. If relocation is deemed necessary, it will be conducted in accordance with the relocation plan. Incidental take permits are required for relocation of California tiger salamander (USFWS and CDFW) and California red-legged frog (USFWS). Relocation of western spadefoot and foothill yellow-legged frog normally requires a letter from CDFW authorizing this activity; however, a biologist with a specific authorization (i.e., scientific collecting permit or MOU from CDFW) will be accepted for this purpose.

58. Preconstruction Surveys for Western Pond Turtle and Monitoring of Construction Activities (BIO-6). If determined as a result of pre-construction surveys pursuant to Mitigation Measure BIO-3a, that suitable aquatic or upland habitat for western pond turtle is identified within proposed work areas, Permittee shall implement Mitigation Measure BIO-6 as set forth in the Project MMRP, consistent with measures developed for the EACCS, to ensure that the proposed Project does not have a significant impact on western pond turtle. The mitigation includes but is not limited to surveys conducted both one week before and immediately before (within 24 hours) of work activity, use of a biological monitor if needed, and approval by CDFW for any required relocation of turtles.
59. Plan for Restoration of Disturbed Annual Grasslands (BIO-5c). Within 30 days prior to any ground disturbance, Permittee shall have a qualified biologist prepare a Grassland Restoration Plan in coordination with CDFW and subject to CDFW approval, to ensure that temporarily disturbed annual grasslands and areas planned for the removal of

permanent roads and turbine pad areas are restored to pre-Project conditions. The Grassland Restoration Plan shall conform to the requirements of Mitigation Measure BIO-5c in the MMRP.

The Grassland Restoration Plan shall include a requirement to monitor restoration areas annually (between March and October) for up to three years following the year of restoration. The restoration will be considered successful when the percent cover for restored areas is 70% absolute cover of the planted/seeded species compared to the percent absolute cover of nearby reference sites.

The Permittee shall provide evidence to the Planning Director that CDFW has reviewed and approved the Grassland Restoration Plan. Additionally, the Permittee shall provide annual monitoring reports to the County by January 31 for three years or until restoration is deemed successful by the CDFW, summarizing the monitoring results and any remedial measures implemented (if any are necessary) during the previous year.

60. Pre-Construction Worker-Awareness Training for Archaeological Resources (MM CUL-2c). The Permittee shall provide for training overseen by a qualified professional archaeologist prior to the initiation of any site preparation and/or the start of construction. The Permittee shall ensure that all construction workers receive adequate training, and to ensure that forepersons and field supervisors can recognize archaeological resources (e.g., areas of shellfish remains, chipped stone or groundstone, historic debris, building foundations, human bone) in the event that any are discovered during construction.

DURING CONSTRUCTION

61. Implement Applicable BAAQMD Basic Construction Mitigation Measures (MM AQ-2a). The project proponents shall require all contractors to comply with the following requirements for all areas with active construction activities.
- a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day.
 - b. All haul trucks transporting soil, sand, or other loose material offsite will be covered.
 - c. All visible mud or dirt tracked out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
 - d. All vehicle speeds on unpaved roads will be limited to 15 mph.
 - e. All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
 - f. Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California

- airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points.
- g. All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified visible emissions evaluator.
 - h. Post a publicly visible sign with the telephone number and person to contact representing the Permittee regarding dust complaints. This person will respond and take corrective action within 48 hours. The Air District and County Building Official's phone numbers will also be visible to ensure compliance with applicable regulations.
62. Implement Applicable BAAQMD's Additional Construction Mitigation Measures (MM AQ-2b). The project proponents shall require all contractors and subcontractors to comply with the following requirements for all areas with active construction activities.
- a. During construction activities, all exposed surfaces will be watered at a frequency adequate to meet and maintain fugitive dust control requirements of the relevant air quality management entities.
 - b. All excavation, grading, and/or demolition activities will be suspended when average wind speeds exceed 20 mph, as measured at the Livermore Municipal Airport.
 - c. Wind breaks (e.g., trees, fences) will be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50% air porosity.
 - d. Vegetative ground cover (e.g., fast-germinating native grass seed) will be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
 - e. If feasible and practicable, the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time will be limited.
 - f. Construction vehicles and machinery, including their tires, will be cleaned prior to leaving the construction area to remove vegetation and soil. Cleaning stations will be established at the perimeter of the construction area.
 - g. Site accesses to a distance of 100 feet from the paved road will be treated with a 6 to 12-inch compacted layer of wood chips, mulch, or gravel.
 - h. Sandbags or other erosion control measures will be installed to prevent silt runoff to public roadways from sites with a slope greater than 1%.
 - i. The idling time of diesel-powered construction equipment will be minimized to 2 minutes.

- j. The project will develop a plan demonstrating that the offroad equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20% NOX reduction and 45% PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
 - k. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).
 - l. All construction equipment, diesel trucks, and generators will be equipped with BACT for emission reductions of NOX and PM.
 - m. All construction equipment shall meet ARB's most recent certification standard for offroad heavy duty diesel engines.
63. Reduce construction-related air pollutant emissions to below BAAQMD NOx thresholds (MM AQ-2c). The project proponents will ensure construction-related emissions do not exceed BAAQMD's construction NOX threshold of 54 pounds per day. In addition to implementing PEIR Mitigation Measures AQ-2a and AQ-2b, the project proponents will coordinate with BAAQMD (or the Clean Air Foundation) to purchase NOX credits to offset remaining NOX construction and operations emissions exceeding BAAQMD thresholds.

The project proponents will track construction activity, estimate emissions, and enter into a construction mitigation contract with BAAQMD to offset NOX emissions that exceed BAAQMD NOX maximum daily threshold of 54 pounds per day.

The maximum daily emissions will be calculated on a daily basis by determining total construction-related NOX emissions for each calendar day. BAAQMD will use the mitigation fees provided by the project proponents to implement emissions reduction efforts that offset project NOX emissions that exceed the BAAQMD threshold.

This mitigation includes the following specific requirements:

- a. The project proponents will require construction contractors to provide daily construction activity monitoring data for all construction activities associated with the project to estimate actual construction emissions, including the effect of equipment emissions reduction measures. The project proponents will submit the daily construction activity monitoring data and an estimate of actual daily construction emissions to the lead agency and BAAQMD for review by the 15th day of each month for the prior construction month. The lead agency will examine the construction and operational activity monitoring to ensure it is representative, and BAAQMD will examine the emissions estimate to ensure it is calculated properly.

- b. After acceptance of the emissions estimates by BAAQMD for the prior month, the project proponents will submit mitigation fees to BAAQMD to fund offsets for the portion of daily emissions that exceed the maximum daily NOX threshold. The mitigation fees will be based on the mitigation contract with BAAQMD (see discussion below) but will not exceed the emissions-reduction project cost-effectiveness limit set for the Carl Moyer Program for the year in which mitigation fees are paid. The current Carl Moyer Program cost-effectiveness limit is \$30,000 per weighted ton of criteria pollutants (NOX + ROG + [20*PM]). An administrative fee of 5% will be paid by the project proponents to BAAQMD to implement the program.
 - c. The mitigation fees will be used by BAAQMD to fund projects that are eligible for funding under the Carl Moyer Program guidelines or other BAAQMD emissions-reduction incentive programs that meet the Carl Moyer Program cost-effectiveness threshold and are real, surplus, quantifiable, and enforceable.
 - d. The project proponents will enter into a mitigation contract with BAAQMD for the emissions-reduction incentive program. The mitigation contract will include the following:
 - a. Identification of appropriate offsite mitigation fees required for the project.
 - b. Timing for submission of mitigation fees.
 - c. Processing of mitigation fees paid by the project proponents.
 - d. Verification of emissions estimates submitted by the project proponents.
 - e. Verification that offsite fees are applied to appropriate mitigation programs within the SFBAAB.
 - e. The mitigation fees will be submitted within 4 weeks of BAAQMD acceptance of an emissions estimate provided by the project proponents showing that the maximum daily NOX threshold was exceeded (when measured on a daily basis).
64. Compliance with NPDES Storm Water Requirements (MM WQ-1). Permittee shall implement the Storm Water Pollution Prevention Plan (SWPPP) required by Condition 45 and as required by Mitigation Measure WQ-1 in the MMRP, maintain compliance with the other requirements of the CGP and the County C.6 Stormwater Permit (inspection, sampling, reporting, etc.) and construct the stormwater treatment system(s) per the Stormwater Control Plan (SCP). The SCP, SWPPP, and the CGP and County Stormwater Permit inspection, sampling and reporting documentation shall be kept onsite during construction activity and shall be made available upon request to representatives of the County and Water Board staff.
65. Prevent Introduction, Spread, and Establishment of Invasive Plant Species (MM BIO-2). The Permittee shall implement Mitigation Measure BIO-2 as set forth in the MMRP, in order to avoid and minimize the introduction and spread of invasive nonnative plant species, including the following BMPs, and the other requirements of Mitigation Measure BIO-2.

- a. Construction vehicles and machinery will be cleaned prior to entering the construction area. Cleaning stations will be established at the perimeter of the construction area along all construction routes or immediately offsite.
- b. Vehicles will be cleaned only at approved areas. No cleaning of vehicles will occur at job sites.
- c. To discourage the introduction and establishment of invasive plant species, seed mixtures and straw used within natural vegetation will be either rice straw or weed-free straw, as allowed by state and federal regulation of stormwater runoff.

In addition, the project proponent will prepare and implement erosion and sediment control plans to control short-term and long-term erosion and sedimentation effects and to restore soils and vegetation in areas affected by construction activities (2020 Updated PEIR Mitigation Measure BIO-1b). Prior to initiating any construction activities that will result in temporary impacts on natural communities, a restoration and monitoring plan will be developed for temporarily affected habitats in each project area (PEIR Mitigation Measure BIO-5c). Restoration and monitoring plans will be submitted to the County and CDFW for approval. These plans will include methods for restoring soil conditions and revegetating disturbed areas, seed mixes, monitoring and maintenance schedules, adaptive management strategies, reporting requirements, and success criteria. Following completion of project construction, the project proponents will implement the revegetation plans to restore areas disturbed by project activities to a condition of equal or greater habitat function than occurred prior to the disturbance.

66. Retain a Biological Monitor During Ground-Disturbing Activities in Environmentally-Sensitive Areas (BIO-1e). As required by Mitigation Measure BIO-1e, the Permittee shall have a qualified biologist (as determined by the Alameda County Planning Director) conduct periodic monitoring of decommissioning, repowering, and reclamation activities that occur adjacent to sensitive biological resources (e.g., special-status species, sensitive vegetation communities, wetlands, etc.). Monitoring shall occur during initial ground disturbance where sensitive biological resources are present and weekly thereafter or as determined by the County in coordination with a qualified biologist. The biologist will assist the crew, as needed, to comply with all Project implementation restrictions and guidelines. In addition, the biologist will be responsible for ensuring that the Permittee or its contractors maintain exclusion areas adjacent to sensitive biological resources, and for documenting compliance with all biological resources-related mitigation measures.
67. Protection of Valley Elderberry Longhorn Beetle Habitat (MM BIO-4a). Where pre-construction surveys completed pursuant to Condition 18 (Mitigation Measure BIO-3a) indicate valley elderberry longhorn beetle habitat is present within proposed work areas or within 100 feet of these areas, the Permittee shall implement Mitigation Measure BIO-4a in the MMRP related to avoiding removal of elderberry shrubs, protecting elderberry

shrubs/clusters near construction areas, providing buffer areas approved by USFWS, fencing and monitoring.

Biological inspection reports on the presence and protective actions taken regarding valley elderberry longhorn beetle habitat will be provided to the Permittee, the County and USFWS.

68. Stop Work Procedures for Encounters With Hazardous Materials or Soil or Groundwater Contamination (MM HAZ-4). As required in part by Mitigation Measure HAZ-4 as set forth in the MMRP, the Permittee shall initiate stop-work procedures upon encounters with hazardous materials or soil or groundwater contamination during construction, demolition or reclamation activities, and implement appropriate health and safety procedures, including the use of appropriate personal protective equipment (e.g., respiratory protection, protective clothing, helmets and goggles). Any such discovery shall be reported immediately to the Alameda County Health Services Agency – Environmental Health Department, and complete procedures outlined in Mitigation Measure HAZ-4 in the MMRP and as described in Condition 22.
69. Stop Work Procedures for Encounters With Cultural Resources During Ground-Disturbing Activities (MM CUL-2d). As required by Mitigation Measure CUL-2d as set forth in the MMRP, the Permittee shall, in addition to providing construction specifications requiring stop-work procedures upon encounters with cultural resources during grading or other ground-disturbing activity (as required by Condition 52), the Permittee and any related contractor shall immediately halt all activity within 100 feet of the find until a qualified archaeologist can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil (“midden”) containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If the find is determined to be potentially significant, the archaeologist, in consultation with the Native American representative (if appropriate), will develop a treatment plan that could include site avoidance, capping, or data recovery.
70. Stop Work Procedures for Encounters With Human Remains During Ground-Disturbing Activities (MM CUL-3). In addition to providing construction specifications requiring stop-work procedures upon encounters with cultural resources during grading or other ground-disturbing activity, the Permittee shall ensure the construction specifications include a stop-work order if human remains are discovered during construction or demolition. There will be no further excavation or disturbance of the site within a 100-foot radius of the location of such discovery, or any nearby area reasonably suspected to overlie adjacent remains. The Alameda County Coroner will be notified and will make a determination as to whether the remains are Native American. If the Coroner determines

that the remains are not subject to his authority, he will notify the Native American Heritage Commission, who will attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this state law, then the landowner will re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. A final report will be submitted to Alameda County. This report will contain a description of the mitigation program and its results, including a description of the monitoring and testing resources analysis methodology and conclusions and a description of the disposition/curation of the resources.

71. Procedures and Preparation for Encounters with Paleontological Resources During Major Excavation (MMs GEO-7a, GEO-7b and GEO-7c). As required by Mitigation Measures GEO-7a, GEO-7b and GEO-7c in the MMRP, the Permittee shall retain a qualified professional paleontologist to monitor activities with the potential to disturb sensitive paleontological resources, and to determine if, on the basis of data gathered during detailed project design, where monitoring by a paleontologist during ground-disturbing activities will require monitoring. The Permittee shall implement Mitigation Measures GEO-7a, GEO-7b and GEO-7c as set forth in the MMRP related to paleontological resources.

The Permittee will ensure that all construction workers receive adequate training provided by a qualified professional paleontologist, and to ensure that forepersons and field supervisors can recognize fossil materials in the event any are discovered during construction.

If substantial fossil remains (particularly vertebrate remains) are discovered during earth disturbing activities, activities within 100 feet of the find will stop immediately until a state-registered professional geologist or qualified professional paleontologist can assess the nature and importance of the find and a qualified professional paleontologist can recommend appropriate treatment. Subsequent procedures are described in detail in the MMRP for Mitigation Measures GEO-7c.

72. Construction Signage. Permittee shall provide signage as required by the permitting authority (e.g. Fire Department, Building Department) including phone numbers of the facility operator for use in case of an emergency. The name of the Project and the names, titles, and phone numbers of individuals responsible for control of construction-related noise, dust, and traffic shall be maintained on all signage during construction. A 24-hour emergency number shall also be provided on all signage. The sign shall be kept up-to-date at all times.
73. Limit Construction to Daylight Hours (MM AES-1). As required by Mitigation Measure AES-1, major construction activities shall not be undertaken between sunset and sunrise or on weekends. Construction activity is specifically prohibited from using high-wattage lighting sources to illuminate work sites after sunset or before sunrise, with the exception

of nighttime deliveries under the approved transportation control plan or other construction activities that require nighttime work for safety considerations. For the purpose of this condition and Mitigation Measure AES-1, major construction activities shall be defined as those which are visibly obtrusive from residences and public recreational trails, based on the finding of significant impacts in the PEIR.

74. Noise-Reduction Practices During Construction (MM NOI-2). The Permittee shall employ noise-reducing practices during decommissioning and new turbine construction so that resulting noise does not exceed Alameda County noise ordinance standards. Measures to limit noise may include the following:
- Prohibit noise-generating activities before 7 a.m. and after 7 p.m. on any day except Saturday or Sunday, and before 8 a.m. and after 5 p.m. on Saturday or Sunday.
 - Locate equipment as far as practical from noise sensitive uses.
 - Require that all construction equipment powered by gasoline or diesel engines have sound-control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation.
 - Use noise-reducing enclosures around noise-generating equipment where practicable.
 - Implement other measures with demonstrated practicability in reducing equipment noise upon prior approval by the County.

In no case will the Permittee be allowed to use gasoline or diesel engines without muffled exhausts.

PRIOR TO DATE OF COMMERCIAL OPERATION

75. Remove Derelict Facilities and Restore Abandoned Roadways (MM AES-2b). As required by Mitigation Measure AES-2b as set forth in the MMRP, the Permittee shall clear the Project site of all derelict equipment, wind turbine components not required for the Project, and litter and debris from old turbine operations. Such litter and debris may include derelict turbines, obsolete anemometers, unused electrical poles and broken turbine blades. In addition, abandoned roads that are no longer in use on such parcels shall be restored and hydroseeded to reclaim the sites and remove visual traces from the viewscape, except in cases where state or federal resource agencies (i.e., USFWS and/or CDFW) recommend that the features be left in place for habitat purposes, or as specified by local landowners to facilitate continued ranching operations. All parcels with new turbines will be maintained in such a manner through the life of Project operations and until the parcels are reclaimed in accordance with the approved reclamation plan.
76. Compensate for Impacts on Special-Status Plant Species (BIO-1d). The project proponent will avoid or minimize temporary and permanent impacts on special-status plants that occur on the project site and will compensate for impacts on special-status plant species.

Although all impacts on large-flowered fiddleneck, diamond-petaled California poppy, and caper-fruited tropidocarpum will be avoided, impacts on other special-status plant species will be avoided to the extent feasible, and any unavoidable impacts will be addressed through compensatory mitigation.

Where avoidance of impacts on a special-status plant species is infeasible, loss of individuals or occupied habitat of a special-status plant species occurrence will be compensated for through the acquisition, protection, and subsequent management in perpetuity of other existing occurrences at a minimum 2:1 ratio (occurrences preserved:occurrences impacted). For focal species identified in the EACCS (San Joaquin spearscale, big tarplant, Congdon's tarplant, palmate-bracted bird's-beak, Livermore Valley tarplant, and recurved larkspur), loss of individuals and occupied habitat will be compensated at 5:1, consistent with the EACCS. The project proponent will provide detailed information to the County and CDFW on the location of the preserved occurrences, quality of the preserved habitat, feasibility of protecting and managing the areas in-perpetuity, responsibility parties, and other pertinent information. The preserved habitat will be confirmed to support populations of the impacted species and will be preserved in perpetuity via deed restriction, establishment of a conservation easement, or similar preservation mechanism. A qualified botanist or plant ecologist will prepare a preservation plan or long-term management plan for the site containing at a minimum: a monitoring plan and performance criteria for the preserved plant population; a description of remedial measures to be performed in the event that performance criteria are not met; a description of maintenance activities to be conducted on the site, including weed control, trash removal, irrigation, and control of herbivory by livestock and wildlife; and an adequate funding mechanism to ensure long-term management of the preserved habitat. If suitable occurrences of a special-status plant species are not available for preservation, then the project will be redesigned to remove features that would result in impacts on that species.

77. Conservation Measures to Compensate for Avian Mortality (BIO-11h). The Permittee shall provide a plan for compensation for impacts on avian species, including raptors as well as smaller birds, are currently available, employing one or more of the options set forth in Mitigation Measure BIO-11h in the MMRP. The objective is to provide or improve habitat for raptors and avian species within the APWRA on a long-term basis, or in ten-year increments, to be adjusted on the basis of avian monitoring results only every ten years or once within each ten-year period. An avian conservation strategy, to be outlined in the draft APP required by Mitigation Measure 11a, shall be implemented within one year of the commercial operations date (or of 75 percent of the turbine capacity if construction is staged), unless compliance with the conservation strategy includes complying with compensatory mitigation measures in an Eagle Take Permit (ETP) from the USFWS, in which case compensation shall be provided according to terms of the eagle permit. Strategic measures may include retrofitting of high-risk electrical infrastructure; measures outlined in an approved Eagle Conservation Plan and Bird and Bat Conservation Strategy; contributions to avian conservation efforts such as

those undertaken by the California Raptor Center or the East Bay Regional Park District; contributions to regional conservation of avian habitat; contribution to efforts benefitting eagles and other raptors; and other conservation measures to be identified in the future by USFWS and non-governmental organizations. . If the ETP results in retrofitting of high-risk power poles outside of the APWRA, it will be accepted as compensatory mitigation only if required by an ETP from the USFWS, or if other compensatory mitigation measures causes a delay to the Project or results in a greater cost than would be incurred by high-risk power pole retrofits.

78. Compensate for Direct and Indirect Effects on Valley Elderberry Longhorn Beetle (BIO-4b). If elderberry shrubs cannot be avoided and protected as outlined in Mitigation Measure BIO-4a, the Permittee shall obtain an incidental take permit from USFWS and compensate for the loss of any elderberry shrubs. Surveys of elderberry shrubs to be transplanted will be conducted by a qualified biologist prior to transplantation. Surveys will be conducted in accordance with the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (U.S. Fish and Wildlife Service 1999). Permittee shall comply with the specific requirements of Mitigation Measure BIO-4b of the MMRP to mitigate for effects on valley elderberry longhorn beetle.

The Project proponent will be responsible for funding and providing monitoring reports to USFWS in each of the years in which a monitoring report is required. As specified in the *Conservation Guidelines*, the report will include information on timing and rate of irrigation, growth rates, and survival rates and mortality.

79. Compensate for Loss of Habitat for Special-Status Amphibians, Reptiles, Western Burrowing Owl, San Joaquin Kit Fox and American Badger (MMs BIO-5b, BIO-7b, BIO-9 and BIO-10b). Where impacts on aquatic and upland habitat for special-status amphibians, reptiles special-status and non-special-status tree/shrub- and ground-nesting birds and burrowing owls, cannot be avoided or minimized, Permittee shall provide compensatory mitigation in accordance with mitigation ratios and requirements developed under the EACCS (Appendix C). In the event that take authorization is required, compensatory mitigation will be undertaken in accordance with the terms of the authorization in consultation with USFWS and/or CDFW.
80. Compensate for the Loss of Riparian Habitat, Wetlands and Streams (MMs BIO-15, BIO-16 and BIO-18; if applicable). If wetlands or streams are filled or disturbed as part of the repowering Project, the Permittee shall compensate for the loss of this habitat to ensure no net loss of habitat functions and values. Compensation ratios will be based on site-specific information and determined through coordination with state and federal agencies (CDFW, USFWS, United States Army Corps of Engineers, or USACE). Unless specified otherwise by a resource agency, the compensation will be at a minimum 1:1 ratio (1 acre restored or created for every 1 acre filled) and may be a combination of onsite restoration/ creation, offsite restoration, and mitigation credits. A restoration and

monitoring plan will be developed and implemented. The plan will describe how alkali meadow habitat, riparian habitat or wetlands will be created and monitored.

81. Conduct Preconstruction Surveys and Implement Protection Measures for Western Bumble Bee (MMs BIO-22a and BIO-22b). As required by MM BIO-22a, prior to the start of construction, qualified biologist(s) will conduct botanical surveys in late spring/early summer to identify and map concentrations of flowering plants that provide food resources for western bumble bee. If moderate to high quality foraging habitat for western bumble bee is identified in the project area based on the habitat assessment, these areas will be surveyed by qualified invertebrate biologist(s) (with experience conducting bumble bee surveys) within 1 year prior to the start of construction. If western bumble bee is determined not to be present at the project site or a qualified invertebrate biologist (experienced with bumble bees) concludes that there is a very low likelihood that the species is present, then no additional mitigation is required. If western bumble bees are determined to be present at the project site, then the project proponent will implement MM BIO-22b.

As required by MM BIO-22b, the following is required if western bumble bees are present on the Project site:

- The project biologist would conduct additional preconstruction surveys within the project disturbance footprint for active bee nest colonies and associated floral resources (i.e., flowering vegetation on which bees from the colony are observed foraging) no more than 30 days prior to any ground disturbance between March and September.
- To minimize temporary disturbance of suitable foraging and nesting habitat for western bumble bee, ground disturbance within suitable annual grassland habitat will be restricted to the minimum area necessary to perform construction activities.
- To encourage growth of additional nectar and pollen producing plants at the project site, disturbed grasslands that are revegetated in accordance with PEIR Mitigation Measure BIO-5c will use a seed mix combination that includes nectar and pollen producing plants commonly used as a food source by western bumble bee.
- To minimize impacts on bees from herbicide drift, herbicide application around tower foundations will be performed using handheld equipment and will be restricted to a 20- foot radius buffer area around the tower foundations.

Additional conservation measures or conditions of approval may be required in applicable project permits.

82. Evidence of Compliance with the Federal Aviation Administration (FAA). Prior to the date of commercial operation, the Permittee shall provide a copy of the FAA Determination of No Hazard to the Alameda County Planning Director for a hearing by the Alameda County Airport Land Use Commission.

PERFORMANCE STANDARDS

83. Windfarm Fire Requirements. To provide a reasonable level of fire protection and safety for ongoing windfarm operations, the Permittee shall be responsible for compliance with the Altamont Pass Windfarms Fire Requirements dated September 22, 2005 adopted by Alameda County and which were reviewed and re-adopted on November 12, 2014. In addition, the Permittee shall make a reasonable attempt to maintain the telephone numbers of the inhabitants of all adjacent properties and give timely notification to same in the event of an on-site fire.
84. Safety Reporting. Permittee shall notify the County Building Official and Planning Director of any tower collapse, blade throw, fire, or injury to worker within five (5) days of any such occurrence.
85. Screen Surplus Parts and Materials (MM AES-2c). As required by Mitigation Measure AES-2c, the Permittee shall have surplus parts and materials that are kept onsite maintained in a neat and orderly fashion and screened from view, which may be accomplished by using a weatherproof camouflage material that can be draped over surplus parts and materials stockpiles. Draping materials shall be changed at least twice per year from green to brown and back again according to the season so that stockpiles are effectively camouflaged to match the predominant color of surrounding grass areas.
86. Site Maintenance. Litter and debris shall be contained in appropriate receptacles and shall be disposed of promptly. All construction trailers, construction materials and construction-related debris shall be removed following cessation of construction activity, or within 30 days of authorization of commercial operation.
87. Removal of Inoperative Equipment. Any inoperative windfarm or windfarm site that is determined to be substantially inoperative shall be restored or reclaimed consistent with the approved *Restoration and Reclamation Plan* (Condition 11), under the following procedures:
 - a) The Planning Director and Director of Public Works shall make a determination that the permitted wind farm operations have been abandoned or have produced less than 5 percent of the rated output of the wind farm in one year, verified by the annual status reports and there is no demonstrated plan provided by the Permittee or property owner, satisfactory to the Planning Director, to restore the equipment to a productive operating condition.
 - b) The Planning Director and Director of Public Works may instead make a determination that more than 50% of the turbines are actively being removed or are in disrepair and there is no demonstrated plan, satisfactory to the Planning Director, to restore the equipment to a productive operating condition.

Upon determination by the Planning Director that either of the above criteria is present on the property, the Planning Director shall give notice to the property owner/wind operator of the following requirements:

- a. Within 30 days from the date of the notice by the Planning Director, the Permittee shall secure a building permit to inspect all inoperable or abandoned wind turbines; and
 - b. The application for a building permit shall be accompanied by a cash performance deposit to restore the site subject to the approved *Restoration and Reclamation Plan*.
88. Noise Standards. In the event a reasonable complaint is received by the Environmental Health Director alleging the presence of sound levels from one or more wind turbines exceeding the levels described in the application, or exceeding 55 dBA (Ldn) as measured at the exterior of any dwelling unit:
- a. The Environmental Health Director shall report this matter to the Permittee and to the Planning Director and upon receipt of such report, this matter shall be brought to hearing pursuant to Section 17.54.030.
 - b. Upon receipt of the report from the Environmental Health Director, the Planning Director shall require the Permittee to have a qualified firm furnish a site specific study with recommendations on the circumstances, if any, which would render the Project in conformance with all applicable noise conditions; the report shall also include a recommendation to the Planning Director who will make the final determination as to whether subsection (d) shall be imposed.
 - c. For a minimum 30 day period from the date of notification from the Environmental Health Director, at the time and place as may be agreed upon by the parties involved, Permittee shall attempt in good faith to negotiate a resolution of this matter with the party making the allegation; the results of such negotiation shall be reported to the Planning Director in a timely manner.
 - d. Following the review period as provided under subsection (c) and until the conclusion of the revocation procedures as provided by Section 17.54.030, one or more wind turbines authorized by this permit to be constructed or maintained that are in closest proximity to the dwelling or building site of the party making the allegation, may be required to be made inoperative.

The measurement standard for the A-weighted scale shall be adjusted by the Planning Director to allow any sound device that is installed on or around the turbine as a mitigation for bird collisions.

Methods for measuring and reporting acoustic emissions from wind turbines and wind-farms shall be equal to or exceed the minimum standards for precision described by the International Electrotechnical Commission (IEC) in its 61400 series – Standards and Technical Specifications – *IEC 61400-11: Acoustic Noise Measurement Techniques*.

The Planning Director, in consultation with the Alameda County Environmental Health Services, shall establish criterion for noise samples and measurement parameters such as the duration of data collection, time of day, wind speed, atmospheric conditions and direction as set forth in the Wyle Research Report.

89. Electromagnetic Interference. If it has been demonstrated to the Planning Director that the turbine is causing disruptive electromagnetic interference, the Permittee shall promptly mitigate the disruptive interference, which may include discontinued operation of one or more turbine.

MONITORING AND SUBSEQUENT REVIEW

90. Initial Status Report. Six months from the issuance of grading and/or building permits, the Permittee shall submit to the Planning Director a status report describing compliance with conditions of the permit.
91. Annual Status Report. Following commercial operation date (COD), and on each annual anniversary of said commencement, Permittee shall submit to the Planning Director a brief status report containing the following information: description and rated capacity of all equipment installed, relevant meteorological data collected, and actual MW electric power generated to date broken down into appropriate time categories.
92. Post-Construction Avian Fatality Monitoring (MM BIO-11g). As required by Mitigation Measure BIO-11g as set forth in the MMRP, the Permittee shall provide for a post-construction monitoring program to be conducted for the Project for a minimum of three (3) years beginning on the COD. Monitoring may continue beyond 3 years if construction is completed in phases. Moreover, if the results of the first 3 years indicate that baseline fatality rates (i.e., non-repowered fatality rates) are exceeded, monitoring will be extended until the average annual fatality rate has dropped below baseline fatality rates for 2 years, and to assess the effectiveness of adaptive management measures specified in Mitigation Measure BIO-11i. An additional 2 years of monitoring will be implemented at year 10 (i.e., the tenth anniversary of the COD). Project proponents will provide access to qualified third parties authorized by the County to conduct any additional monitoring after the initial 3-year monitoring period has expired and before and after the additional 2-year monitoring period, provided that such additional monitoring utilizes scientifically valid monitoring protocols. Monitoring shall be in conformance with the protocols and specifications of Mitigation Measure BIO-11g, including the formation of a technical advisory committee (TAC) to oversee the monitoring program and to advise the County on implementation of adaptive management measures.
93. Post-Construction Bat Fatality Monitoring (MM BIO-14b). As required by Mitigation Measure 14b in the MMRP, the Permittee shall implement a scientifically defensible, post-construction bat fatality monitoring program that is consistent with the protocols and sample size established and recognized by bat biologists in the APWRA, to estimate actual bat fatalities and determine if additional mitigation is required. Such monitoring

shall take place concurrent with the 3-year post-construction monitoring program required by Mitigation Measure BIO-11g, developed in accordance with California Energy Commission and California Department of Fish and Game (2007), and shall incorporate bat-specific components and protocols as specified by Mitigation Measure 14b in the MMRP, including having at least one biologist with significant experience in bat research on the TAC, performing post-construction bat fatality monitoring using trained dogs with handlers, and conducting bat acoustic surveys concurrently with fatality monitoring at the Project site. If recommended by the TAC, such a monitoring program shall recommence for two (2) years beginning on the tenth anniversary of the COD.

94. Annual Monitoring Reports on Bat Use and Fatalities (MM BIO-14c). The Permittee shall have annual reports of bat use results and fatality monitoring prepared by a qualified biologist within 3 months of the end of the last day of each year's fatality monitoring as required by Mitigation Measure BIO-14b, and submit such reports to the TAC and Planning Director. Special-status bat species records will be reported to the California Natural Diversity Data Base (CNDDB).
95. Technical Advisory Committee (MM BIO-11g). The County shall convene a Technical Advisory Committee (TAC) to oversee the post-construction monitoring program as required by Mitigation Measure BIO-11g and Condition 92 and to advise the County on adaptive management measures required by Mitigation Measure BIO-11i and Condition 96. The roles and responsibilities of the TAC membership shall be established by the Planning Director following consultation with the East County Board of Zoning Adjustments (based on a public hearing to be held for such specific purpose on or before December 18, 2014). The TAC shall include representatives from the County (including one or more technical consultants, such as a biostatistician, an avian biologist, and a bat biologist), and wildlife agencies (CDFW, USFWS) and as determined following the above-mentioned consultation. The TAC will have a standing meeting, which shall be open to the public, every 6 months to review monitoring reports produced pursuant to Mitigation Measure BIO-11g and Condition 92. Formation and operation of the TAC shall otherwise be consistent with Mitigation Measure BIO-11g.

The TAC may be the same TAC as may be formed and meeting for the purpose of prior repowering projects, such as Golden Hills—Phase 1; no new TAC is either required or encouraged. An adjunct or auxiliary advisory committee for the TAC composed of landowners, special district representatives, environmental advocacy groups and other stakeholders shall be convened by the Planning Director to confer with the 'core' TAC members on an as-needed basis, particularly on issues of establishing conservation easements and providing for landscape-scale mitigation as required by Condition 76.

The applicant shall collaborate with the County and the TAC over the twelve-month period following approval to evaluate whether or not additional new technology for active curtailment (e.g., IdentiFlight) to reduce raptor collisions is feasible for the Project, and if there is agreement, can be implemented thereafter in a reasonable period of time.

96. Implement an Avian Adaptive Management Program (MM BIO-11i). If fatality monitoring described in Mitigation Measure BIO-11g results in an estimate that exceeds the preconstruction baseline fatality estimates (i.e., estimates at the non-repowered turbines as described in the PEIR) for any focal species or species group (i.e., individual focal species, all focal species, all raptors, all non-raptors, all birds combined), the Permittee shall prepare a Project-specific adaptive management plan within 2 months following the availability of the fatality monitoring results. The County shall review and approve such plan in consultation with the TAC and it shall be implemented within 2 months of such approval. Follow-up monitoring will be required to determine if specific measures shall be sustained, revised or replaced with other measures. Measures, as outlined in Mitigation Measure BIO-11i, include but are not limited to visual modifications, anti-perching measures, prey-reduction strategies, use of experimental technologies, turbine curtailment (including real-time curtailment), cut-in speed adjustments based on a focused study of such a strategy, or condor evaluation and curtailment strategies.
97. Develop and Implement a Bat Adaptive Management Plan (MM BIO-14d). The Permittee shall develop adaptive management plans to reduce bat mortality, in concert with Mitigation Measure BIO-14b, using appropriate feasible measures, and using both currently available and emerging information. The goals of the adaptive management plans are to ensure that the best available science and emerging technologies are used to assess impacts on bats, and that impacts are minimized to the greatest extent possible while maintaining energy production. Specific bat-related measures shall conform to the guidelines set forth in Mitigation Measure BIO-14d in the MMRP, including identified adaptive management measures.
98. Injured Bat Rehabilitation Compensation (MM BIO-14e). Project proponent shall pay in full the cost of reasonable, licensed rehabilitation efforts for any injured bats taken to wildlife care facilities from the Project area.
99. Stormwater Control Plan: Permittee shall carry out the operation and maintenance (O&M) of all installed stormwater protective system(s) as directed in the approved Stormwater Control Plan (SCP) and in compliance with Provision C.3 of the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (MRP) and with the terms and conditions of the County Stormwater Permit, as required by Condition 45.
100. Monitor Substation Circuit Breakers for SF₆ Leakage. (MM GHG-2b). Permittee shall ensure that any new circuit breaker installed at a substation has a guaranteed SF₆ leak rate of 0.5% by volume or less. The applicant will provide Alameda County with documentation of compliance, such as specification sheets, prior to installation of the circuit breaker. In addition, the applicant will monitor the SF₆-containing circuit breakers at the substation consistent with Scoping Plan Measure H-6 for the detection and repair of leaks.

101. Optional Review/Revocation/Revision. At any time during the term of this permit and after notice as provided for in the initial hearing, this matter may be set for rehearing if the Planning Director has made an initial determination based on substantial evidence that the use of the site for generation of electrical energy from wind turbine operations has ceased for a period of six months, or has produced less than 5 percent of the rated output of the wind farm in one year, and if therefore the permit should be revoked. In addition, pursuant to Section 17.54.030, the permit may be revoked if the permit has otherwise been exercised unlawfully or contrary to any condition or limitation of its issuance. As part of such rehearing, and/or reconsideration for the permit, the Board may determine that conditions previously imposed should be modified or new condition should be added to assure continued affirmative findings for this permit. This reconsideration may include imposition of other requirements, treatments and measures to ensure public safety and applicable policies of the East County Area Plan. Any condition modified or added shall have the same force and effect as if originally imposed.
102. Transfer of Operations. Any entity that has acquired the facilities as authorized under this permit may maintain the benefits of the existing use permit provided that a letter of notification is submitted to the Board of Zoning Adjustments within six months after such transaction, and all conditions of approval for the subject facility are carried out by the new operator/Permittee.
103. Site Restoration. Permittee shall provide written notification to the Planning Director upon cessation of operations on the site by the Permittee. During operation of the Project, no abandoned turbine tower, rotor, ground or other equipment components shall be stored onsite outside designated storage areas. A wind turbine shall be deemed abandoned for the purposes of this Resolution if it has not produced electricity for one year or has produced less than 5 percent of the rated output of the wind farm in one year.
- If all operations have been terminated, the Permittee and/or property owner shall be required to remove all improvements authorized under this permit from the site and the property shall be returned within twelve months of cessation to a condition with no wind facilities, subject to the requirements of the County.
104. Termination. Said Conditional Use Permit shall terminate after 30 years, on the 30th anniversary of the date of approval of this application, and shall remain revocable for cause in accordance with Section 17.54.030 of the Alameda County Zoning Ordinance. Permittee shall either remove the turbines and improvements approved herein in accordance with the approved reclamation plan or shall apply for new use conditional permits in accordance with Section 17.54.130 of the Zoning Ordinance.

**APPROVED MINUTES OF MEETING
EAST COUNTY BOARD OF ZONING ADJUSTMENTS
April 22, 2021**

REGULAR MEETING

CALL TO ORDER: The Chair called the meeting to order at 1:30 p.m.

MEMBERS PRESENT: Members Frank Imhof, Chair and members Scott Beyer and Derek Eddy.

MEMBER EXCUSED: None

OTHERS PRESENT: Andrew Young, Senior Planner; Heather Littlejohn, County Counsel and Jazmin Sanchez, recording secretary.

PLEDGE OF ALLEGIANCE

OPEN FORUM: Open forum is provided for any members of the public wishing to speak on an item not listed on the agenda. Each speaker is limited to two (2) minutes. The Chair instructed everyone on how to participate in open forum – There were no speakers.

NEIGHBORHOOD PRESERVATION AND ZONING ORDINANCE ABATEMENT – *None*

ALCOHOLIC BEVERAGE SALE REGULATION ADMINISTRATIVE HEARING - *None*

APPROVAL OF MINUTES FROM PREVIOUS MEETINGS

APPROVAL OF BOARD MINUTES – March 25, 2021. Member Eddy moved to approve minutes of March 25, 2021 as submitted. Chair Imhof seconded the motion. *Andrew Young conducted the roll call. Yeas: Members Imhof, Beyer and Eddy. Motion carried 3/0.*

CONSENT CALENDAR: *No items*

REGULAR CALENDAR:

PLN2019-000226, CONDITIONAL USE PERMIT, MULQUEENEY WIND ENERGY LLC / BROOKFIELD RENEWABLE ENERGY PARTNERS - Application to allow repowering of an estimated 518 existing or previously existing wind energy turbine sites with up to 36 new turbines with a maximum production capacity of 80.0 megawatts (MW), using turbines rated between 2.2 and 4.2 MW per turbine, on twenty nine (29) parcels located north and south of Patterson Pass Road between approximately one-third and four miles west of Midway Road, and between one and five miles south of Interstate 580. The project site comprises 29 parcels extending over approximately 4,600 acres, including the following Assessor Parcel Numbers (APNs): 99A-1800-2-3, 99A-1800-2-4, 99B-7890-2-4, 99B-7890-2-5, 99B-7890-2-6, 99B-7890-4-0, 99B-7900-1-3, 99B-7900-1-4, 99B-7900-1-5, 99B-7900-1-6, 99B-7900-1-7, 99B-7900-2-0, 99B-7910-1-1, 99B-7910-1-2, 99B-7925-2-1, 99B-7925-2-2, 99B-

7925-2-3, 99B-7925-2-4, 99B-7925-2-5, 99B-7925-3-0, 99B-7950-2-0, 99B-7975-1-0, 99B-7980-1-0, 99B-7985-1-3, 99B-7985-1-4, 99B-7985-1-5, 99B-7985-1-6, 99B-8050-1-0, and 99B-8100-1-1. The Project is broadly consistent with the Repowering Program that was the subject of a Program Environmental Impact Report (PEIR) for Repowering the Altamont Pass Wind Resource Area (APWRA) certified by the East County Board of Zoning Adjustments on November 12, 2014, and is therefore reviewed as a tiered project with a Subsequent Environmental Impact Report (SEIR) pursuant to Section 15162 of the California Environmental Quality Act (CEQA) Guidelines. **Staff Planner: Andrew Young**

Andrew Young presented the staff report. He described the project. The staff's recommendation is that the board received the presentation, take public comment on the project and the final EIR, review the draft resolution to certify the SEIR, certify the final SEIR, then review the draft resolution and exhibits for approval of the project, and lastly approved the project, in the form of the reduced project alternative as defined in the SEIR. The Board may instead approve the project in another form as discussed herein for the required findings.

Heidi Mekkelson, project manager for the EIR, provided a brief overview of the EIR process. The EIR was prepared under CEQA. The fundamental function of CEQA is to inform the public and decision makers about potential impacts and find ways or alternatives thru mitigation measures and to disclose reasons why the project is being approved even though significant impacts are involved. When an EIR has already been approved for a project but there have been changes to the project, a Subsequent EIR is required for the additional analysis. The SEIR will evaluate the effects of the project changes and determine if the changes result in new impacts that were not disclosed in the original document. The SEIR is not used to evaluate the entire project, it just evaluates the incremental differences between the original project and the revised project. The SEIR analyzed the project and three alternatives. One is that no repowering would occur and the site would remain in existing condition. The second alternative would be to have the 36 turbines and have 31 of the turbines relocated to reduce the bird strike risks; and the final reduced project alternative would be to have 24 turbines compared to the proposed 36. All turbines to be placed at least 0.5 mile from golden eagle nests and eagle activity. The last alternative is supposed to be the environmentally superior alternative and also the alternative that staff is recommending for approval by this board. Heidi Mekkelson spoke on comments received from seven organizations. The topics ranged from avian fatalities to potential impacts of construction to birds. There were also claims of inaccurate information or omission of information. The comments ranged from incomplete project description to inadequate evaluation of hazardous materials on the project site. There was one letter of support from East Bay Community Energy. The EIR found that the project would not result in any significant irreversible effect on the environment. The proposed project would not induce growth. The reduced project alternative would reduce some identified significant impacts related to avian and bat fatalities. New updated and mitigation measures to be implemented includes a mitigation to reduce construction related air pollutant emission; a pre-construction habitat assessment and focused surveys on western bumble bee; and the implementation of program measures to avoid and minimize effects on western bumble bee.

John Kirby, compliance manager, spoke on the project and the benefits to local economy by creating union labor jobs and the purchase of local construction supplies for the project. This project will generate enough energy for 18,000 homes. He spoke on efforts to reduce avian and

bat mortality, keeping turbines away from eagle nests, speed adjustment of turbines, technology to support active curtailment to reduce risk to eagles, and reducing the number of turbines from 36 to 24. He spoke on extra cost to project due to the implementation of some of these measures.

Member Eddy asked about the project decommission in 2016 and the reason for it. The applicant said the lease expired and changed hands. Member Eddy questioned the huge decrease from 518 to 24 is a significant decrease and if he could expand on issues with the bigger turbines. The applicant said the turbines need to be spread out from each other. The turbines are much larger than before, but there is nothing wrong with the turbines. Going from 36 to 24 turbines and trying to keep the project's cost and energy production the same. They are also better and minimize the risk to local habitat. Member Eddy asked if the reduced number will reduce the impact on the environment. The applicant said there is less infrastructure and overall it is a benefit to the environment. This is the effect of wind turbine technology and it has lessened the risks to habitat. The old technology is no longer sustainable. He asked Heidi to expand on the technology issue.

Heidi Mekkelson said, generally speaking, the older generation turbines have higher risks and impacts to avian and bats species. One of the goals for repowering is to replace the older generation turbines with newest generation turbines that have greatest technology to reduce the risks. Member Eddy asked if the proposed changed project will still produce the same 80 megawatts. The applicant said yes and the 24 turbines layout is the most economical.

Member Beyer asked if the old infrastructure on the site has been cleaned up. Andrew Young said most of the restoration on site has already occurred. Some of the slides are not current. Member Beyer asked if the old stuff will be removed. Andrew Young said most of the turbine foundations are typically buried. Member Beyer asked if the applicant is responsible for the restoration. The Applicant said the restoration of the site has been done by the previous operator. Member Beyer asked who is responsible for inspecting the site to make sure that the restoration was done. Andrew Young said that is the responsibility of the Planning Department. He said he is sure that the previous applicant performed the restoration. The Chair said this is exactly what happened at the solar farm on Kelsa Road. The infrastructure was never removed. He said maybe there should be a site visit to make sure that it was removed. The Chair spoke on technology that has been installed at different sites which detects if a bird is flying in the path of a turbine. Andrew Young said this is not a feature for this project. There are other sites that have this feature. There were some issues with the technology but it has been updated and hopefully will have better results. The Chair said this technology is amazing and it would save birds. Andrew Young said it is still experimental. Heidi Mekkelson said the EIR does require adoptive management measures for the project, although this is not proposed as the project description, it could be an adoptive measure.

Member Beyer said he is not satisfied with the answers. Andrew Young said he was very involved with the Kelsa Road project and unfortunately there was not a bond for the project. But currently there are bond measures for all the windfarm projects for the removal of infrastructure.

Public comment was open.

Mike Lyons, representing Audubon Society, said he has been working in the Altamont for the last fifteen years. Audubon is supportive of windfarm projects. He said that repowering is not providing the reduction in bird mortality that was promised. There are not benefits for birds. These rodor swept areas are very large and have very significant impact on birds. In order to reduce the fatalities the overall size of the project needs to be reduced. This project is going to be increased to 80 megawatts. The increase in mortality to the bats is also a concern. Note that all letters raised red flags that were not addressed in the response to comment. He asked that the board not approve this project today and give these agencies and applicant time to address these issues.

Doug Bell, Wildlife Program Manager for EBRPD, has been working on research since 2005, the district supports responsible production of wind energy in the Altamont while protecting natural, cultural and habitat in the Altamont. Fewer number of turbines helps the impact to animals. The decrease in the number of turbines and maintaining the same name plate capacity ultimately negates the reduction of animal fatalities. He urged the applicant to reduce the overall name place capacity. He urged that staff take advantage of studies on scientific micro siting studies now available which includes years of quantified flight behavior observation of birds and bats.

William Hopps, president of the Audubon Chapter, said he certainly endorses the comments of these two speakers. Very discouraging to see how the situation of animals on the Altamont has not improved. He asked the board not to approve this application and have the applicant come back with a better project.

Pam Young, speaking on behalf of Golden Gate Audubon Society, supports the renewable energy projects that is carefully considered. Supports the previous comments. There is a profound amount of new information coming out of this project. Adaptive measurement should be implemented right away and not wait three years as the PEIR says. Curtailment is extremely important. Renewable energy is too great of a harm to habitat. Sustainable energy is important, some information is carefully being considered but it needs to be strengthened.

Public comment was closed.

Member Eddy asked how about the past 50 megawatts to the proposed 80 megawatts. Staff said originally it was 74 megawatts, and the 80 megawatts was mentioned in the EIR. It was previously approved in 2012. Member Eddy asked if the board's job is to see if the environment impact is more significant than in the past. Staff said the distinction is to review the information and see if there are impacts that are more severe this time or if there are changed circumstances. Andrew Young spoke on previous projects that have been approved and how they compare with the current application.

Heide Mekkelson wanted to remind the board that this is a subsequent analysis, there was already an EIR program, the impacts on habitat have been evaluated, it has been cleared and certified by CEQA. It is beyond the point of challenge. The job of the subsequent EIR is to acknowledge the new proposed project of 80 megawatts and will this result in new impacts that

were not identified in the EIR. It was concluded in the assessment that no new impacts were found.

The Chair asked County Counsel if checking the site to make sure that the infrastructure was removed is this board's function. Does this board need to take a field trip to make sure that the site was cleaned up before making the final decision on this project.

County Counsel said it is not this board's job. This board's job is to evaluate the project as it has been presented, to decide whether the facts support approval of this project and whether the environmental impacts were adequately assessed in the SEIR. The follow up on decommissioning and whether it was done or not, is not associated with this permit. This is not the subject of this hearing. The issue could be addressed as a matter of enforcement by the Planning Department. If the board needs more information on impacts, then this board may choose to continue the item to work with staff on additional information. But decommissioning is not before you today. The prior development and removal of infrastructure is a subject of its own. There are various things to be considered tonight.

Public comment was open.

Tim Duffy, property owner, said this property is owned by five different families. Nextera used to own the easement and it was transferred to Brookfield and during the process property owners worked closely with Nextera to bring property to previous conditions. He said to his knowledge Nextera has followed up on the decommissioning and removal of infrastructure to bring the land to what it was when they first took over.

Public comment was closed.

Member Eddy moved to approve the EIR and the reduced alternative as presented tonight. County Counsel said the motion should state to certify the SEIR. Member Byer seconded the motion. The Chair asked if there is a substitute motion to include the bird sonar distancing equipment. County Counsel said it could be included as a condition of approval if it is not there yet state the reason for adding the condition. The Chair said he would like that condition to help reduce avian fatalities. Andrew Young said it is an option of one of the adaptive measures. It is within the board's power to add the condition. County Counsel said there are two actions today, the EIR and the CUP with the addition of a condition for the active radar system but not naming any software. The Chair said on a three-year or five-year trial.

County Counsel asked Heiddi if she could show the mitigation conditions in the EIR to make sure that this board is not adopting inconsistent findings. Andrew Young asked if it should be a mitigation measure or a condition of approval. He said there is an existing mitigation measure but it triggers after a year. Heiddi Mekkelson shared the mitigation measures of the EIR and the adaptive mitigation measures, i.e. radar system. One is implementation of experimental technology to test the efficacy and also turbine curtailment, which was raised during the public comment.

County Counsel asked staff to explain to the board when these proposed mitigation measures would be recommended. Heiddi said the sentence read "if fatality monitoring described in the

mitigation measures results in an estimate that exceeds the pre-construction baseline fatality estimate which is estimate as the of the non-repower turbines as the described in the program EIR for any focal specific group then the project proponents will prepare a project specific adaptive management program within two months following the availability of the fatality results.” Andrew Young said it could be triggered following the three years, maybe one year. Heiddi said the EIR says three years. Andrew Young said it would be within the boards’ purview to require active curtailment. County Counsel said the board may add or change the conditions of approval as long as there is evidence in the record to support the condition.

Public comment was open.

The applicant spoke on the added condition and cost to the project. He also spoke on the lack of information on the effectiveness of the technology. He expressed his concern with added mitigation to the project and the cost of the new technology. He suggested that there is enough language in the EIR to address this new technology. He asked that the language be strengthened but not necessarily imposed as a condition of approval. Heiddi said the adoptive management strategy to mitigating these impacts is a strategy that was established in the certified EIR and the three-year monitoring period is so that a baseline can establish the effectiveness of this measure. If the monitoring data is not available, then there is not a baseline to measure if the technology is working or not.

Public comment was closed.

The Chair said he agrees with the three-year monitoring program. The weather changes everything. Member Eddy said instead of requiring the condition why not ask for a percentage, ten percent or two turbines, of the project be set with the new technology. It will not be a financial burden for whole project. It sets a standard to gather more information. The chair said he agrees. Andrew Young said the technology is not designed to work with one turbine, but five or six. It should have at least one year or more to gather information.

Discussion ensued between the applicant and the board regarding new technology and budget for the project. The Chair asked staff the location of the project that currently have the new technology. Andrew Young said approximately one mile.

Member Eddy re-worded the motion. He moved to certify the SDEIR. Member Beyer seconded the motion.

Andrew Young conducted the roll call. Yeas: Members Imhof, Byer and Eddy. Motion carried 3/0.

Member Eddy moved to approve the conditional use permit and add a condition that the applicant shall work with the County for twelve months to collect data and information on active curtailment. County counsel read specific language for consideration on the motion: “Motion to approve the conditional use permit with an additional condition that the applicant shall collaborate with the county and TAC for a period of 12 months following approval to evaluate whether additional new technology can be implemented with respect to active curtailment as identified. Member Beyer seconded the motion.

Andrew Young conducted the roll call. Yeas: Members Imhof, Byer and Eddy. Motion carried 3/0.

Andrew Young instructed everyone on the appeal procedure.

STAFF COMMENTS & CORRESPONDENCE: *Andrew Young informed the board that the solar application for SunWalker is being heard by the Board of Supervisors today.*

COMMISSION ANNOUNCEMENTS, COMMENTS AND REPORTS: *None*

ADJOURNMENT: *The Chair announced the next meeting on May 27th. Member Byer moved to adjourn the meeting at 3:57p.m. The Chair seconded the motion.*

ALBERT LOPEZ, SECRETARY
EAST COUNTY BOARD OF ZONING ADJUSTMENTS



**ALAMEDA COUNTY COMMUNITY DEVELOPMENT AGENCY
PLANNING DEPARTMENT
STAFF REPORT**

TO: EAST COUNTY BOARD OF ZONING ADJUSTMENTS

HEARING DATE: APRIL 22, 2021

GENERAL INFORMATION

APPLICATION: CONDITIONAL USE PERMIT, PLN2019-00226

APPLICANT: MULQUEENEY WIND ENERGY LLC, a subsidiary of Brookfield Renewable Energy Partners

PROPOSAL: Application to allow repowering of an estimated 518 existing or previously existing turbine sites, with up to 36 new turbines with a maximum production capacity of 80.0 megawatts (MW), using turbines rated between 2.2 and 4.2 MW per turbine.

LOCATION, ASSESSOR'S PARCEL NOS. AND SIZE OF PARCEL: North and south sides of Patterson Pass Road (no address) extending over approximately 4,600 acres in the southeastern area of the Altamont Pass Wind Resource Area (APWRA), Alameda County, between approximately one-third and four miles west of Midway Road, and between one and five miles south of Interstate Highway 580. Assessor's Parcel Numbers (APNs):

99A-1800-2-3, 99A-1800-2-4, 99B-7890-2-4, 99B-7890-2-5, 99B-7890-2-6, 99B-7890-4-0, 99B-7900-1-3, 99B-7900-1-4, 99B-7900-1-5, 99B-7900-1-6, 99B-7900-1-7, 99B-7900-2-0, 99B-7910-1-1, 99B-7910-1-2, 99B-7925-2-1, 99B-7925-2-2, 99B-7925-2-3, 99B-7925-2-4, 99B-7925-2-5, 99B-7925-3-0, 99B-7950-2-0, 99B-7975-1-0, 99B-7980-1-0, 99B-7985-1-3, 99B-7985-1-4, 99B-7985-1-5, 99B-7985-1-6, 99B-8050-1-0, and 99B-8100-1-1.

ZONING: A-B-E (Agriculture, 160-acre minimum building site area).

GENERAL PLAN DESIGNATION: LPA (Large Parcel Agriculture), *East County Area Plan*, adopted in 1994 and amended in November 2000 and May 2002.

ENVIRONMENTAL REVIEW: The Project is subject to the California Environmental Quality Act (CEQA, 1970, as amended) and is the subject of a Subsequent Environmental Impact Report (SEIR), as defined in Section 15162 of the CEQA Guidelines. The SEIR is tiered under the Altamont Pass Wind Resource Area Repowering Program EIR (PEIR) that was certified by the County on November 12, 2014. The draft SEIR was made available for public comment between November 6 and December 21, 2020, and was subsequently extended to January 8, 2021, thus extending the 45-day public comment period to over 60 days. A public hearing was held on December 8, 2020 to take public comment on the SEIR, at which no one spoke or submitted other comments. The Final SEIR, containing written and verbal comments and responses to written comments was made public on April 9, 2021, and has thus been circulated for 13 days, over the required minimum of ten days prior to this hearing.

RECOMMENDATION

The Board should receive a staff presentation, take public comment on the Project (the Conditional Use Permit) and the Final SEIR, review the draft Resolution to certify the SEIR, certify the Final SEIR, then review the draft Resolution and Exhibits for approval of the Project, and lastly approve the Project, in the form of the Reduced Project Alternative as defined in the SEIR (the Environmentally Superior Alternative). The Board may instead approve the Project in another form as discussed herein for the required findings.

WIND-RELATED CONDITIONAL USE PERMIT HISTORY

February 3, 1982, approved C-4180, 24 wind turbines yielding 2.4 MW;
November 17, 1982, approved C-4326, 71 wind turbines yielding 7.1 MW;
May 11, 1983, approved C-4437, 9 wind turbines yielding 0.9 MW;
September 11, 1985, approved C-4950, 441 wind turbines yielding 44.1 MW;
September 11, 1985, approved C-4957, 34 wind turbines yielding 3.4 MW;
April 30, 1986, approved C-5065, 16 turbines yielding 4.0 MW, operated by Windworks, Inc.
September 16, 1987, approved C-5304, 43 turbines yielding 4.3 MW, and one turbine of 0.4 MW;
September 23 1987, approved C-5318, 37 wind turbines yielding 3.7 MW;
December 9, 1987, approved C-5359, 37 wind turbines yielding 3.7 MW;

Except for C-5065 operated by Windworks, Inc., the other eight Conditional Use Permits listed above were amalgamated as the application of C-8137 in 2003 to operate 697 turbines and yield up to 70 MW of generating capacity.

September 5, 2005, Conditional Use Permit, C-8137 approved on appeal by the Board of Supervisors for continued operation of a combined total of 697 wind turbines operated by Altamont Infrastructure Company, with a capacity of 70.0 MW.

September 5, 2005, Conditional Use Permit C-8191 approved by the Board of Supervisors for continued operation of 16 wind turbines operated by Windworks, Inc., a subsidiary of Altamont Winds, Inc., with a capacity of 4 MW.

GENERAL PLAN AND ZONING

The East County Area Plan (ECAP) designates the Project area as Large Parcel Agriculture (LPA). Subject to the provisions, policies, and programs of the ECAP, the LPA designation permits one single-family residence per parcel, agricultural uses, agricultural processing facilities, public and quasi-public uses, quarries, landfills and related facilities, wind farms and related facilities, utility corridors, and similar uses compatible with agriculture.

The ECAP includes a Goal to maximize the production of wind-generated energy, Policies 168 through 175 and Implementation Programs 73 through 76, which support wind energy within the APWRA (pp 43-44, ECAP). The current Project is deemed to be consistent with the wind-related Policies in the ECAP such as allowing for redevelopment (i.e., repowering) and expansion within the limits of environmental constraints (Policy 169), and establishing mitigation programs to minimize the impacts of turbine operations on birds, Policy 172).

Lands in the Project area are zoned A-160 and A-320 (Agricultural District, with minimum building site areas, respectively of 160 acres or 320 acres), which allows for agricultural and other non-urban uses. Within the A District, privately owned wind-electric generators are a conditionally permitted use subject to approval by the East County Board of Zoning Adjustments (EBZA).

BACKGROUND

Windfarms in the APWRA were originally developed under CUPs approved between the early 1980s and mid-1990s. Throughout that period, various wind energy operators held permits for the operation of over 4,000 wind turbines with a reported nameplate generating capacity as of 1998 of roughly 417 MW. These permits expired between 2001 and 2004, and after applying for renewal permits for continued operation, the East County Board of Zoning Adjustments approved 29 consolidated use permits for five different

operators, in two stages in November 2003 and January 2004. All of the approvals were appealed to the Board of Supervisors, a process that concluded in September 2005 with affirmation of the approvals under specific conditions directed at reducing avian mortality and developing a repowering program and preparing a program EIR to address the effects of repowering, and all permits were set to expire after 13 years, in September 2018, during which time the operators were expected to apply for new use permits to implement repowering – i.e., replacement of the old turbines with the newest and more efficient turbines, at that time ranging in capacity of between 0.7 and 1.0 MW per turbine, compared to the 80s and 90s era first- and second-generation turbines of between 10 and 500 kilowatts (i.e., 0.01 to 0.5 MW).

Research in the late 1990s and throughout the first decade of the 2000s had pointed to repowering the old turbines with the newer third-generation turbines as the best approach to retaining renewable wind energy production in the APWRA while also addressing the serious problem of avian fatalities due to blade strikes, especially of volant raptors such as golden eagle, red-tailed hawk, burrowing owl and American kestrels. The first repowering project in the APWRA, the Diablo Winds project in the north-central area of the APWRA, which replaced 169 turbine sites with 31 turbines rated at 0.66 MW each, was approved in 2003 before the 2005 permit renewals, and continues to operate and is deemed part of the total repowering buildout that was anticipated in the 2014 Program EIR of 450 MW.

The Program EIR (PEIR) was certified in November 2014, and two repowering projects were approved at that time, the Golden Hills Wind project and the Patterson Pass Wind project, to be operated by different companies. Since then, the Golden Hills, and Golden Hills North projects have been built, and another three projects have been approved, of which one, the Summit Wind project, is expected to be operational by the summer of 2021. Also, since 2014, the Patterson Pass project proponent sold its wind energy assets to Centauri Energy Partners, LLC, but because no action has been taken by the new owners to implement or exercise its approved use permit, it is now expired. The two sPower projects, both approved in 2020 and listed below in the summary table of projects, are yet to be initiated or exercised (beginning with review of the Avian Protection Plan by the County's avian protection Technical Advisory Committee or TAC).

Mulqueeney Ranch – Final SEIR: Table 0-1. Approved, Operational, and Proposed Projects in the APWRA

Project Name	Owner/Operator	CEQA Document Used or Anticipated to be Prepared (Status)	Total MW
Operating Prior to PEIR			
Diablo Winds	Glidepath	1998 EIR ^a (Operational since 2005)	20.5
Approved Projects			
Patterson Pass	EDF (now Centauri)	PEIR (Expired) ^e	19.8 (0)
Golden Hills	NextEra	PEIR (Operational)	85.9
Golden Hills North	NextEra	PEIR-Tiered (Operational)	46
Summit Wind ^b	AWI (now Castlake, LP)	PEIR-Tiered (Under construction)	57.5
Rooney Ranch ^c	sPower	PEIR-Tiered (Not yet under construction)	25.1
Sand Hill ^d	sPower	SEIR Tiered from PEIR (Not yet under construction)	50.0
Subtotal			285.0
Proposed Project			
Mulqueeney Ranch	Brookfield	SEIR Tiered from PEIR (this document)	80
Combined Gross Total MW			365.0

MW = megawatts

(Footnotes follow on next page)

^a The 1998 Program Repowering EIR is now considered superseded by the 2014 Program EIR.

^b Summit Wind was approved in January 2016 for 27 turbines and a combined capacity of up to 54.0 MW; however, in May 2020 project revisions were approved to use 23 larger capacity turbines, resulting in a capacity of 57.5 MW.

^c The Rooney Ranch Project proposed by sPower was approved by the City of Santa Clara on June 25, 2019.

^d The Sand Hill Project was approved by the County in February 2020, based on a 109.5-MW alternative evaluated in its SEIR, instead of the project proposal for a 144.5-MW project. Certification of the Sand Hill Final SEIR and approval of the CUP was subsequently appealed. A hearing to consider the appeal was held by the Alameda County Board of Supervisors on December 15, 2020, during the public review period for the Mulqueeney Ranch draft SEIR. At that hearing, the Board denied the appeal and upheld the Sand Hill SEIR and approved a revised project with a maximum capacity of 50 MW and no more than 16 total turbines.

^e The Patterson Pass Project no longer has an approved status, nor is it currently proposed for repowering, so its MW capacity can be subtracted from the total column in this table.

Brookfield acquired the assets of the Mulqueeney Ranch wind project after 2014 from a combination of operators. In 2005 when the single, consolidated permit for Mulqueeney Ranch was approved, the operations comprised 697 turbines, of which nearly 180 were removed under the terms of the 2005 permit renewal for phased removal of individual turbines ranked as hazardous to raptors. Although at the time of the 2005 permit the combined output was 70 MW, the project was identified in the Program EIR as an 80 MW project, and is thus reasonably planned at that capacity. All old generation wind turbines and towers on the project site were decommissioned and removed in 2016. Wind turbine foundations (generally pier-type foundations) were also removed at that time.

SITE AND CONTEXT DESCRIPTION

The project site is located in the southeastern quadrant of the Altamont Pass Wind Resource Area (APWRA) along both sides of Patterson Pass Road, west of Midway Road. The APWRA comprises an approximately 50,000-acre area that extends across the northeastern hills of Alameda County and a smaller proportion of Contra Costa County to the north. The region is generally characterized by rolling foothills of annual grass land used for grazing. Except for the valley bottoms along the small tree and shrub-lined creeks, the hillsides and ridges are generally treeless and dominated by high-tension power line corridors that cross the terrain.

The site itself is in part directly on the eastern boundary of Alameda County, and extends between one and five miles south of Interstate I-580, with an irregular shape extending both north and south of Patterson Pass Road. The northern half of the site surrounds a square, roughly quarter-square-mile set of four parcels that is operated as a conservation land bank also on both sides of Patterson Pass Road and which is not part of the project site. The site's topography is distinguished by a generally diagonal boundary running from the northwest to the southeast between the very gently rolling and mild hills to the north and east, with steeper portions of the site on the south and west of that boundary. Generally parallel to that boundary and within the site is the Union Pacific railway line that is used for the Altamont Commuter Express (ACE) train service. The conservation properties lie southwest of the Union Pacific railroad tracks but among the mild slopes. Directly east of the northeast corner of the site is the PG&E Tesla substation, which is a major hub for northern California high-tension power lines and covers approximately 80 acres with substation equipment and facilities. Two major high-tension power line corridors traverse the site, roughly across the northern half and down the middle of the southern half. The cattle ranch operations and an onsite residence are about a tenth of a mile south of the substation.

Patterson Pass Road and the parallel Patterson Run creek extends about 3.7 miles in total from the northwest corner of the site to its southwestern corner, ascending uphill into the hills over about two-and-a-half miles at an elevation of roughly 550' above sea level to about 1,300'; the western side of the site (north half) ranges among hills and valleys between 600' and 800'. Various other unnamed ravines traverse the site and surroundings. The southern boundary of the site is at elevations of between 1,600' and 1,800'. Some rocky features are evident on some of the steeper hillsides. (See figures, attached.)

PROJECT DESCRIPTION SUMMARY

The project as proposed is to replace a total of 518 old generation wind turbine sites that were fully decommissioned in 2016 and all installation of up to 36 new wind turbines with a range of nameplate energy production capacities, between 2.2 and 4.2 MWs each. The primary objective of the project as described in the *draft* Subsequent EIR was to site up to 36 new turbines to produce and deliver 80 MW of wind energy through a long-term power purchase agreement with a local ‘load-serving entity’. However, the applicant has agreed to modify the stated objective to emphasize, in the final SEIR, that the objective is to produce 80 MW and to do so with the least number of individual turbine locations necessary to achieve the production objective, and furthermore, to have a power purchase agreement with a local community choice aggregator. Reducing the number of individual turbine locations is recognized tacitly as serving to reduce environmental disturbance and the full range of potential impacts. It is easily understood that the objective of 80 MW could be achieved with fewer but larger capacity turbines.

The SEIR was nonetheless prepared to evaluate the potential impact of installing up to 36 new turbines, so that in the event the largest capacity turbines are not available for installing on the project site, the scope of the analysis in the SEIR addresses the possible larger number of sites. While the objective of 80 MW could be met with 36 turbines having a capacity of 2.2 MW each, the same objective could be met with 24 to 30 larger capacity turbines, or even fewer depending on their capacity. At the present stage it is not practical or economic for the applicant to be restricted to a single turbine size. However, as discussed further below, an alternative to the project defined in the Subsequent EIR, described as the *Reduced Project Alternative*, is recognized as the environmentally superior alternative among those that serve the fundamental objectives of the project, and would consist of a maximum of 24 turbine locations within the project site, using larger with a maximum average capacity of 3.33 MW. Planning staff recommend consideration of this alternative, and it is the focused subject of this staff report.

Project plans attached illustrate the layout (four sheets) of 36 proposed turbine sites, assuming 2.2-MW turbines for the project. Final turbine selection would be selected based on project economics and energy cost driven by site constraints, data obtained from meteorological monitoring of the wind resources, civil and electrical construction costs and turbine availability as well as environmental considerations, bird use survey results, and avian micro-siting considerations.

The physical parameters of different turbine designs vary moderately as indicated in the SEIR (unchanged in the final from the draft), with blade lengths ranging between 60 and 68 meters in length (197’–223’), and a total resulting rotor diameter of 120 to 136 meters (394’ to 446’). The total height of the turbines, to the blade tip when it is the 12 o’clock position, would not be increased and is expected to be 499’ or no more than 500’, and may be as low as 459’. The 4.2 MW turbines under consideration by the applicant would be distinctive from those described in the Program EIR, in that the turbines have the longest turbine blades, of up to 223’ in length, which is 18 feet or approximately 9% longer than the maximum length described in the Program EIR (205’). As a result, rotor diameters would be up to 36 feet greater (approximately 9%), and rotor-swept area would increase by up to 2,268 square meters (the difference between 12,259 and 14,527 square meters, or approximately 18.5% more area). Among the possible consequences of a longer rotor blade (68 meters or 223’) is that the rotor swept area could be closer to the ground (e.g., a blade at the 6 o’clock position), at about 66 feet, compared to 110 feet for the typical 3.0 MW turbine that the Program EIR generally considered as the largest foreseeable wind turbine size. (see Table 2-7 in the Final SEIR).

A comprehensive description of project components and features is provided in the Project Description chapter of the SEIR for the project, but in summary, they include siting the turbines according to the adopted setback considerations adopted by the County for use throughout the APWRA. Turbine foundations are typically spread-foot, using between 450 and 800 cubic yards of steel-reinforced concrete, resulting in a foundation pad and surrounding service graveled area of approximately 58 feet in diameter. Each turbine requires safety lighting on the power nacelle of each turbine to meet FAA aviation safety standards,

lightning protection, and the operation of each turbine is controlled by an undergrounded control and data network system to monitor lightning strikes and other events. In addition to the turbine foundations, the project will entail extensive grading and construction of new or expanded roads (using existing road networks as much as possible), erecting the turbine towers and installing the generators and rotor blades, and installing pad-mounted transformers and the power collection system. No operations and maintenance facility is planned, but will use commercial office space in nearby Tracy, or possibly Livermore. The turbines would be connected to a new substation that would be constructed adjacent to PG&E's Tesla substation where the project output would connect to the regional electrical grid. Given the proximity of the project substation to the Tesla substation, construction of an overhead high-voltage transmission line will not be required except for a short span (less than 300 feet) between the two substations.

A few unique and important features of the proposed project are worth noting, which are intended to reduce the avian and bat mortality associated with wind turbine operations in the APWRA. Firstly, in order to comply with standard condition of approval for all wind repowering project proponents since certification of the PEIR, and specified in the PEIR as Mitigation Measure BIO-11b: *Site Turbines to Minimize Potential Mortality of Birds*, the applicant engaged an environmental specialist to conduct "micro-siting" studies. Jim Estep, who was a member of the APWRA Scientific Review Committee that was empaneled as a condition of the 2005 permit renewals, prepared a study that was completed in July 2020. The siting study reported on examination of 93 site locations, and based on the parameters established by the PEIR, identified the risk level of each of 36 sites initially identified by the project proponent, another three replacement sites, and then 54 more recommended or proposed alternative relocation sites. Of these, nine sites were identified as high risk sites for golden eagle fatalities, and were eliminated from further consideration, along with another three sites, thus reducing the number of recommended sites to 24.

The risk level to bat species was not a central topic of the study, based on the absence of information showing that micro-siting of turbines within a generally monotypic landscape, though complicated by a wide range of slopes, hillsides, ridges, ravines and other topographic characteristics, could noticeably influence the potential for bat mortality. It is suggested that the position of individual turbines relative to steep slopes, differences in elevation above surrounding terrain, even position near road beds cut for turbine component delivery, which are understood to influence raptor flight, would not have the same relationship to the flight behavior of bats. However, instead of using siting to minimize bat mortality, the proponent has agreed to a project operational feature which is to set the cut-in speed of all turbines to operate only at higher wind speeds of 5.0 meters/second during the nighttime, because bats are known to reduce their flight activity at such higher speeds. It is also the case that increasing the cut-in speed will mean overall operating hours would be reduced by a substantial degree, and that all birds including small and medium birds and all raptors would see a proportional benefit of lowered avian mortality.

INTER-AGENCY COORDINATION

The project was referred for comment and recommended conditions of approval to various Alameda County agencies, regional air and water quality agencies, state and federal wildlife agencies, and other major wind industry stakeholders in July 2020. A parallel 'referral' or notification of the project was also conducted to allow a number of Native American tribal communities to consult on the project, and notification to many other persons was initiated in April 2020 with the Notice of Preparation of the SEIR, as required by CEQA. Only the County Fire Department responded with a request for a Fire Control Plan, which is a standard condition of approval that would be submitted at the time of grading and building permit applications.

FINAL SUBSEQUENT EIR – COMMENTS AND RESPONSES TO COMMENTS

The Final SEIR document is in the form of the Draft SEIR with new text inserted (underlined) and other text deleted (in ~~strikeout~~ mode) in several chapters, based in part on information suggested by comments received on the Draft SEIR, and also on some new information obtained since the Draft SEIR was made

public. The revisions to the draft SEIR include staff-initiated revisions in Section 3.4, *Biological Resources*, that address the United States Fish and Wildlife Service's (USFWS) December 15, 2020 announcement that listing the monarch butterfly as endangered or threatened under the Endangered Species Act (ESA) is warranted but precluded by higher priority listing actions. The monarch butterfly is now designated as a candidate for listing under ESA and its status will be reviewed annually until a listing decision is made.

The draft SEIR has been revised to include an analysis of the proposed project's impacts to monarch butterfly. As discussed on pages 3.4-147 to 3.4-148 of the final EIR, impacts would be less than significant. This information is not a significant modification to the draft SEIR analysis and does not warrant recirculation pursuant to CEQA Guidelines Section 15088.5.

The County held a public hearing on December 8, 2020 to request comments on the draft SEIR. No verbal or other public comments were received at the public hearing. The County received seven comment letters on the draft SEIR, as listed below, in the order received:

- United States Fish and Wildlife Service, Thomas Leeman, Deputy Chief, Migratory Birds
- California Department of Fish and Wildlife, Gregg Erickson, Regional Manager
- East Bay Regional Park District, Douglas A. Bell, Ph.D.
- East Bay Community Energy, Nick Chaset, EBCE CEO
- Adams Broadwell Joseph & Cardozo, Andrew J. Graf
- Golden Gate Audubon Society, Pam Young, Executive Director
- State of California, Department of Justice, Tara L. Mueller, Deputy Attorney General

The comment letters are focused on bird and bat mortality resulting from the operations of wind turbines, the effectiveness of potential avian and bat avoidance and minimization measures, and in very broad terms, the relative degree by which such mortality was accurately estimated in the Draft SEIR and how it should be represented in the Final EIR. The writers raise many highly technical issues with regard to the way in which the Project was evaluated relative to mortality rates that have been observed at other wind farm projects within the APWRA. Some major topics in the individual letters and addressed in the responses to comments include:

- avian and bat avoidance and minimization measures that were presented in the Draft SEIR, and recommendations for additional measures to be considered
- golden eagle productivity and local populations, and the effects on such populations in light of fatalities from interaction with wind energy facilities
- burrowing owl populations, particularly in consideration of the Two Sisters Burrowing Owl Preserve immediately adjacent to the project site
- potential impacts to California condor due to presence within the project site
- curtailment measures to minimize bat fatalities
- construction and operation impacts on tricolored blackbird and Swainson's hawk
- sufficiency of proposed mitigation ratios for impacts to special-status plant species
- compensatory mitigation for impacts to non-special-status nesting birds and raptors, burrowing owl, and tricolored blackbird
- how the baseline of wind energy development should be defined for comparison with the Project, for assessing the general and cumulative impacts of the Project.
- curtailment of wind turbines near golden eagle, Swainson's hawk, other raptors, and tricolored blackbird colonies

- the methodology used to micro-site individual turbines for the micro-sited alternative, and how they were rated for relative risk
- claims of an inaccurate and incomplete project description
- claims of inadequate identification of potentially impacted species or a full evaluation of impacts on such species
- claims of inadequate compliance with micrositing requirements
- claims of an omission of indirect impacts from wind-energy generated wildfires
- claims of inadequate evaluation of hazardous materials on the project site
- claims of an omission of a quantified health risk analysis
- claims that the avian and bat impact analysis underestimates impacts and lacks substantial supporting evidence for the conclusions
- claims that all feasible mitigation measures and alternatives were not fully evaluated
- claims that impacts on wetlands and species habitat were not fully identified
- claims that existing conditions were improperly represented
- cumulative impacts, including what projects to include, to estimate potential overall mortality in the APWRA, and the relationship to the maximum of 450 MWs evaluated in the PEIR
- alternatives such as eliminating identified higher-risk turbine sites or reducing the number of turbines should be considered
- a letter of support for the project from East Bay Community Energy

Detailed and critical letters were provided by Adams Broadwell Joseph & Cardozo and the California Attorney General's office on the Draft SEIR asserting that the SEIR fails to meet substantial evidence standard for an EIR in fully evaluating the impacts of the Project, in particular on birds and bats, and therefore the Draft SEIR needs revision and recirculation. The main argument of these letters include: a) the Draft SEIR underrepresented existing population estimates and fatality rates and therefore the severity of the Project's impacts on bird and bat populations is not based on substantial evidence; b) the Project should have been evaluated against a baseline condition of zero existing turbines, reflecting the current state of the project site; c) the cumulative analysis is deficient in recognizing other wind projects in the Diablo Range region, in Contra Costa and Solano Counties, and accounting for all existing and reasonably foreseeable wind energy development in Alameda County; d) the absence of an alternative with fewer turbines is inadequate to meet CEQA standards for defining alternatives to a project; and e) mitigation measures should have been expanded from those defined in the PEIR to include, in addition to the few additional measures that the SEIR proposes for construction buffers from tri-colored blackbird and some compensatory mitigation strategies, better micro-siting, post-construction survey protocols, and adaptive management strategies including additional turbine curtailment and more extensive shutdowns.

PROGRAM EIR AND CURRENT PROJECT TIERING

The Program Environmental Impact Report (PEIR), certified by the County in November 2014, addressed the anticipated approval of new CUPs to allow replacement of old generation wind turbines with current generation turbines in the Alameda County portion of the APWRA on a program level for the entire area. The PEIR also specifically evaluated, on a project level, two project applications, the Patterson Pass Wind and Golden Hills Wind – Phase I Projects. As provided for in the CEQA Guidelines (Section 15168), the certified PEIR allows for subsequent specific project applications to 'tier' from the PEIR, to the extent that the subsequent projects lie within the scope of the PEIR, and do not introduce new or substantially different significant impacts. In addition, subsequent projects are expected to be related geographically and to have

similar (or less) environmental effects that can be mitigated with measures and strategies that are similar to those adopted for the projects evaluated at the project level in the PEIR.

PLANNING CONSIDERATIONS

Although the current Project proposes turbines substantially larger in generating capacity than other wind repowering projects, with a 3 MW turbine as the largest considered in the PEIR, the project is in most respects similar to the other repowering projects that the Board of Zoning Adjustments has previously approved, including Golden Hills and Golden Hills North, and Summit Wind. Since certification of the PEIR, the first repowering project, Golden Hills, was completed as part of the overall APWRA repowering effort. The Golden Hills Wind Energy Center Postconstruction Fatality Monitoring Reports for the first three years of operations are now available. The SEIR notes that although the first- and second-year Golden Hills Wind Project mortality results do constitute new information, they do not conclusively show that avian impacts for this project will be substantially more severe than anticipated in the PEIR. This is because the PEIR conservatively assumed that, even though estimates at that time based on three repowering projects in the same region appeared to indicate considerable reductions in mortality among all focal raptor species, further study could show – as in the present case – that avian impacts “could be greater than the baseline rates” and the impact would be significant and unavoidable.

For purposes of the analysis of avian mortality, the turbine used as the basis for developing estimates of future or typical project impacts in the PEIR was the Vasco Winds 2.3 MW turbine. The consequence of the increased nameplate capacity proposed for the Project, up to 4.2 MW, however, could be lower impacts per MW for certain environmental topic areas. More specifically, impacts could be reduced because, as proposed for the Project, 19 turbines rated at 4.2 MW each would result in 79.8 MW of generating capacity, whereas the same capacity could only be reached through installation of 36 of the proposed 2.2 MW turbines, thereby requiring considerably more land area and resulting in greater ground-disturbing activity to reach the same capacity.

It is recommended that the Board adopt the Reduced Project Alternative which would by 1) reduce the size of the project in terms of both rotor-swept area (RSA) and the number of turbines; increase turbine distance from eagle nests and eagle activity centers; place turbines in consideration of the results of the micro-siting study (Appendix F of the Final SEIR) and supplemental micro-siting study (Appendix G of the Final SEIR); and implement seasonal cut-in speed changes to attempt to reduce impacts on bats. This alternative would replace the thirty-six (36) 2.2 MW capacity turbines proposed under the project with twenty-four (24) micro-sited 3.465 MW turbines (Final SEIR Figure 4-2). Compared to the project, only 24 (rather than 36) turbines would be installed, of which 18 would be located at nearly the same locations as under the project (but with minor relocations due to the micro-siting process) and 6 would be located at a substantial distance (hundreds of feet) from any of the initially proposed project turbine sites. The project capacity is 80 MW with a total RSA of 40.7 hectares (ha) (Final SEIR Table 4.3-4), while the Reduced Project Alternative has a nameplate capacity of 83.16 MW but would be limited to 80 MW operational capacity; its RSA would be 32.8 ha, a 19% reduction compared to the project. Based purely upon the nameplate considerations, the Reduced Project Alternative would be expected to decrease avian and bat fatalities of every focal species or species group by up to 19% based on the reduction in RSA.

Although Planning staff are in support of the finding of the SEIR authors that the fatality rates for golden eagles and the other focal raptor species are subject to more research and wide deviation from project to project and among the varying topography and natural resource conditions within the APWRA, the upper range of such mortality for golden eagles, other raptor species, and bats makes it highly appropriate to impose more limitations on the proposed Project, both in terms of its size, and additionally, on the program of mitigation measures and conditions of approval. The applicant will be required to seek incidental take permits for species protected by state and federal laws, although the state and federal resource agencies will

have to assess the appropriateness of issuing such permits. Additionally, Planning staff recommend as a condition of approval, that if larger, 4.2 MW turbines are available to the project proponent at the time suited for ordering turbines to be delivered that the proponent can reduce the total number of turbines to as few as nineteen (19). The final location of these turbines would be subject to Planning Director approval and recommendations of the County's avian protection Technical Advisory Committee.

RECOMMENDATION

The Board should receive a staff presentation, take public comment on the Project (the Conditional Use Permit) and the Final SEIR, review the draft Resolution to certify the SEIR, certify the Final SEIR, then review the draft Resolution and Exhibits for approval of the Project, and lastly approve the Project, in the form of the Reduced Project Alternative as defined in the SEIR (the Environmentally Superior Alternative).

The Board may instead approve the Project in the form determined by the Board, on the basis of information in the SEIR, the staff analysis herein, information presented to the Board at the hearing, or as necessary to make the required findings to approve the conditional use permit application.

Attachments:

- Final Subsequent Environmental Impact Report, including Appendices regarding air quality (including greenhouse gases), biological resources, and water supply assessment (in digital form on a CD).

- Draft Resolution to certify the Final Subsequent Environmental Impact Report

- Draft Resolution to approve Conditional Use Permit PLN2017-00201, including Exhibits:

 - Exhibit A: Written Findings of Significant Effects

 - Exhibit B: Mitigation Monitoring and Reporting Program

 - Exhibit C: Statement of Overriding Considerations

The Final SEIR and Appendices are also available on the CDA/Planning webpage, at http://www.acgov.org/cda/planning/landuseprojects/sand_hill_wind_project_b.htm or by navigating from the website (www.acgov.org/cda/planning): Pending Land Use Projects, Current Development Projects, Wind Turbine Projects, and Sand Hill Wind Project in the table shown.

PREPARED BY: Andrew Young Senior Planner

REVIEWED BY: Sandra Rivera Manager/Director of Operations

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**DRAFT RESOLUTION NO. Z-21-YY OF
THE EAST COUNTY BOARD OF ZONING ADJUSTMENTS ADOPTED AT THE
HEARING OF APRIL 22, 2021
CERTIFYING THE FINAL SUBSEQUENT ENVIRONMENTAL IMPACT REPORT
FOR THE MULQUEENEY RANCH WIND PROJECT,
CONDITIONAL USE PERMIT PLN2019-00226,
IN COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT**

WHEREAS, Mulqueeney Wind Energy, LLC (Mulqueeney Wind), a subsidiary of Brookfield Renewable, in December 2019 filed an application for Conditional Use Permit, PLN2019-00226 (Project), to replace 518 old generation wind turbines to install up to 36 new turbines with a maximum production capacity of 80 (MW), and more completely described in Resolution **Z-21-XX** that accompanies this Resolution; and

WHEREAS, the Project is part of an overall program to repower the entire portion of the Altamont Pass Wind Resource Area (APWRA) that is within Alameda County, by replacing older generation turbines with newer, larger turbines that serve to improve turbine efficiency and reduce operating costs, but which also have the potential benefit of substantially reducing avian mortality, especially for raptor species, that was a documented characteristic of the older generation turbines; and

WHEREAS, the repowering of the APWRA (hereinafter referring only to the Alameda County portion thereof) was the subject of a Program Environmental Impact Report (PEIR) which the East County Board of Zoning Adjustments (“Board of Zoning Adjustments” or “Board”) certified by adoption of Resolution Z-14-40 on November 12, 2014 as being in compliance with the California Environmental Quality Act (CEQA); and

WHEREAS, the PEIR evaluated two repowering alternatives for a maximum capacity of either 417 megawatts (MW) or 450 MW of combined nameplate capacity of new turbines within the APWRA, in order to serve the objective of increasing the output of clean energy and meeting state energy portfolio goals, in recognition that the APWRA has been the site of privately-owned wind energy projects in operation since the 1980s, after the State of California designated the area for production of renewable energy, while further recognizing that within the APWRA the number of MWs generally has a direct and proportional relationship to the mortality of protected avian and bat species; and

WHEREAS, the Board of Zoning Adjustments previously approved in September 2003 the Diablo Winds repowering project that began operations in 2004 and represents 20.5 MW of capacity, based on a prior Program EIR for Repowering the APWRA certified in 1998; and

WHEREAS, the existence of the Diablo Winds project represented a baseline condition for the 2014 PEIR and not a potential new project to be evaluated in the PEIR, because the PEIR was an evaluation of all current and future applications (submitted since the Notice of Preparation for the PEIR was circulated in 2010) for repowering a maximum of either 417 or 450 MW of combined new repowering development; and

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WHEREAS, the PEIR further included two specific projects in its analysis which represented partial repowering of the APWRA, known as Golden Hills and Patterson Pass which together represented 108.2 MW of capacity, and which were approved by the Board of Zoning Adjustments at the time of the certification of the PEIR on November 12, 2014, and the PEIR was intended to provide for tiered review of other specific repowering projects that were anticipated to be proposed, consistent with the provisions for program EIRs in Section 15168 of the CEQA Guidelines using checklists to determine if such projects were adequately covered or anticipated in the PEIR; and

WHEREAS, Section 15162 of the CEQA Guidelines provides direction as to the circumstances in which a subsequent EIR shall be prepared including when, based on substantial evidence in light of the whole record, the lead agency determines that substantial changes are proposed in the project or program described and addressed in a prior EIR, or changes in the circumstances under which the project will be undertaken, that together would involve new significant environmental effects or more severe significant effects than previously identified, such that major revisions of the prior EIR are required; and

WHEREAS, the Project has been reviewed in accordance with the provisions of CEQA and it was determined that while the Project's scope was described generally as part of the PEIR, the Project proposes individual turbines with a nameplate capacity from 2.2 MW to 4.2 MW, and therefore with 40 percent more MW yield per turbine than the 3.0 MW turbines used in the PEIR to estimate environmental impacts of a typical individual future repowering project, and physically increased dimensions of roughly 9% longer rotor blades, 9% additional total rotor diameter, and a resulting 19% expansion of rotor swept area, such that the potential or likely effect would be increased avian and bat mortality on a per turbine basis, which supports the County's decision to prepare a subsequent EIR; and

WHEREAS, the Project is proposed in the context of new information including additional monitoring reports from similar repowering projects in both Alameda and Contra Costa Counties and further information regarding bat mortality, that combined with the physically larger and greater MW output together support the County's decision to prepare a subsequent EIR; and

WHEREAS, in the time since the Golden Hills project was approved in November 2014 for 88.4 MW and 52 turbines, it was constructed in 2015 with a capacity of approximately 85.9 MW (2.5 less MW and 48 turbines), and the Patterson Pass project, approved for up to 12 turbines with a capacity of 19.8 MW has not been constructed but remains an approved project; and

WHEREAS, in the time since the PEIR was certified and on the basis of analyses using environmental checklists pursuant to CEQA (Section 15168), the Board of Zoning Adjustments has approved three more repowering projects amounting to an additional 365 MW

of capacity, including the Golden Hills North project (40.8 MW), the Summit Wind project (54 MW), and the Sand Hill Wind Repowering project (50 MW); and

WHEREAS, in the time since the Golden Hills North project was approved in November 2015 for 40.8 MW and 24 turbines, it was constructed in 2016 instead with a name-plate capacity of 46 MW (5.2 more MW and 20 turbines with a capacity of 2.3 MW each); and

WHEREAS, in the time since the Summit Wind project was approved in January 2016 for 54 MW and up to 27 turbines, its owners have begun construction of 23 turbine sites only and propose to use turbines rated with a capacity of 2.5 MW each such that capacity would be increased to 57.5 MW if approved by the Board of Zoning Adjustments as a modified Conditional Use Permit (CUP); and

WHEREAS, the City of Santa Clara, which has jurisdiction over a single wind energy project site known as Rooney Ranch within the APWRA, approved in June 2019 the application of sPower for its repowering project of 25.1 MW of capacity on Rooney Ranch using an environmental checklist tiering from the PEIR in accord with Section 15168 of the CEQA Guidelines; and

WHEREAS, due to the changes in approved and constructed repowering projects as described hereinabove, the total number of MW currently in operation or approved for construction in the APWRA, including the Diablo Wind project, is 285 MW; and

WHEREAS, combined with the approved 80 MW approved for the Mulqueeneey Ranch Project, the total number of MW of currently operating, constructed approved and proposed repowered wind energy projects in the APWRA would amount to 365 MW; and

WHEREAS, a Notice of Preparation (NOP) of a Subsequent Environmental Impact Report (DSEIR) was issued on April 6, 2020 soliciting public input regarding the environmental analysis of the repowering Project; and

WHEREAS the Draft Mulqueeneey Ranch Project Subsequent Environmental Impact Report (DSEIR) was prepared and circulated for public comment between November 6, 2020 and December 21, 2020; and

WHEREAS the DSEIR describes the effects of the Project on the environment at a detailed level, identifies mitigation measures applicable to the Project and previously identified in the PEIR which would reduce each significant impact to the greatest extent possible or feasible, in most cases to a level that is less than significant but in other cases without reducing it to a less than significant level, including adverse impacts on protected avian and bat species including golden eagle, red-tailed hawk, American kestrel, burrowing owl and other focal raptor species; and

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WHEREAS, a Notice of Availability (NOA) of the DSEIR was prepared on November 6, 2020 and copies of the DSEIR provided to the state Office of Planning and Research – State Clearinghouse (SCH) for distribution to state Responsible Agencies, and was also provided to or made available to other interested agencies, organizations and area property owners and residents to solicit comment on the DSEIR during a 45-day comment period ending on December 21, 2020 that was extended for another eighteen (18) days to January 8, 2021 at 5:00 p.m., and the DSEIR was made available at the offices of the Alameda County Planning Department at 224 West Winton Avenue, Hayward, California, 94544, at a Planning Department branch office at 3585 Greenville Road (Martinelli Center) Livermore, California, 94550, and made available on the Planning Department’s public website on November 6, 2020; and

WHEREAS, a public hearing to take verbal comment on the DSEIR was held on December 8, 2020, at the hour of 1:30 p.m. at a meeting of the East County Board of Zoning Adjustments in the City of Pleasanton Council Chambers, 200 Old Bernal Avenue, Pleasanton, California, 94566, where no comment was received; and

WHEREAS seven letters of comment were received by the County through January 8, 2021, raising numerous substantial issues such as the cumulative impact analysis in the SEIR of Project effects on avian and bat species, the “micro-siting” of individual turbines, and including a request to analyze additional Project alternatives and mitigation measures; and

WHEREAS, in accordance with the CEQA Guidelines Section 15132, the Final Subsequent EIR (FSEIR) document was prepared which includes the full text of the DSEIR, as revised by the lead agency in response to public comments or to otherwise improve the draft, all comments received on the DSEIR, a list of persons, organizations and agencies commenting on the SEIR, and responses to each comment, and said FSEIR was provided on April 9, 2021 to interested agencies, organizations and persons who commented on the SEIR, and made available on the County’s public website; and

WHEREAS, it satisfactorily appears from affidavits on file that proper notice of said public hearing was given in all respects as required by law; and

WHEREAS, this Board, as the decision making-body for the certification of this FSEIR, did hold a public hearing regarding the FSEIR at the hour of 1:30 p.m. on Wednesday, the 22nd day of April 2021 in the City of Pleasanton Council Chambers, 200 Old Bernal Avenue, Pleasanton, California; and

WHEREAS, the FSEIR did not include any additional significant new information or identify any new significant environmental impacts, a substantial increase in the severity of an environmental impact, or any other factors under CEQA Guidelines 15088.5 that would require recirculation of the SEIR; and

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CERTIFYING FINAL SUBSEQUENT EIR FOR THE MULQUEENEY RANCH WIND
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NOW, THEREFORE, BE IT RESOLVED that this Board certifies that the Final Subsequent EIR for the Mulqueeneey Ranch Wind Repowering Project has been completed in compliance with CEQA; and

BE IT FURTHER RESOLVED as follows:

1. The Board certifies that it has been presented with all of the information described in the above recitals and has reviewed and considered this information and the Final Subsequent EIR prior to adopting this Resolution and considering approval of the Project.
2. The Board certifies that the above recitals are true and correct.
3. The Board certifies that the Final Subsequent EIR reflects the County's independent judgment and analysis.
4. Notice of the Board's hearings on the Draft Subsequent EIR and Final Subsequent EIR have been given as required by law and the actions were conducted pursuant to the State Planning and Zoning Law, CEQA, the State CEQA Guidelines and the County's CEQA Guidelines.
5. The Board is a non-elected decision-making body within a local lead agency, and that the certification of the Final Subsequent EIR may be appealed to the Board of Supervisors of the County of Alameda.
6. All individuals, groups and agencies desiring to comment were given adequate opportunity to submit oral and written comments on the Final Subsequent EIR which met or exceeded the requirements of State Planning and Zoning Law and CEQA.
7. All comments submitted during the public review and comment period on the Draft Subsequent EIR were responded to adequately in the Final Subsequent EIR.
8. No new comments or information has been submitted during the hearing on the Final Program EIR that would substantially change the analysis or conclusions of the Final Subsequent EIR.

**EAST COUNTY BOARD OF ZONING ADJUSTMENTS ALAMEDA COUNTY
PLANNING DEPARTMENT**

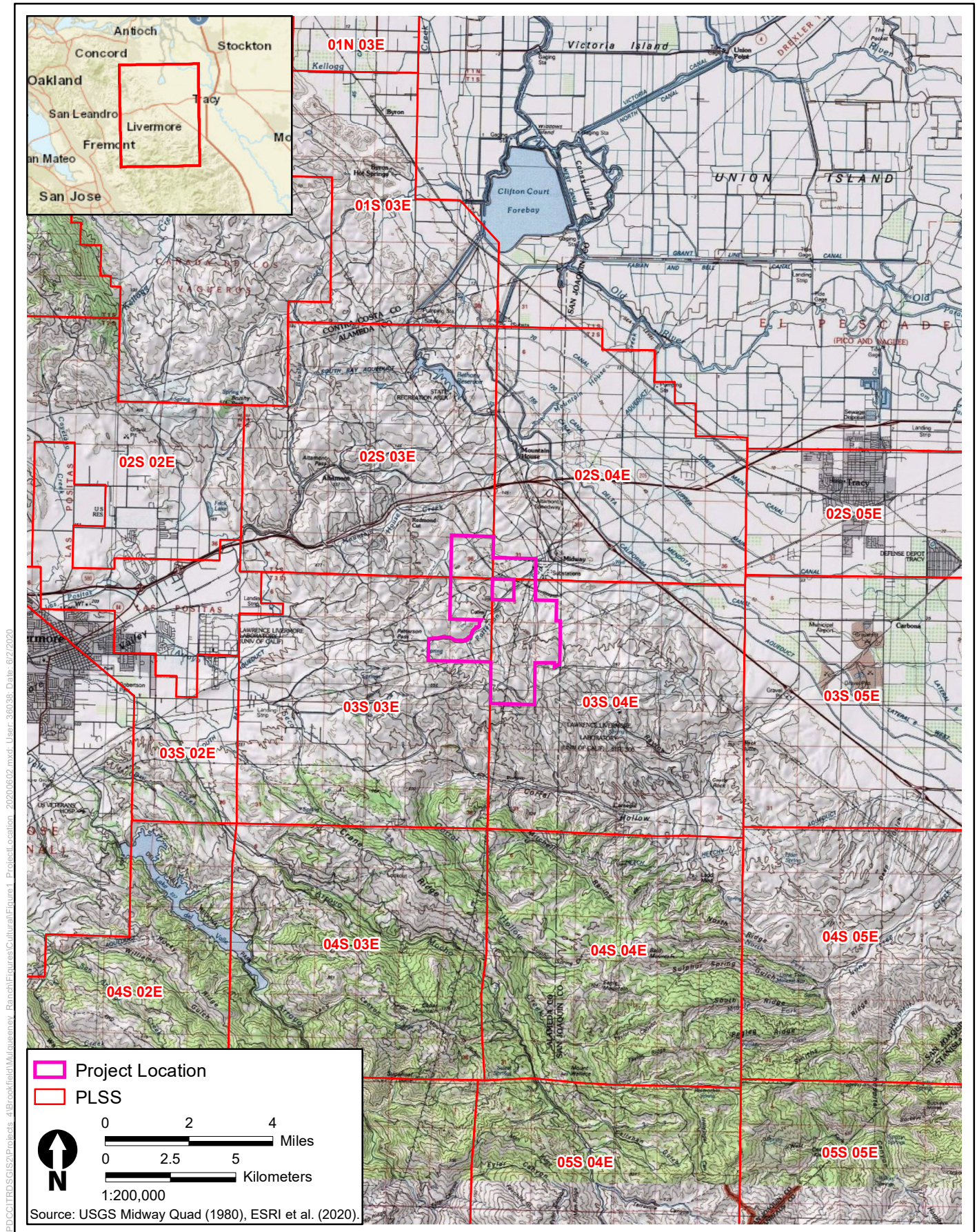
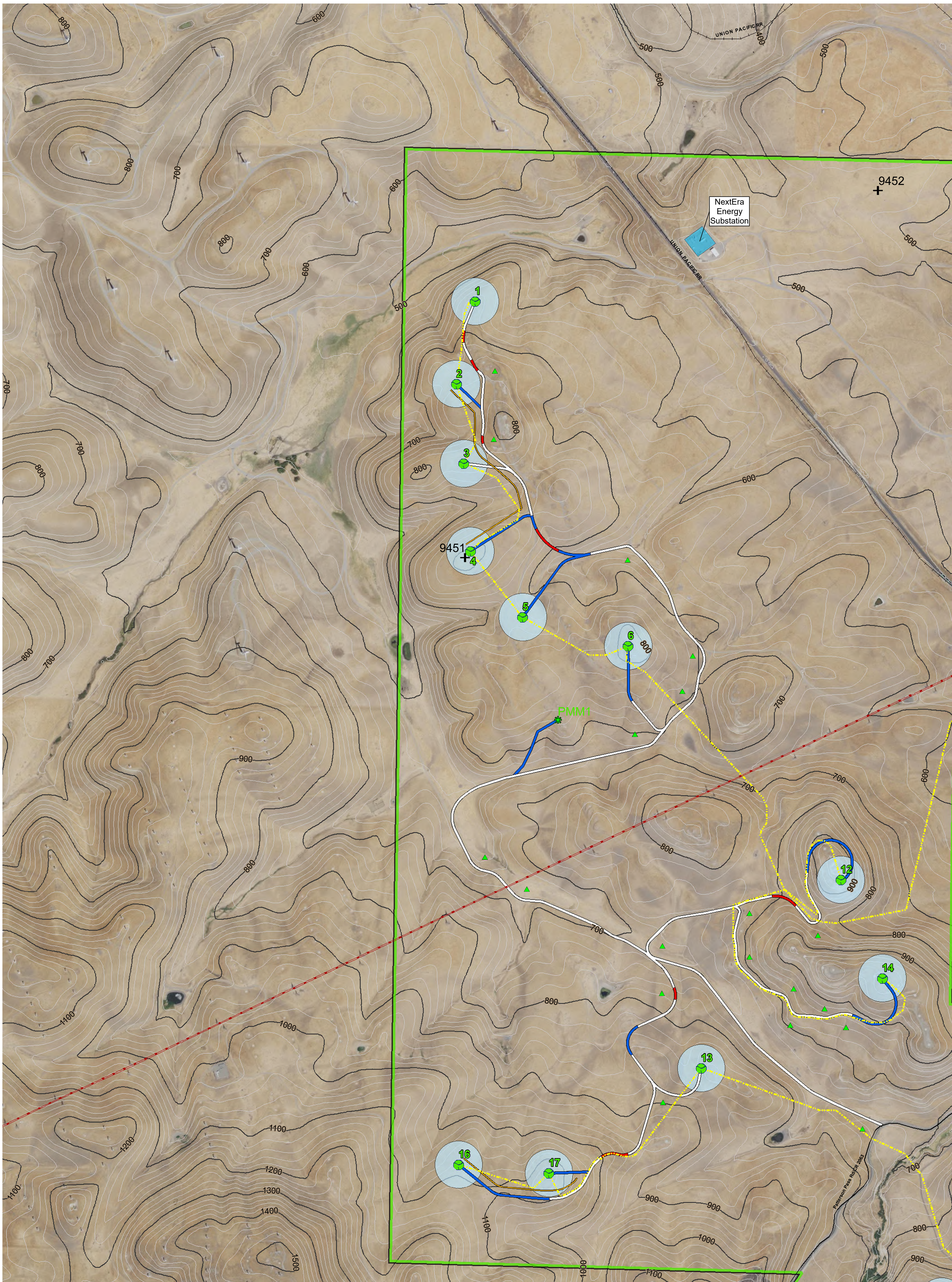


Figure 1
Project Location
Mulqueeny Ranch Wind Project



Project Boundary

Project Components

Wind Turbine Generator

Turbine Pad

Proposed MET Mast

Electrical Collection System

Radius Improvement

Crane Path

Existing Access Road-Widen and Resurface

Existing Access Road-Regrade and Widen

New Access Road

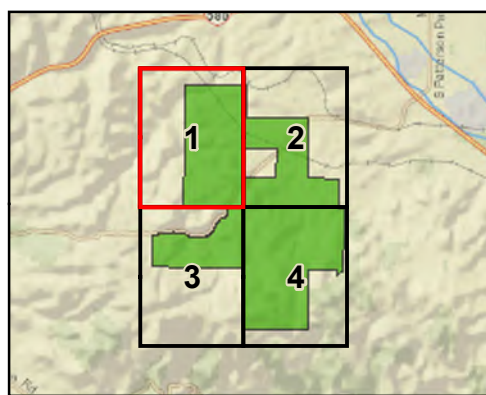
Proposed Project Substation

Temporary Construction Facility

Existing Infrastructure

Existing Temporary MET Mast (to be removed)

Existing Transmission



Project Layout: Black & Veatch, October 15, 2019
Contour Interval = 20 feet



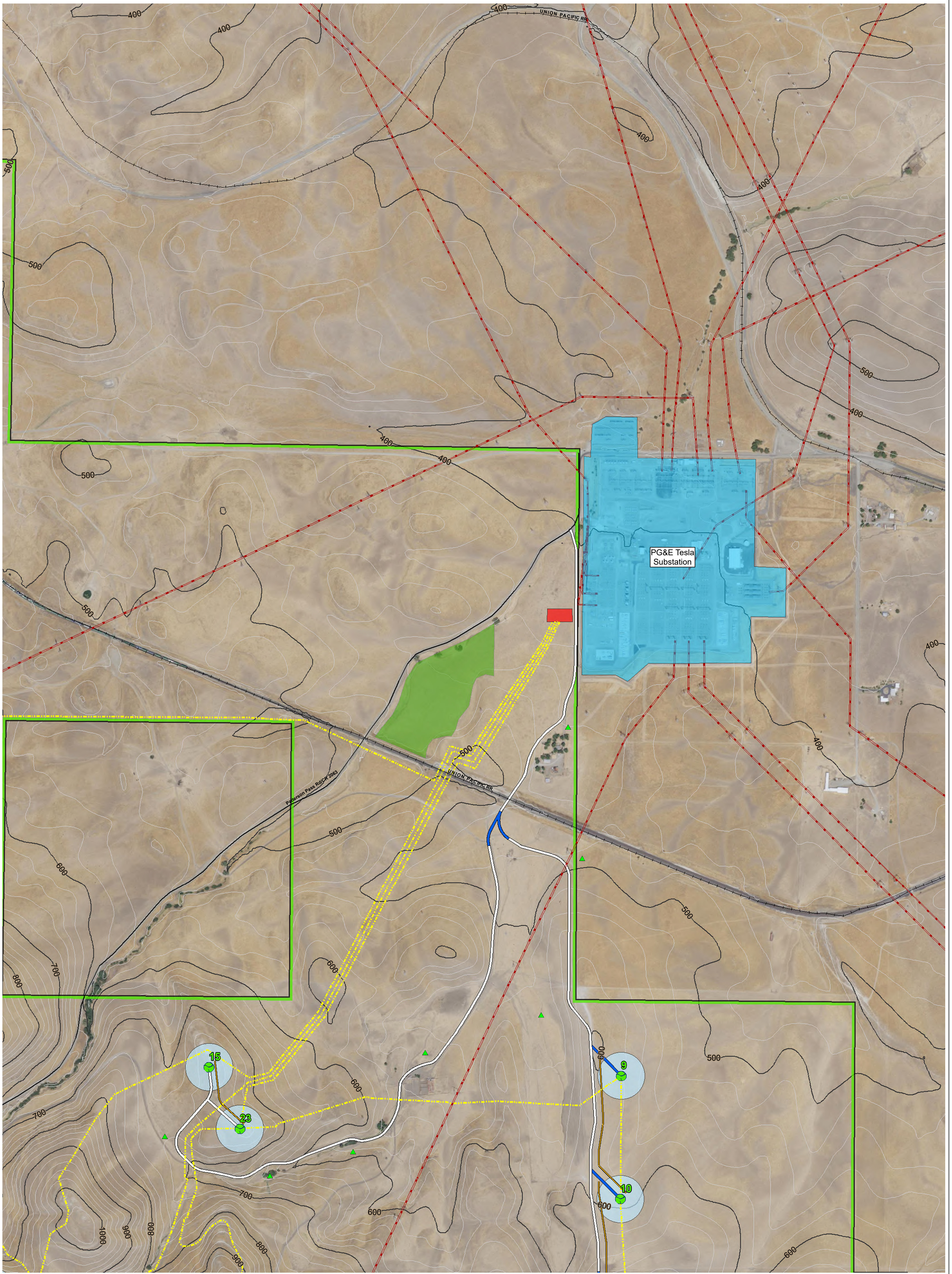
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Mulqueeneey Ranch Wind Repowering Project

Submitted to:
Alameda County Planning Department
224 West Winton Avenue, Room 111
Hayward, CA 94544
Contact: Andrew Young
510-670-5400

Submitted by:
Mulqueeneey Wind Energy, LLC
200 Liberty Street, 14th Floor
New York, NY 10281
Contact: Dave Hurd
519-980-2206



- Project Boundary

Project Components

Wind Turbine Generator

Turbine Pad

Proposed MET Mast

Electrical Collection System

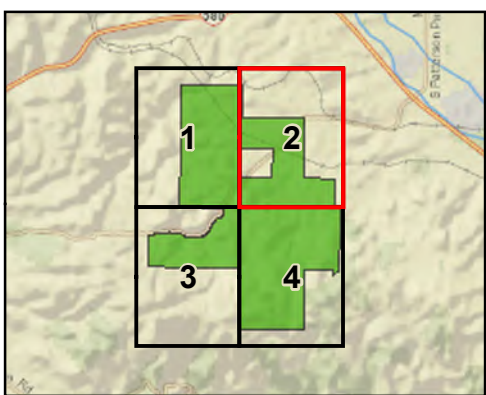
Radius Improvement

Crane Path
- Existing Access Road-Widen and Resurface
- Existing Access Road-Regrade and Widen
- New Access Road
- Proposed Project Substation
- Temporary Construction Facility

- Existing Infrastructure**

Existing Temporary MET Mast (to be removed)

Existing Transmission



Project Layout: Black & Veatch, October 15, 2019
Contour Interval = 20 feet

N

0

500

1,000

Feet

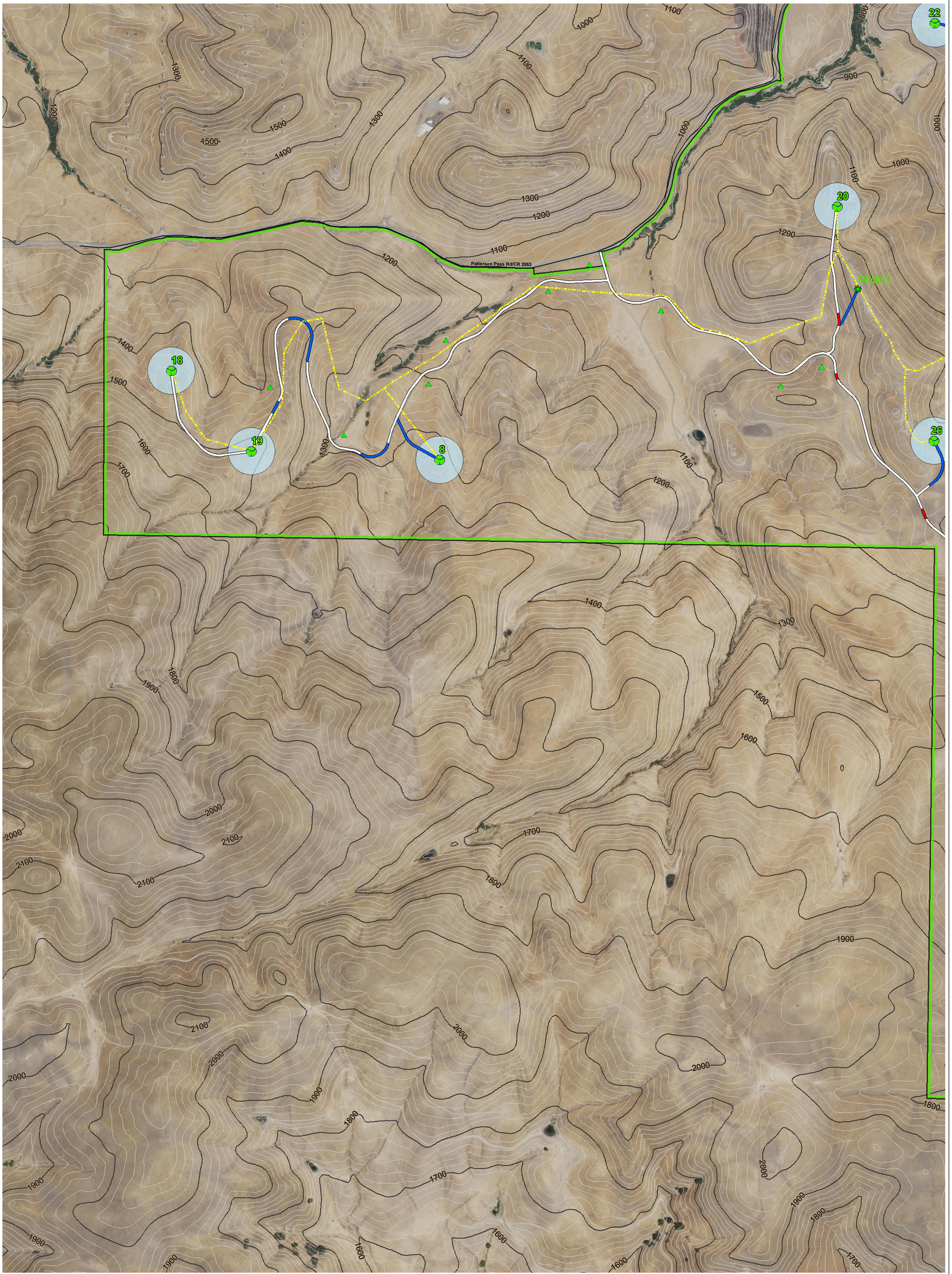
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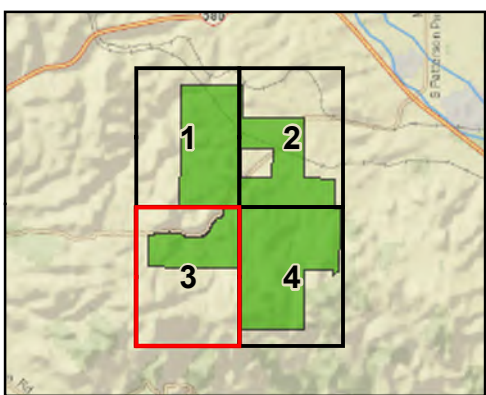
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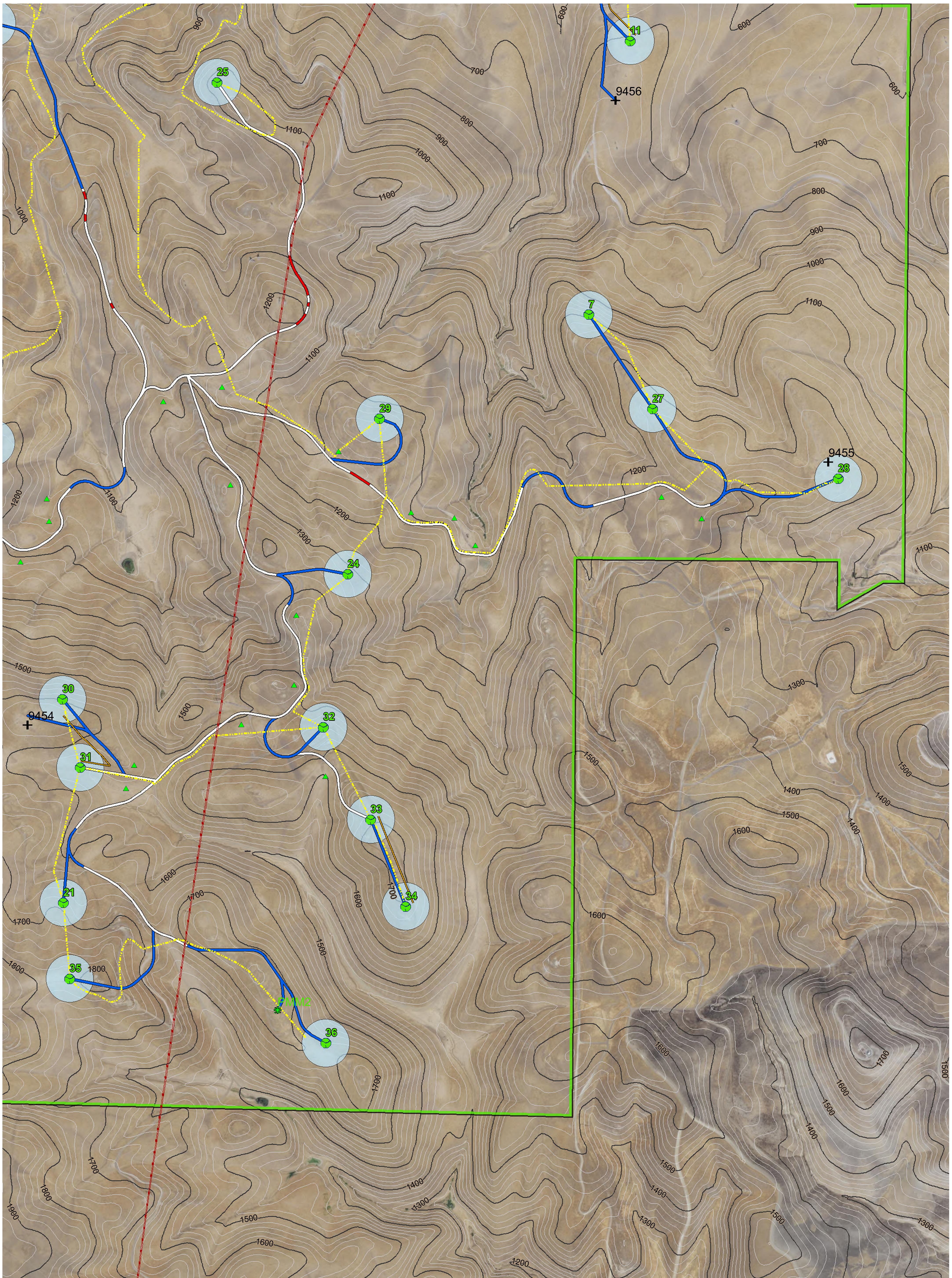
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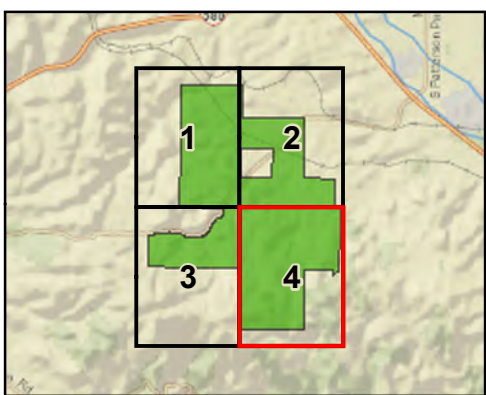
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Project Layout: Black & Veatch, October 15, 2019
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0

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1,000

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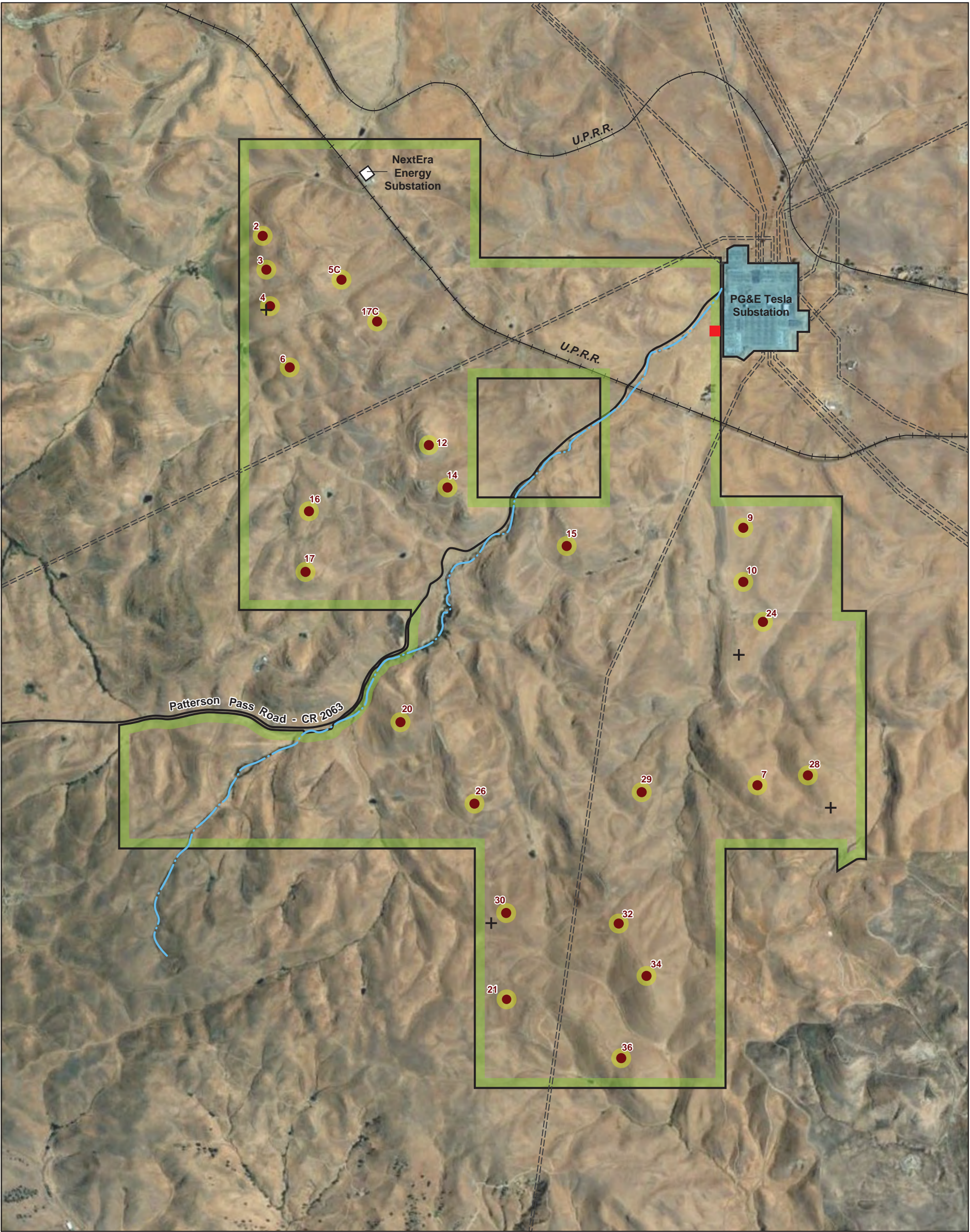
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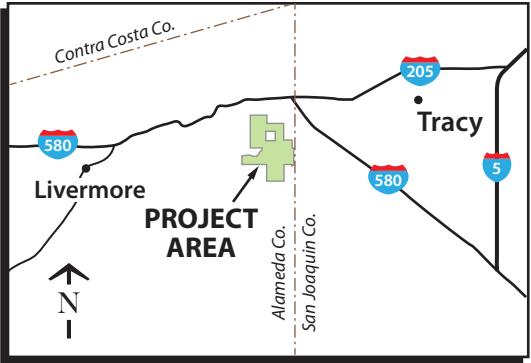
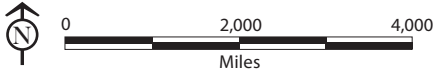


Figure 2
Mulqueeney Ranch Wind Repowering Project - Final Turbine Layout

**RESOLUTION NO. Z-21-XX OF
THE EAST COUNTY BOARD OF ZONING ADJUSTMENTS
ADOPTED AT THE HEARING OF APRIL 22, 2021
APPROVING CONDITIONAL USE PERMIT PLN2019-00226**

WHEREAS, MULQUEENEY WIND ENERGY, LLC, a wholly-owned subsidiary of Brookfield Renewable, filed an application for CONDITIONAL USE PERMIT, PLN2019-00226 (“Project”) in December 2019, to allow repowering of 518 existing or previously existing generation turbine sites to install up to 36 new turbines with a maximum production capacity of 80 megawatts (MW), using turbines rated between 2.2 to 4.2 MW per turbine, and to make improvements to related infrastructure, on twenty-nine (29) parcels in an area designated in the A (Agriculture) zone district located on roughly 4,600 acres in total area in the southeastern quadrant of the Alameda County portion of the Altamont Pass Wind Resource Area, north and south of Patterson Pass Road, between approximately one-third and four miles west of Midway Road, and between one and five miles south of Interstate 580, including the following Assessor's Parcel Numbers:

99A-1800-2-3; 99A-1800-2-4; 99B-7890-2-4; 99B-7890-2-5; 99B-7890-2-6;
99B-7890-4; 99B-7900-1-3; 99B-7900-1-4; 99B-7900-1-5; 99B-7900-1-6;
99B-7900-1-7; 99B-7900-2; 99B-7910-1-1; 99B-7910-1-2; 99B-7925-2-1;
99B-7925-2-2; 99B-7925-2-3; 99B-7925-2-4; 99B-7925-2-5; 99B-7925-3;
99B-7950-2; 99B-7975-1; 99B-7980-1; 99B-7985-1-3; 99B-7985-1-4;
99B-7985-1-5; 99B-7985-1-6; 99B-8050-1; and 99B-8100-1-1.

WHEREAS, the subject Project is part of an overall program to repower the entire Altamont Pass Wind Resource Area (APWRA) by replacing older generation turbines with newer, larger turbines that serve to improve turbine efficiency but also have the potential to substantially reduce avian mortality, especially for raptor species; and

WHEREAS, this application has been reviewed in accordance with the provisions of the California Environmental Quality Act (CEQA) and it was determined that the proposed Project would result in potentially significant adverse environmental impacts and therefore is a project subject to CEQA, and that the Project was described generally as part of the APWRA Program Environmental Impact Report (PEIR) certified by the East County Board of Zoning Adjustments on November 12, 2014; and

WHEREAS, in compliance with Section 15091 of the CEQA Guidelines, the Planning Department has prepared Written Findings of Significant Effects, attached herein as Exhibit A, to provide a brief explanation of the rationale for each finding, supported by substantial evidence in the record, that changes or alterations have been required in or incorporated into the Project, including by identified mitigation measures which would avoid or substantially lessen some but not all identified significant environmental effects, and furthermore that certain mitigation measures or project alternatives identified in the Final Program EIR are infeasible due to specified economic, legal, social, technological, or other considerations; and

WHEREAS the Final Program EIR indicates that activities anticipated under the APWRA Repowering Program, which include the subject Project, would result in significant and

unavoidable adverse impacts on avian wildlife species including golden eagle and other focal raptor species; and

WHEREAS, on November 12, 2014, the East County Board of Zoning Adjustments adopted Resolution Z-14-40 which certified the Final Program EIR as being in compliance with CEQA, that the Final Program EIR was presented to the Board, which has reviewed and considered the information in the Final Program EIR prior to adopting said Resolution, and that the Final Program EIR reflects the County's independent judgment and analysis; and

WHEREAS, on April 22, 2021 the East County Board of Zoning Adjustments adopted Resolution **Z-21-YY** which certified the Final Subsequent EIR for the Mulqueeneey Ranch Wind Repowering Project, Conditional Use Permit PLN2019-00226, as being in compliance with CEQA, that the Final Subsequent EIR was presented to the Board, which has reviewed and considered the information in the Final Subsequent EIR prior to adopting said Resolution, and that the Final Subsequent EIR reflects the County's independent judgment and analysis; and

WHEREAS, in compliance with Section 15091(d) of the CEQA Guidelines, the Planning Department has prepared a Mitigation Monitoring and Reporting Program, attached herein as Exhibit B, which is required to be implemented by the Permittee and by the County as a condition of approval of the Project and that are fully enforceable through permit conditions, agreements, or other measures; and

WHEREAS, further in compliance with Section 15093 of the CEQA Guidelines the Planning Department has prepared a Statement of Overriding Considerations, attached herein as Exhibit C, which states specific reasons, supported by substantial evidence in the record, why the Planning Department and the Board would approve the Project although certain significant adverse environmental effects of the Project would not be avoided or substantially lessened by the identified mitigation measures; and

WHEREAS, the East County Board of Zoning Adjustments has determined that approval of the Project as conditioned herein, including the implementation of the Mitigation Monitoring and Reporting Program attached herein as Exhibit B, would provide for all of the significant effects on the environment to have been eliminated or substantially lessened where feasible, as indicated in the Written Findings of Significant Effects, attached herein as Exhibit A, and that there are certain significant effects on the environment found to be unavoidable which are acceptable due to overriding concerns as indicated in the Statement of Overriding Considerations attached herein as Exhibit C; and

WHEREAS, adoption of the programs, requirements, procedures, legal and financial commitments and all other specifications as set forth in the conditions of approval for the conditional use permit is found to be necessary for the public health and safety and as a necessary prerequisite to ensure that the proposed decommissioning, construction and operation of the facilities are managed in such a way as to serve the goals and objectives of the Alameda County General Plan; and

WHEREAS, the Staff Report was submitted recommending the application be approved subject to the proposed conditions of approval and adoption of the draft Resolution and associated Exhibits; and

WHEREAS a representative present on behalf of the Applicant appeared at said public hearings and presented testimony in support of the application; and

WHEREAS members of the public appeared at said public hearing and presented testimony in support of and in opposition to the application; and

WHEREAS the Board did hear and consider all reports, recommendations and testimony as hereinabove set forth and asserts the information contained in the attached Exhibits reflects the independent judgment of the Board;

NOW THEREFORE

BE IT RESOLVED that the Board finds that:

1. The use is required by the public need in that wind energy production in the Altamont Pass Wind Resource Area (APWRA) represents a major source of renewable energy that is currently under-utilized by aged, underperforming or defunct wind turbines with documented adverse effects on avian species. The proposed Project would replace existing turbines with more efficient turbines, with the potential to reduce avian impacts. The Project would generate and supply 100% emissions-free electricity to California, would support California's renewable energy goals, and would help reduce dependence on fossil fuels, a primary factor in global warming or climate change.
2. The use will be properly related to other land uses and transportation and service facilities in the vicinity in that as an existing wind farm, the Project site is well-suited from a planning and practical perspective for continued use as a windfarm. The Project parcels have been developed with wind power project uses for over 30 years and are located a substantial distance away from substantial residential, commercial and industrial uses. Existing supporting facilities will continue to be utilized to transmit the power generated to satisfy the electricity needs of California.
3. The use, if permitted, under all the circumstances and conditions of this particular case, will not materially affect adversely the health or safety of persons residing or working in the vicinity, or be materially detrimental to the public welfare or injuries to property or improvements in the neighborhood. The proposed Project would serve the goals and objectives of the Alameda County East County Area Plan and other County economic development and environmental objectives, would have limited impacts on County services and infrastructure, and as mitigated with the measures to be adopted under the Mitigation Monitoring and Reporting Program attached herein as Exhibit B and

the conditions of approval, would not negatively impact the surrounding community or environment. As the site is currently occupied by wind turbines and supporting facilities, once construction is complete and the wind turbines have been repowered, environmental conditions as they currently exist would be maintained, if not improved.

Furthermore: a) the subject turbines would be sited in a manner that reduces risks to avian and bat species and according to specified minimum setbacks to reduce any health, safety or aesthetic concerns to any residents in close proximity; b) proper maintenance and operation efforts would be in effect to ensure the safe operation of the turbines; c) fire prevention and security measures would be in place to protect the public and local property; d) construction activities will be conducted in a manner that reduces potential health, safety and environmental concerns; e) the proposed use would not substantially hinder the continued use of the Project sites and surrounding land for cattle grazing as the primary property use; f) any access roads improved for the proposed use would provide improved access to the grazing lands; g) land owners would benefit from the lease payments made by the applicant, which further supports grazing operations; and h) other improvements, such as roadways, railroads, electrical substations and landfills are not adversely affected by the presence of wind turbines and their associated infrastructure because the proposed Project would replace and/or continue to use existing facilities.

4. The use will not be contrary to the specific intent clauses or performance standards established for the District in which it is to be considered in that the proposed Project is located in the A (Agriculture) zoning district, which has as its stated intent: "to promote implementation of General Plan land use policies for agriculture and other nonurban uses; to conserve and protect existing agricultural uses; and to provide space for and encourage such uses in places where more intensive development is not desirable or necessary for the general welfare." The proposed Project would be consistent with this intent because the development of wind power projects is both allowed and encouraged in the APWRA by the East County Area Plan, the Project removes minimal land from agricultural production, and the use is appropriately located in non-urban areas and serves the public welfare.

BE IT FURTHER RESOLVED that the Board adopts the Written Findings of Significant Effects contained in Exhibit A of this Resolution, the Mitigation Monitoring and Reporting Program contained in Exhibit B of this Resolution; and the Statement of Overriding Considerations contained in Exhibit C of this Resolution, which Exhibits are incorporated herein as if fully set forth.

BE IT FURTHER RESOLVED that the Board does hereby approve the said application as shown by plans and materials labeled Application Exhibit "B" on file with the

Alameda County Community Development Agency, Planning Department, 224 West Winton, Rm. 111, Hayward, CA, 94544), subject to the following conditions:

AUTHORIZATION

1. Approval. Approval of this Permit authorizes Mulqueeney Wind Energy, LLC (Mulqueeney Wind), a subsidiary of Brookfield Renewable, to replace 518 old generation wind turbines sites previously removed from the subject parcels to install up to 24 new turbines with a maximum production capacity of approximately 80 (MW), using turbines rated between 2.2 to 4.2 MW per turbine, on 29 parcels or parts of parcels, extending over roughly 4,600 acres within the southeastern quadrant of the Alameda County portion of the Altamont Pass Wind Resource Area, north and south of Patterson Pass Road, between approximately one-third and four miles west of Midway Road, and between one and five miles south of Interstate 580, including the following Assessor Parcel Numbers:

99A-1800-2-3; 99A-1800-2-4; 99B-7890-2-4; 99B-7890-2-5; 99B-7890-2-6;
99B-7890-4; 99B-7900-1-3; 99B-7900-1-4; 99B-7900-1-5; 99B-7900-1-6;
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99B-7985-1-5; 99B-7985-1-6; 99B-8050-1; and 99B-8100-1-1.

In the event that larger, 4.2 MW turbines are available to and selected by the project proponent at the times suited for ordering turbines to be delivered, the proponent shall reduce the total number of turbines to nineteen (19) turbines only, the final location of which shall be subject to Planning Director approval and recommendations of the County's avian protection Technical Advisory Committee.

2. Compliance and Conditions. Permittee agrees to comply with all applicable regulations, rules and requirements of the County of Alameda and its Agencies, all subdivisions and departments of such agencies, and to comply with specific conditions of approval described herein by the representatives of said agencies, including but not limited to:
 - a. Community Development Agency, Planning Department
 - b. Public Works Agency, Building Inspection Department
 - c. Public Works Agency, Land Development Department
 - d. Public Works Agency, Grading Division
 - e. Fire Department
 - f. County Sheriff
 - g. Health Services Agency, Environmental Health Department

Failure to act in compliance with the conditions herein will be construed as a violation of Zoning and enforcement proceedings shall commence as provided for by Section 17.58 of the Alameda County Zoning Ordinance.

Permittee further agrees to comply with all applicable regulations, rules and requirements of the State of California and United States agencies, including but not limited to the following:

- | | |
|--|---|
| h. California Public Utilities Commission | k. California Energy Commission |
| i. California State Department of Fish and Wildlife | l. Bay Area Air Quality Management District |
| j. California State Water Quality and Control Board - San Francisco and Central Valley Regions | m. United States Fish and Wildlife Service |
| | n. Federal Aviation Administration |
3. Insurance: A Comprehensive General Liability insurance policy in the minimum amount of \$1,000,000 and in the form prescribed in the document "INSURANCE REQUIREMENTS, ALAMEDA COUNTY PLANNING DEPARTMENT, November 12, 2014," in addition to insurance requirements of other agencies listed in Condition 2 shall be provided to the County within 20 business days following approval of this Conditional Use Permit and provided again within 20 business days of each annual anniversary thereof.
4. Utility Tax Compliance. Within 60 days of this approval, the Permittee shall submit to the Alameda County Planning Department evidence of business registration with the Alameda County Business Tax Unit in the form of a valid business certificate to ensure compliance with the County's utility tax regulations.
5. Liability. By exercise of this Conditional Use Permit, the Permittee agrees to defend, indemnify and hold harmless the County of Alameda, its officers, employees, agents and servants for any and all liability caused by the negligence or wrongful act of the Permittee arising out of the exercise of this Conditional Use Permit, and to pay all claims, damages, judgments, legal costs, adjuster fees, and attorney fees related thereto.
6. Indemnification. The Permittee shall defend, indemnify, and hold harmless Alameda County or its agents, officers, and employees from any claim, action, or proceeding against Alameda County or its, agents, officers or employees to attack, set aside, void, or annul Conditional Use Permit, PLN2017-00201, the Program Environmental Impact Report (PEIR), the California Environmental Quality Act findings, determination of significant impacts, the Mitigation Monitoring and Reporting Program (MMRP), or any combination thereof. Such indemnification shall include, but not be limited to, an award of costs and attorney's fees incurred by Alameda County in its defense. The County shall promptly notify Permittee of any such challenge.
7. Planning Review and Permit Administration Costs. The Permittee shall be responsible for payment of all additional Planning Department and Public Works Agency staff and material costs for completing these agencies' reviews up to the time of this approval,

including costs billed against the original application deposit, costs which exceeded the deposit and for a deposit of an additional \$2,000.00 for similar costs associated with administration and enforcement of the conditions herein, independently of Inspection Costs as required below (Condition 8). If all or any part of said cash deposit is depleted by such administration activities, the Permittee shall restore the balance of the deposit to the original \$2,000.00.

The Permittee shall compensate the County for expenditures to retain a biological and avian resource consultant necessary to monitor implementation of these conditions and the Project MMRP during Planning Department review of the building permit, during construction, not to exceed \$15,000 for the Project plus \$100.00 per proposed MW.

The Permittee shall compensate the County for expenditures to retain a County technical representative to the Technical Advisory Committee, as necessary to review monitoring reports and advise the County regarding implementation of these conditions and the Project MMRP during each year of post-construction monitoring as specified in Conditions 92, 93 and 94 (Mitigation Measures BIO-11g, BIO-14b and BIO-14c). Such compensation shall be paid annually in proportion to the installed or rated MW capacity of the facility (as a proportional percentage of all wind repowering projects, which may be prorated on a monthly basis), not to exceed \$15,000 for all repowering projects (adjusted annually for inflation).

8. Inspections and Cost Recovery. The Permittee shall allow staff of the Alameda County Planning Department, Alameda County Public Works Agency, the California Department of Fish & Wildlife, and any other responsible agency to conduct site inspections during construction and operation of the Project in order to ensure compliance with approved permits, plans, and conditions of approval. Inspections shall be conducted at the discretion of said agencies. Discovery of noncompliance may be cause for commencement of proceedings to revoke this Conditional Use Permit, and for payment of applicable bonds. Public Works Agency staff is also authorized to inspect structural and pavement conditions of County roads serving the construction site prior to and after construction to identify needed repairs and to assess cost recovery requirements.

The Permittee or its successors shall be responsible for payment of all reasonable costs associated with necessary inspections of the facility, including costs incurred by the Planning Department, the County Fire Department, the Building Inspection Division, the Public Works Agency or any other applicable Federal, State or County department or agency. Each County Agency shall have the authority to require deposits of \$4,000.00 prior to plan review, for plan review, inspections or other necessary costs. State and federal agencies shall be responsible for collecting established fees and related compensation where required by statute.

9. Bonds. Application for Building Permits to implement any portion of this Conditional Use Permit shall be accompanied by the following bonds:

- a. A \$2,000.00 cash bond shall be deposited to be used in the investigation and evaluation of a noise complaint as provided in Condition 88 herein below. If all or any part of said cash bond is depleted by such activities, the Permittee shall restore the balance of the bond to the original \$2,000.00.
 - b. A security bond or other acceptable instrument shall be recorded with the Director of Public Works to guarantee repair and restoration of roads serving the Project area that may be damaged in the course of construction of the Project, consistent with the requirements of the Transportation Control Plan as set forth in Condition 48 below.
 - c. A surety bond or other acceptable security instrument shall be recorded with the Director of Public Works to guarantee implementation of the restoration and reclamation plan as required by Conditions 11 and 12 below.
10. Mitigation Monitoring and Reporting Program. The Permittee shall implement all applicable mitigation measures identified in the Mitigation Monitoring and Reporting Program (MMRP) attached herein as Exhibit B, and as specified individually herein. These conditions of approval incorporate the individual mitigation measures and present them either in summarized form or by reference only, and in certain cases provide additional clarification and guidance on the manner, timing and responsibility for implementation of the mitigation measures. The incorporation of the mitigation measures into the conditions of approval (i.e., their replication and representation herein) is not intended to revise, modify or add to any mitigation measure, or add any new obligation to the Permittee under CEQA, but only to augment the understanding of how each mitigation measure shall be implemented. Each mitigation measure is presented within the applicable phase of Project development used herein, beginning with design, and continuing through permit applications, pre-construction tasks, obligations during construction, performance during operation, and for periodic review through the life of the permit.

These conditions of approval are intended to and shall be interpreted by reading Exhibit B and the enumerated conditions together, as a whole, in a manner that gives the maximum effect to both and, to the extent necessary, harmonizes them to avoid any inconsistencies or superfluous terms. If the Permittee, the County or other public agency responsible for implementation of a mitigation measure finds any discrepancy between Exhibit B and these conditions, Exhibit B shall be relied upon unless the conditions herein provide greater clarification of the time or performance or the manner of implementation of the MMRP, when determined to be necessary for the effective implementation of the MMRP. Any remaining questions of interpretation shall be resolved by the Planning Director.
11. Restoration and Reclamation Plan: Prior to issuance of building permits the Permittee shall submit for review and approval by the County Planning Director and the Director of Public Works, a reclamation plan for removal at the end of this permit term (or by major default by the Permittee as described below) of all wind turbines, foundations and ground

equipment to a depth of three feet below finished grade. Roads and above-ground facilities installed pursuant to this permit shall also be removed unless the property owner has requested in writing as part of the reclamation plan that they be left in place, subject to approval of the Planning Director. The reclamation plan shall include provisions for:

- a. Removal of roads and staging areas within the subject property or properties not needed for maintenance and operations or for other allowed property uses by the property owner;
- b. Re-grading and re-vegetation to return the subject property or properties to rangeland or pre-windfarm use conditions, with site-specific characteristics of topography, vegetation, drainage and other unique environmental features, subject to approval of the California Department of Fish and Wildlife;
- c. Repair of County roadways from damage that may result from off-haul of materials, movement of oversized loading or heavy-haul vehicle, traffic management and a substantial increase in volume of vehicle trips;
- d. A transportation control plan for conveyance of oversize turbine components.

The reclamation plan shall include a cost estimate of labor and material costs, prepared by a licensed contractor to implement the proposed reclamation plan, and the Planning Director shall have the authority to request additional details of specific cost elements. The reclamation plan shall include a guarantee by the Permittee to carry out the reclamation plan upon determination by the Planning Director and Director of Public Works that the permitted wind farm operations have been abandoned or have produced less than 5 percent of the rated output of the wind farm in one year.

The Planning Director and Director of Public Works may instead make a determination that more than 50% of the turbines are in disrepair and there is no other demonstrated plan, satisfactory to the Planning Director, to restore the equipment to a productive operating condition. Under such circumstances the Planning Director may order the Permittee or property owners to execute the reclamation plan.

12. Restoration and Reclamation Bond. Prior to issuance of building permits, and based on County approval of the reclamation plan as above, the Permittee shall post a security in the form of a surety bond. The security shall remain with the County for the life of the Project, except upon replacement as provided below and upon replacement shall be adjusted for inflation using the appropriate construction price index, as determined by the Director of the Public Works Agency. In the event ownership of the turbines changes from the current Permittee to another person or entity, the new owner shall replace the surety bond of the original Permittee with a surety bond in the name of the new owner within 30 days of the change of ownership.
13. Changes to Power Purchase Agreements. Permittee agrees that, at least six (6) months prior to the expiration, renewal or extension of any Power Purchase Agreements (PPA) made by the Permittee, the Permittee shall inform the Planning Director of such changes

and provide the County of Alameda and any Community Choice Aggregation joint powers authority or equivalent program (CCA) in which the County participates, a right of first offer to establish a PPA between the Permittee and the County or the CCA.

14. Ten Year Review. No more than ninety (90) calendar days after the tenth anniversary of the initial approval and within ninety (90) days of the subsequent twentieth anniversary, the Planning Director shall, after notice as provided for in the initial hearing and except as provided for under Conditions 88 and 101 below, set this matter for public hearing by the East County Board of Zoning Adjustments for the purpose of reviewing and verifying compliance with the conditions of approval so as to validate the findings of this conditional use permit.
15. Post-Construction Monitoring Review. Upon completion of the post-construction avian fatality monitoring program required by Mitigation Measures 11g, the post-construction bat fatality monitoring program required by Mitigation Measures 14b, and if required, after implementation of adaptive management program review required by Mitigation Measure BIO-11i, this matter may be set by the Planning Director for a public hearing, after notice as provided for in the initial hearing, for the purpose of assessing the effectiveness of avian protection plans, adaptive management measures, conservation or other strategies to improve or mitigate avian species safety concerns raised in the Program Environmental Impact Report (PEIR). This review may allow the Planning Director to modify conditions previously imposed or add conditions directly related to the results of the post-construction avian fatality monitoring program (Mitigation Measure BIO-11g) and the recommendations of the Technical Advisory Committee.
16. Commencement Date. Pursuant to Section 17.52.050, building permits shall be obtained and construction activity commenced within 3 years of approval or this permit shall be of no force or effect.

PRIOR TO DESIGN SUBMITTAL

17. Preconstruction Surveys for Special-Status Plant Species (MM BIO-1a). As required by Mitigation Measure BIO-1a in the MMRP, no more than 3 years prior to ground-disturbing repowering activities, and during the appropriate identification periods for special-status plants as specified in the MMRP and the PEIR, the Permittee shall have a qualified biologist (as determined by the Alameda County Planning Director) conduct field surveys to identify special-status plant species within and adjacent to the Project site. The Permittee shall submit a report documenting the survey results to the Planning Director for review and approval, meeting the requirements of Mitigation Measure BIO-1a, prior to ground-disturbing activities and before issuance of building permits.
18. Preconstruction Surveys for Habitat for Special-Status Wildlife Species (MM BIO-3a). As required by Mitigation Measure BIO-3a in the MMRP, no more than 3 years prior to ground-disturbing repowering activities, the Permittee shall have a qualified biologist (as

determined by Alameda County) conduct field surveys within decommissioning, repowering, and restoration work areas and their immediate surroundings to determine the presence of habitat for special-status wildlife species. The Permittee shall submit a report documenting the survey results and meeting the requirements of Mitigation Measure BIO-3a to the Planning Director for review and approval, prior to conducting any ground-disturbing repowering activities and before issuance of building permits.

19. Preconstruction Bat Roost Surveys (MM BIO-12a). As required by Mitigation Measure BIO-12a in the MMRP, prior to any ground-disturbing activity the Permittee shall have a roost habitat assessment prepared by a qualified bat biologist to identify potential colonial roost sites of special-status and common bat species within 750 feet of the construction area. If suitable roost sites are to be removed or otherwise significantly affected by the proposed Project, the bat biologist will conduct targeted roost surveys of all identified sites that would be affected. Surveys shall conform to the protocols and guidelines set forth in Mitigation Measure BIO-12a in the MMRP, and a report shall be submitted to the Planning Director following such surveys as specified by Mitigation Measure BIO-12a of the MMRP and prior to issuance of building permits.
20. Avoid Loss of Historic Resources and Record if Necessary (MMs CUL-1a and -1b). As required by Mitigation Measure CUL-1a in the MMRP, the Permittee shall avoid historic resources in the design and layout of the Project wherever feasible. As required by Mitigation Measure CUL-1b, if avoidance of resources in accordance with Mitigation Measure CUL-1a is determined to be infeasible, the significantly affected historic resource shall be recorded prior to site disturbance and before issuance of building permits, consistent with Mitigation Measure CUL-1b requirements.
21. Preconstruction Survey and Planning for Cultural Resources (MMs CUL-2a and CUL-2b). As required by Mitigation Measure CUL-2a in the MMRP, prior to ground-disturbing activities and issuance of the building permit, the Permittee shall have qualified personnel conduct an archaeological field survey of the Project area to determine whether significant cultural resources exist within the Project area. Documentation of the field survey results shall comply with Mitigation Measure CUL-2a.

As required by Mitigation Measure CUL-2b, if any significant resources are identified through the preconstruction survey, a treatment plan with measures that could include site avoidance, capping, or data recovery will be developed and implemented by the Permittee and approved by the Planning Director subject to applicable requirements.
22. Environmental Site Assessment to Identify Possible Site Contamination (MM HAZ-4). As required by mitigation measure HAZ-4 in the MMRP, the Permittee shall have a Phase I Environmental Site Assessment (ESA) prepared for any Project area proposed for ground-disturbing activities and submit it to the Alameda County Health Services Agency – Environmental Health Department, as the authorized regulatory oversight

agency. The Phase I ESA shall be in conformance with the minimum requirements described in Mitigation Measure HAZ-4 in the MMRP.

If the Phase I ESA indicates likely soil contamination a Phase II ESA shall be prepared by a qualified environmental professional under a work plan approved by the Environmental Health Director, including proposed soil sampling, remediation and disposal of contaminants if necessary. The Phase II ESA shall include the components outlined in Mitigation Measure HAZ-4, and shall be provided to the Planning Director and Environmental Health Director, the latter of which may require remediation of soil or groundwater or disposal of hazardous building materials subject to a work plan approved by the Environmental Health Director. Review of a work plan and Phase II ESA will require a deposit of \$6,000.00 (as of this approval date) with the County Health Services Agency – Environmental Health Department, and may require opening a Site Cleanup Program (SCP) file. Any contaminated soil identified on a Project site must be properly disposed of in accordance with the State Department of Toxic Substance Control (DTSC) regulations in effect at the time the Phase II ESA is submitted to the Environmental Health Director.

23. Preconstruction Noise Studies (MM NOI-1). As required by Mitigation Measure NOI-1 in the MMRP, if any turbine is proposed to be located within 2,000 feet of a noise sensitive receptor, such as a residence, school, church or public recreational trail, the Permittee shall have a qualified acoustic engineering consultant prepare a report to evaluate the Project-specific noise impacts associated with operation of the proposed wind turbine(s). This evaluation shall conform to the requirements of mitigation measure NOI-1. If operation of the turbine(s) is predicted to result in noise level of 55 dBA (Ldn) or greater where noise is currently less than 55 dBA (Ldn) or result in a 5 decibel (dB) increase where noise is currently greater than 55 dBA (Ldn), the Permittee shall modify the Project to select new specific installation sites or turbine designs within the Project boundary to ensure that these performance standards will not be exceeded.

Other methods that can be used to ensure compliance with these performance standards include but are not limited to increasing the distance between proposed turbines and noise sensitive uses, or use of alternative turbine operational modes to reduce noise. Upon completion of the noise study, the Permittee shall submit a report to the Alameda County Planning Director demonstrating how the Project will comply with these performance standards. After review and approval of the report by the Planning Director, the Permittee shall incorporate measures as necessary into the Project design to ensure compliance with these performance standards.

24. Safety Setbacks. New wind turbines shall have a minimum setback from other land uses as stated below.
- a. From a parcel boundary on which a separate windfarm operation is proposed or approved: 1.1 times (or 110% of) the rotor length.

- b. From a parcel boundary on which no windfarm operation is proposed or approved: 1.25 times (or 125% of) the total turbine height.
- c. From a Dwelling Unit: three times (or 300% of) the total turbine height.
- d. From a public road, interstate highway, public trail, commercial or residential zoning: 2.5 times (or 250% of) the total turbine height.
- e. From a recreation area or property approved for an outdoor recreation use: 1.25 times (or 125% of) the total turbine height.
- f. From a high-tension electrical transmission line: 2 times (or 200% of) the total turbine height.

The setbacks specified above shall be increased by one (1) percent of the total turbine height (to the top of the rotor blade at the 12:00 o'clock position) per ten (10) feet of elevation that the turbine's ground elevation is above the ground elevation of the affected parcel or use, specifically the nearest affected parcel boundary, recreation area or property, dwelling unit, road or highway right-of-way, trail, commercial or residential zone district boundary, or the center of a transmission or conductor line. The setback may be decreased by one (1) percent of such total turbine height per ten (10) feet of elevation that the turbine's ground elevation is below the ground elevation of affected parcels or uses.

Furthermore, the setbacks specified above, as adjusted according to turbine elevation above or below an affected parcel or use, may be reduced by 50% to an alternative minimum (i.e., to one-half the resulting setback), if a notarized agreement or a recorded easement from the affected property owner (except in the case of setbacks from a public road, interstate highway or transmission line) is approved by the Planning Director, with the following exceptions and conditions:

- i. The setback from a parcel on which no windfarm operation is proposed or approved may be reduced to no less than 1.1 times (or 110% of) the rotor length.
- ii. The setback from a recreation area or property approved for an outdoor recreation use shall not be reduced to less than 1.0 times (100% of) the total turbine height.
- iii. The setback from a public road, interstate highway, public trail, commercial or residential zoning, or high-tension transmission line shall only be reduced to such minimum with the submittal of a report by a qualified professional, to be approved by the Planning Director with substantial evidence that public safety will not be compromised, and property owner agreement or easements shall be required only from private properties with commercial or residential zoning.

Adjustments based on the ground elevation of a turbine shall be limited to whole ten-foot increments, disregarding any smaller portion. Total turbine height shall always be measured from ground elevation to the top of the rotor at the 12:00 o'clock position (i.e., at the furthest upward reach of the rotor blade). For adjoining parcels under the same

windfarm use permit, no setback is required. Knowledge of existing, proposed or approved windfarm use permits on adjacent parcels shall be based on the best available information at the time of the subject application. The Planning Director shall reserve the right to reject all or part of an alternative minimum setback based on substantial evidence that a wind turbine will have adverse noise, safety or visual impacts on a dwelling unit that have not been previously disclosed publicly, or that a required report requires additional information before such a minimum is approved.

25. Safety Setbacks for Meteorological Towers. New temporary and permanent meteorological towers (met towers) shall have a minimum setback from the exterior Project boundary, shown in the permit application, equal to the total height of the met tower plus 25 feet.
26. Undergrounding of Utility Lines. All electrical utility collection and distribution connection lines shall be installed underground, except as required by the utility company for final connections to major substations.
27. Site Development Review for Previously Undeveloped Ridgelines (MM AES-2a). Site Development Review pursuant to Section 17.54.230 et. seq. of the County Zoning Ordinance shall be required for new turbines proposed on a ridgeline or hilltop which has not previously been developed with commercial-scale wind turbines (over 25 kW rated capacity). Such Site Development Review shall not be approved unless the Planning Director determines that the visual effects will be substantially avoided by distance from public view points (e.g., over 2,000 feet), intervening terrain, screening landscaping, or compensatory improvements to equivalent and nearby (radius of 1 mile) scenic features, as approved by the Planning Director.
28. Analyze Shadow Flicker Distance and Mitigate Effects (MM AES-5). Where shadow flicker could result from the installation of wind turbines near residences (i.e., within 500 meters or about 1,600 feet in a broadly easterly or westerly direction, accounting for all seasons of the year), the Permittee shall prepare a graphic model and study to evaluate the potential for shadow flicker impacts on residences for review and acceptance by the Planning Director. No shadow flicker in excess of 30 minutes in a given day or 30 hours (net or total) in a given year will be permitted unless it has been mitigated subject to the approval of the Planning Director.

If any residence is nonetheless affected by shadow flicker within the 30-minute/30-hour thresholds, the Permittee shall implement one or more measures to avoid or minimize the effect, such as providing opaque window coverings, window awnings, landscape buffers or a combination of these features to reduce flicker to acceptable limits for the affected receptor, or shutting down the turbine during the period shadow flicker would occur. Such measures shall be undertaken in consultation with the owner of the affected residence, and may be confirmed by preparation of a shadow flicker study at the Permittee's expense. If the shadow flicker study indicates that any given turbine would

result in shadow flicker exceeding the 30-minute/30-hour thresholds and the affected property owner is not amenable to window coverings, window awnings, or landscaping and the turbine cannot be shut down during the period of shadow flicker, then the turbine operations would be set back or limited to avoid shadow flicker to the satisfaction of the affected owner of the residence.

29. Color Treatment. All wind turbines, blades, towers and structures shall be treated and maintained with a generally uniform off-white paint scheme in order to blend with the surroundings and minimize adverse visual effect. Exceptions may include experimental measures if recommended by the TAC and approved by the Planning Director to allow any turbine to be painted as a mitigation for bird collisions.
30. Lighting Guidelines. Lighting design for turbine tower entries, substations and permanent operations and maintenance buildings shall be submitted for review and approval by the Planning Director and included in the building permit application. New lighting shall be downward casting and shielded, utilizing motion detection systems if appropriate and shall not unnecessarily "wash out" into surrounding areas. Lenses and bulbs shall not protrude from light fixtures. Fixtures intended to be lit for long periods of time shall utilize low-pressure sodium lamps or devices with similar properties (i.e., long-lasting and energy efficient). Fixtures shall be mounted at the lowest feasible height. If industrial design standards or FAA safety protocols require lighting designs that conflict with the requirements of this condition, such standards and protocols shall take precedence subject to approval by the Planning Director and Building Official with respect to other applicable conditions and mitigation measures.

Lighting required by FAA shall be shrouded, directed upward, or utilize other technology to minimize lighting at ground level. If FAA safety protocols require lighting designs that conflict with the requirements of this condition, such protocols shall take precedence subject to approval by the Planning Director and Building Official with respect to other applicable conditions and mitigation measures.

31. Tower Access. Each wind turbine tower shall be fully enclosed with interior access controlled by the Permittee with security measures approved by the Building Official, and ladder or lift safety measures.
32. Operational Safety. Each turbine generator shall be equipped with both manual and automatic controls to limit the rotational speed of the blade within the design limits of the overall turbine. Generators shall be designed, installed and operated to prevent emissions of electromagnetic interference that are disruptive to adjacent land uses.
33. Meteorological Tower Design Standards. Temporary meteorological towers (met towers) shall be shown on site plans submitted for building permits, and may be guyed (supported by guy-wires) with colored avian marker balls or spirals at appropriate intervals. Met towers installed for operation of more than two years (24 months) shall be free-standing and not supported by guy-wires. Permanent or temporary met towers in excess of 200

feet (or 60 meters) shall be referred to the Federal Aviation Administration for consideration of lighting requirements and paint treatment (e.g., aviation orange). Lighting required by FAA shall be shrouded, directed upward, or utilize other technology to minimize lighting at ground level. If FAA safety protocols require lighting designs that conflict with the requirements of this condition, such protocols shall take precedence subject to approval by the Planning Director and Building Official with respect to other applicable conditions and mitigation measures.

34. Permanent Signage. Permittee shall provide signage on the entry gates to the subject property(ies) providing basic contact information for use in case of an emergency, including the name of the Project, names, titles, and phone numbers of individuals responsible for operations, non-emergency phone numbers, and the Planning Department general contact information. The turbine towers, rotors, cabinets, or mountings shall not be used for advertising.
35. Turbine and Infrastructure Design and Siting to Reduce Avian Mortality (MMs BIO-11b, BIO-11c and BIO-11d). As required by Mitigation Measures BIO-11b, BIO-11c and BIO-11d in the MMRP, the Permittee shall utilize a siting process and prepare a siting analysis, using analyses of landscape features and location-specific bird use and behavior data to determine the specific turbine site locations with the potential to reduce avian collision risk and fatalities and otherwise minimize potential impacts on bird and bat species. Proponents will utilize existing data as well as collect new site-specific data as part of the siting analysis. Permittee shall implement Mitigation Measure BIO-11b as set forth in the Project MMRP.

Permittee shall use turbines with certain characteristics recognized to reduce the collision risk for avian species. Permittee shall implement the design-related measures set forth by Mitigation Measure BIO-11c as set forth in the Project MMRP. Permittee shall also apply specific measures outlined in Mitigation Measure 11d when designing and siting turbine-related infrastructure in order to reduce the risk of bird electrocution and collision.

Upon determining that the information in the siting analysis is sufficiently detailed for Technical Advisory Committee (TAC) consideration and recommendations, the Planning Director shall schedule a meeting for TAC review of the Project's compliance with mitigation measures BIO-11a and BIO-11b.

36. Retrofit Existing Infrastructure to Minimize Risk to Raptors (MM BIO-11e). As required by Mitigation Measure BIO-11e, the Permittee shall have any existing power lines in its Project area, that are owned or operated by the Permittee and that are associated with electrocution of an eagle or other raptor retrofitted within 30 days of any recorded electrocution, or prior to the start of commercial operation, to make them raptor-safe according to Avian Power Line Interaction Committee guidelines. All other existing structures to remain in a Project area during repowering will be retrofitted, as feasible, according to specifications of Condition 35 and Mitigation Measure BIO-11c prior to repowered turbine operation.

37. Site Management to Discourage Prey for Raptors (MM BIO-11f). As required by Mitigation Measure BIO-11f in the MMRP, the Permittee shall prevent the use of rodenticides, allow rock piles only over 500 meters from any new turbine, and use gravel around turbine foundations, when designing and siting turbine-related infrastructure and other site improvements, and operating the wind turbines, in order to minimize opportunities for fossorial mammals to become established and thereby create a prey base that could become an attractant for raptors.
38. Turbine Siting and Selection to Minimize Potential Bat Mortality (BIO-14a). Permittee shall use the best information available to site turbines and to select from turbine models in such a manner as to reduce bat collision risk. The siting and selection process will take into account bat use of the area and landscape features known to increase collision risk (trees, edge habitats, riparian areas, water bodies, and wetlands). Measures include but are not limited to siting turbines the greatest distance feasible up to 500 meters (1,640 feet) from still or flowing bodies of water, riparian habitat, known roosts, and tree stands. Permittee shall implement Measure BIO-14a as set forth in the Project MMRP.
39. Design of Circuit Breakers to Minimize Sulfur Hexafluoride (SF₆) Leakage (MM GHG-2b). The Permittee shall ensure that any new circuit breaker installed at a substation has a guaranteed Sulfur Hexafluoride (SF₆) leak rate of 0.5% by volume or less. The Permittee shall provide the Building Official with documentation of compliance, such as specification sheets, prior to installation of the circuit breaker. In addition, the Permittee shall monitor SF₆-containing circuit breakers at the substation consistent with the California Air Resources Board's Scoping Plan Measure H-6 for the detection and repair of leaks.

CONSTRUCTION PERMIT REQUIREMENTS

40. Building Permit Application Requirements (including MM GHG-2d). The Permittee shall apply for and obtain approval for separate building permits for the removal and demolition of existing turbines and associated facilities, and the construction of new turbines, and shall conform to the following requirements.
 - a. Soils report and/or geological/geotechnical study will be required.
 - b. Comply with building codes and submittal requirements in effect at the time of submitting for building permits.
 - c. A California licensed architect or engineer shall be designated as the design professional responsible and in charge of the Project submittal. Submittal documents may be signed and sealed by multiple licensed architects or engineers.
 - d. The Permittee's designated California-licensed land surveyor shall be responsible for the property information filed with the Building Permit application.
 - e. The demolition and construction debris diversion plan shall comply with applicable policies of the Public Works Agency's Construction & Demolition Debris Management Program. In particular, the Permittee shall implement Mitigation

- Measure GHG-2d as set forth in the MMRP, to comply with the County's revised Green Building Ordinance regarding construction and demolition debris to achieve the following minimum standards: 1) 100% of inert waste and 50% wood/vegetative/scrap metal not including Alternative Daily Cover (ADC) and unsalvageable material will be put to other beneficial uses at landfills; and 2) 100% of inert materials (concrete and asphalt) will be recycled or put to beneficial reuse.
- f. Plans filed for the Building Permit application shall obtain Zoning Approval (i.e., Planning Department approval for consistency determination that the plans are consistent with this permit), and shall be drawn to scale, indicating the location of each wind turbine, the location and function of all structures within 1,000 feet of any wind turbine, as well as all trailers and major ground equipment to be put in place for use during construction.
 - g. Evidence of a proposed interconnection agreement and any technical requirements and specifications required by the interconnection authority.
 - h. Evidence of filing a notice of proposed construction with the Federal Aviation Administration (FAA) and the required referral to the Alameda County Airport Land Use Commission.
41. Use of Recycled Content in New Building Materials (MM GHG-2c). The Permittee shall require the construction of all new substation and other permanent buildings to incorporate materials for which the sum of post-consumer recycled content plus one-half of the post-industrial content constitutes at least 10% of the total value of the materials in the Project.
42. Fire Department Approval Requirements. Permittee shall contact the Alameda County Fire Department, Fire Prevention Bureau, to obtain a fire clearance certificate. The Bureau may be reached by telephone at (510) 670-5853. The Permittee shall install a Knox Box at all entry gates, provide an emergency contact to the Department, and maintain a fire extinguisher in each ground equipment area. Water tanks meeting NFPA 1142 standards shall be provided at each construction staging area and shown on Building Permit application site plans. Permittee shall be responsible for compliance with Exhibit D, the Altamont Pass Windfarms Fire Requirements dated September 22, 2005 and as updated or revised herein.
43. Grading Permit Application and Geotechnical Investigation Requirements (MM GEO-1). Prior to any grading, ground-disturbing or construction activities on the Project site, the Permittee shall submit a preliminary grading plan and a site-specific geotechnical investigation to the County Grading Department. The geotechnical investigation/report shall be prepared by a qualified geotechnical firm in conformance with Chapter 15.36.320 and subsequent applicable sections of the Alameda County Grading Ordinance, for review by the County for the purpose of obtaining a grading permit in accordance with the provisions of the Grading Ordinance and the following requirements.

- a. The site-specific geotechnical/geologic report shall be prepared by a licensed geotechnical engineer or engineering geologist with local expertise in geotechnical investigation and design, based on data collected from subsurface exploration, laboratory testing of samples, and surface mapping. The report shall contain all of the elements listed under the Alameda County Grading Ordinance Chapter 15.36.350, as required, and address the following and any additional issues as required by the Director of Public Works.
 - Potential for surface fault rupture and turbine site location: The geotechnical report will investigate the Greenville, Corral Hollow-Carnegie, and the Midway faults (as appropriate to the location) and determine whether they pose a risk of surface rupture. Turbine foundations and power collection systems will be sited according to recommendations in this report.
 - Strong ground shaking: The geotechnical report will analyze the potential for strong ground shaking at the project site and provide turbine foundation design recommendations, as well as recommendations for power collection systems.
 - Slope failure: The geotechnical report will investigate the potential for slope failure (both seismically and nonseismically induced) and develop site-specific turbine foundation and power collection system plans engineered for the terrain, rock and soil types, and other conditions present at the project site in order to provide long-term stability.
 - Expansive soils: The geotechnical report will assess the soil types at the project site and determine the best engineering designs to accommodate the soil conditions.
- b. Unstable cut or fill slopes: The geotechnical report will address geologic hazards related to the potential for grading to create unstable cut or fill slopes and make site-specific recommendations related to design and engineering. The geotechnical/geologic report may be subject to a professional review by the County's consulting geotechnical engineer/geologist. It shall be the Permittee's responsibility to provide sufficient funds to the County for this professional review service if required.
- c. Permittee shall implement the design recommendations in the geotechnical report, including revised recommendations resulting from the professional review, if such a review is required.
- d. No grading work will be allowed during the rainy season, from October 1 to April 30, except upon a clear demonstration, to the satisfaction of the Director of the Public Works Agency, that at no stage of the work will there be any substantial risk of increased sediment discharge from the site.
- e. Any proposal for grading work associated with fire access roads must be reviewed and approved by the Alameda County Fire Department prior to issuance of a grading permit.
- f. The grading permit shall be subject to approval of the Alameda County Flood Control and Water Conservation District.

44. Stormwater Control Plan. Permittee shall prepare a Stormwater Control Plan (SCP) in compliance with the technical requirements of Provisions C.3 and C.6 of the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (Municipal Regional Permit, or MRP) and the County Building and Stormwater Management and Discharge Control Ordinances for the purpose of long-term (post-construction) stormwater control. The SCP shall be submitted to the Director of Public Works for approval prior to issuance of a County Stormwater Permit. The SCP shall include:
- a. Plan drawings showing the locations, sizing and Drainage Management Areas discharging to the proposed stormwater treatment system(s), the planned site design and source control measures, and any required hydromodification management (HM) facilities or devices.
 - b. A preliminary written plan that describes the operation and maintenance (O&M) (including inspection) of all installed stormwater treatment systems and HM controls both during construction and following construction.
 - c. A draft of a statement from the Permittee and property owner accepting long-term responsibility for the O&M of the installed stormwater treatment systems and HM controls, along with continuing upkeep of any required source control and site design measures, until such responsibility is legally transferred to another entity.
 - d. A draft of an agreement to include written conditions in any sales or lease agreements or deed for the Project that requires a buyer or lessee to assume long-term responsibility for the O&M of the installed stormwater treatment systems and HM controls, and the upkeep of the source control and site design measures, until such responsibility is legally transferred to another entity.
 - e. A signed statement from the Permittee and property owner(s) granting site access to all representatives of the County, local mosquito and vector control agency staff, and Water Board staff, for the sole purpose of performing O&M inspections of the installed stormwater protection systems (treatment systems, HM controls, source controls and site design measures).
 - f. A written statement from the Permittee and property owner(s) and successors acknowledging that the County may conduct annual inspections of all installed stormwater protection systems and that the Permittee agrees to pay for those inspection costs on a time and materials basis.
 - g. The plan shall specify that all new or modified drainage facilities shall be designed to ensure no net increase in stormwater discharge rates, flow velocities, or sediment transport would result from Project implementation.
 - h. Discharges from these facilities shall be designed so as to avoid concentration of flow and subsequent downstream scouring or sedimentation in natural creek beds.
 - i. Proposed roadways shall be designed so as to ensure that potential for slope failure and erosion is minimized.

- j. The Stormwater Control Plan shall be incorporated into all design drawings and specifications as appropriate, and shall meet the following standards:
 - i. The Permittee shall design and construct all storm drainage facilities in compliance with the County Public Works Design Standards.
 - ii. The Permittee shall prevent storm drainage from draining across driveway(s) or onto adjacent properties in a concentrated manner.
 - iii. The Permittee shall obtain a drainage permit under applicable County Ordinances for the installation of new drainage culverts.

A Stormwater Control Plan, Waste Discharge Identification (WDID) Number, Notice of Intent (NOI) and a Storm Water Pollution Prevention Plan (SWPPP) must be submitted to the Public Works Agency prior to issuance of the County Grading and Stormwater Permits.

45. NPDES Permit Requirements to Prevent Stormwater Pollution During Construction (MM WQ-1). As required by Mitigation Measure WQ-1 in the MMRP, the Permittee shall submit a Notice of Intent (NOI) and obtain coverage under the Construction General Permit (CGP) authority of the National Pollutant Discharge Elimination System (NPDES) for both the Central Valley and San Francisco Bay Regional Water Boards, before the onset of any construction activities for the purpose of preventing stormwater pollution during construction. The Permittee shall have a specific Project Storm Water Pollution Prevention Plan (SWPPP) prepared by a Qualified SWPPP Developer and ready for implementation prior to construction. This SWPPP shall be kept onsite during construction activity and provided upon request to representatives of the County and Water Board staffs.

Permittee shall apply for a County Stormwater Permit prior to the start of any construction; this application shall include proof of coverage under the CGP and a copy of the Project SWPPP. This SWPPP must provide for the implementation of pollutant discharge controls that utilize Best Management Practices (BMPs) and technology to reduce erosion, sedimentation, and other discharges to the water quality standards of the CGP and the County Stormwater Permit. BMPs may consist of a wide variety of protective measures taken to reduce pollutants in stormwater and other nonpoint-source runoff, including but not limited to, the following practices:

- a. Installation of temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) to control erosion and sedimentation from disturbed areas.
- b. Construction of dry detention basins (typically dry except after a major rainstorm, when it will temporarily fill with stormwater), designed to decrease runoff from the work site during storm events and to prevent flooding of the construction areas.

- Basin BMPs must include maintenance schedules for the periodic removal of sediments, excessive vegetation, and debris that may clog basin inlets and outlets.
- c. The application of covers or nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more) that could contribute sediment to waterways.
 - d. The enclosure and coverage of exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways.
 - e. The control of run-on that could deposit sediment or other materials from areas adjacent to the work site.
 - f. The assurance that no earth or organic material will be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water.
 - g. The application of controls that would preclude the following types of materials from being rinsed or washed into the County stormdrain system, the “waters of the United States,” or adjacent properties: concrete, concrete wash, solvents and adhesives, thinners, paints, fuels, sawdust, dirt, gasoline, asphalt and concrete saw slurry, and heavily chlorinated water.
 - h. The establishment of grass or other vegetative cover on the construction site as soon as possible after disturbance.

The Permittee (and the selected contractor) shall select a combination of appropriate BMPs, consistent with the above and with the requirements of the CGP and the County Stormwater Permit, which is expected to minimize runoff and remove contaminants from stormwater discharges. The final selection of BMPs will be subject to approval by the County and by the San Francisco Bay Regional Water Board or the Central Valley Water Board.

The Permittee (and the selected contractor) shall verify that a Notice of Intent (NOI) has been filed with the appropriate State Water Board having jurisdiction, that the said Water Board has issued a Waste Discharge Identification (WDID) Number, that a project SWPPP has been prepared, and that a County Stormwater Permit has been issued before allowing construction to begin. The selected contractor shall perform regular inspections of the construction area, to verify that the BMPs specified in the SWPPP are properly implemented and maintained. The contractor will notify the appropriate Regional Water Board and the County immediately if there is a noncompliance issue. If necessary, the contractor shall require that additional BMPs be designed and implemented if those originally constructed do not achieve the identified performance standard of the CGP or the County Permit.

46. Roadway Encroachment Permit. Permittee shall apply to the Public Works Agency for separate roadway encroachment permits for temporary and permanent access and facilities. Improvement plans shall be prepared by a registered Civil Engineer for

approval by the Director of Public Works, accompanied by the required review and inspection fees, as well as insurance and security deposits if required by the Public Works Agency.

47. Gate Entries. The Permittee shall provide designs to the Director of Public Works for roadway widening, pavement transitions, shoulder widening, necessary longitudinal and transverse drainage, and any driveway profile adjustments in conformance with County Roadway Standards. The new pavement section shall match, at a minimum, the full roadway section of each affected County roadway. No gates or fences shall be located within any County road right-of-way, and gates shall not swing out towards the public road.
48. Construction Traffic Control Plan (MM TRA-1). Prior to starting construction-related activities, the Applicant shall prepare and implement a Traffic Control Plan (TCP) that will reduce or eliminate impacts associated with the proposed project. The TCP shall adhere to Alameda County, San Joaquin County, and Caltrans requirements, and must be submitted for review and approval of the County Public Works Department prior to implementation. The TCP shall include the following elements. The County and Caltrans may require additional elements to be identified during their review and approval of the TCP.
 - Schedule construction hours to minimize concentrations of construction workers commuting to/from the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.).
 - Limit truck access to the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.).
 - Require that written notification be provided to contractors regarding appropriate haul routes to and from the project site, as well as the weight and speed limits on local county roads used to access the project site.
 - Provide access for emergency vehicles to and through the project site at all times.
 - When lane/road closures occur during delivery of oversized loads, provide advance notice to local fire, police, and emergency service providers to ensure that alternative evacuation and emergency routes are designated to maintain service response times.
 - Provide adequate onsite parking for construction trucks and worker vehicles.
 - Require suitable public safety measures in the project site and at the entrance roads, including fences, barriers, lights, flagging, guards, and signs, to give adequate warning to the public of the construction and of any dangerous conditions that could be encountered as a result thereof.
 - Complete road repairs on local public roads as needed during construction to prevent excessive deterioration. This work may include construction of temporary roadway shoulders to support any necessary detour lanes.
 - Repair or restore the road right-of-way to its original condition or better upon completion of the work.

Coordinate project-related construction activities, including schedule, truck traffic, haul routes, and the delivery of oversized or overweight materials, with Alameda County, Caltrans, and affected cities and counties to identify and minimize overlap with other area construction projects.

49. Watercourse Protection Ordinance. If any ground disturbing work is proposed within or near a watercourse, a watercourse encroachment permit or a grading permit shall be secured from the Public Works Agency in accordance with the Alameda County Watercourse Protection Ordinance. Watercourse setbacks shall be delineated on the exhibit plan per the provisions of Article V of the Watercourse Ordinance. The Ordinance establishes a setback of 20 feet from the top of the creek bank. However, for existing bank slopes at 2 horizontal to 1 vertical, or steeper, establish the setback by drawing a line on a cross-section at a 2 horizontal to 1 vertical slope from the toe of the existing bank to a point where it intercepts the ground surface and then add 20 feet. As provided by the Watercourse Protection Ordinance (Section 13.12.310, item G), the Director of Public Works shall make the determination as to setback limits and any permitted development within a setback.
50. Other Watercourse Requirements. The Permittee shall be responsible, prior to any work near or within a recognized watercourse, for securing other permits (e.g., Streambed Alteration Agreement) or other approvals required for work which is regulated by any other public agency (i.e., the California Department of Fish and Wildlife, Army Corp of Engineers, etc.).
51. Project-Specific Avian Protection Plan (BIO-11a). The Permittee shall prepare a Project-specific Avian Protection Plan (APP) as required by Mitigation Measure BIO-11a in the MMRP to specify measures and protocols consistent with the program-level mitigation measures that address avian mortality. The Project-specific APP will include, at a minimum, the following components.
 - a. Information and methods used to site turbines to minimize risk.
 - b. Documentation that appropriate turbine designs are being used.
 - c. Documentation that avian-safe practices are being implemented on Project infrastructure.
 - d. Methods used to discourage prey for raptors.
 - e. A detailed description of the postconstruction avian fatality monitoring methods to be used (consistent with the minimum requirements outlined in Mitigation Measure BIO-11g).
 - f. Methods used to compensate for the loss of raptors (consistent with the requirements of Mitigation Measure BIO-11h).

The Permittee shall prepare and submit a draft Project-specific APP to the County within 10 days of submitting the Building Permit application. The draft APP will be reviewed by

the TAC for consistency and the inclusion of appropriate mitigation measures that are consistent with the PEIR and recommended for approval by the County. The Permittee must obtain approval from the Planning Director of the draft APP prior to commercial operation, and obtain recommendations from the TAC for preparation of the Final APP within six months of commercial operations. The Final APP shall be subject to approval by the Planning Director.

52. Stop Work Procedures for Encounters With Cultural Resources, Human Remains and Paleontological Resources During Ground-Disturbing Activities (MMs CUL-2d, CUL-3 and GEO-7c). Permittee shall ensure that construction specifications include a stop-work order if paleontological, prehistoric, or historic-era cultural resources, or human remains are unearthed during ground-disturbing activities. Specific procedures are set forth in Conditions 69, 70 and 71.

PRIOR TO ISSUING BUILDING PERMIT

53. Implement Best Management Practices (BMPs) to Avoid and Minimize Impacts on Special-Status Plant and Animal Species (MMs BIO-1b, BIO-5a and BIO-7a). The Permittee shall ensure that the BMPs described in Mitigation Measures BIO-1b, BIO-5a, and BIO-7a, in accordance with practices established in the East Alameda County Conservation Strategy (EACCS), will be incorporated into the Project design and construction documents.
54. Measures to Avoid, Minimize and Mitigate Impacts On Special-Status Wildlife Species (MMs BIO-3b, BIO-4a, BIO-5a, BIO-6, BIO-7a, BIO-8a, BIO-8b, BIO-9 and BIO-10a). The Permittee shall implement Mitigation Measures BIO-3b, BIO-4a, BIO-5a, BIO-6, BIO-7a, BIO-8a, BIO-9 and BIO-10a, as identified in the Project MMRP to address special-status invertebrates, amphibians, reptiles, nesting birds and mammals, which are based on the EACCS and which have been modified and supplemented in the Project MMRP. The MMRP measures shall address the following species:
- a. Vernal pool branchiopods (invertebrates, including longhorn fairy shrimp, vernal pool fairy shrimp and vernal pool tadpole shrimp)
 - b. Curved-footed hygrotus diving beetle
 - c. Valley elderberry longhorn beetle
 - d. California tiger salamander
 - e. Western spadefoot
 - f. California red-legged frog
 - g. Foothill yellow-legged frog
 - h. Western pond turtle

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|-------------------------------|---|
| i. Blainville's horned lizard | n. Other non-special-status migratory birds |
| j. Alameda whipsnake | o. San Joaquin kit fox |
| k. San Joaquin coachwhip | p. American badger |
| l. Western burrowing owl | |
| m. Tri-colored blackbird | |

Where impacts cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements provided in the EACCS (Appendix C2 in the Final PEIR). In the event that an incidental take permit is obtained, compensatory mitigation will be undertaken in accordance with the terms of the permit in consultation with United States Fish and Wildlife Service (USFWS).

Implementation of some Mitigation Measures identified in the MMRP will require that the Permittee obtain incidental take permits from USFWS and CDFW (e.g., Alameda whipsnake) before construction begins. Additional conservation measures may be required in applicable Project permits (i.e., ESA incidental take permit).

55. Implement Best Available Control Technology for Heavy-Duty Vehicles (MM GHG-2a). The Permittee shall require existing trucks/trailers to be retrofitted with the best available technology and/or ARB-approved technology and/or CARB-approved technology consistent with the CARB Truck and Bus Regulation (California Air Resources Board 2019). The CARB Truck and Bus Regulation applies to all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. The Permittee shall comply with the specific requirements of Mitigation Measure GHG-2a as set forth in the MMRP to mitigate for potentially significant cumulative construction and operations and maintenance contributions to greenhouse gas emissions.

PRIOR TO GROUND-DISTURBING ACTIVITIES

56. Establish Activity Exclusion Zones for Special-Status Plant Species (BIO-1c). As required by Mitigation Measure BIO-1c in the MMRP, where pre-construction surveys determine that a special-status plant species is present in or adjacent to a Project area, the Permittee shall establish activity exclusion zones to avoid direct and indirect impacts of the Project on such species. No ground-disturbing activities shall take place within these designated activity exclusion zones, including construction of new facilities, construction staging, or other temporary work areas. Activity exclusion zones for special-status plant species will be established around each occupied habitat site, the boundaries of which will be clearly marked with standard orange plastic construction exclusion fencing or its equivalent. The establishment of activity exclusion zones will not be required if no construction-related disturbances will occur within 250 feet of the occupied habitat. The size of activity exclusion zones may be reduced through consultation with a qualified biologist and with concurrence from CDFW based on site-specific conditions.

57. Best Management Practices to Avoid and Minimize Effects on Special-Status Amphibians (MM BIO-5a). The Permittee shall implement BMPs and other appropriate measures consistent with Mitigation Measure BIO-5a in the Project MMRP to address special-status amphibians and shall ensure that, in accordance with measures developed for the EACCS, such BMPs are incorporated into the appropriate design and construction documents. Implementation of some of these measures will require that the Project proponent obtain incidental take permits from USFWS (e.g., California red-legged frog and California tiger salamander) and from CDFW (California tiger salamander only) before construction begins. Additional conservation measures or conditions of approval may be required in applicable Project permits (e.g., ESA or CESA incidental take authorization). Permittee shall comply with the specific requirements of Mitigation Measure BIO-5a in the MMRP to mitigate for effects on amphibians, including, but not limited to limits on the season in which ground-disturbing activities may occur, installation of barrier fencing, identifying appropriate relocation areas and preparing a relocation plan.

Permittee shall have a qualified biologist conduct preconstruction surveys immediately prior to ground-disturbing activities (including equipment staging, vegetation removal, grading). The biologist will survey the work area and all suitable habitats within 300 feet of the work area. If individuals (including adults, juveniles, larvae, or eggs) are found, work will not begin until USFWS and/or CDFW is contacted to determine if moving these life-stages is appropriate. If relocation is deemed necessary, it will be conducted in accordance with the relocation plan. Incidental take permits are required for relocation of California tiger salamander (USFWS and CDFW) and California red-legged frog (USFWS). Relocation of western spadefoot and foothill yellow-legged frog normally requires a letter from CDFW authorizing this activity; however, a biologist with a specific authorization (i.e., scientific collecting permit or MOU from CDFW) will be accepted for this purpose.

58. Preconstruction Surveys for Western Pond Turtle and Monitoring of Construction Activities (BIO-6). If determined as a result of pre-construction surveys pursuant to Mitigation Measure BIO-3a, that suitable aquatic or upland habitat for western pond turtle is identified within proposed work areas, Permittee shall implement Mitigation Measure BIO-6 as set forth in the Project MMRP, consistent with measures developed for the EACCS, to ensure that the proposed Project does not have a significant impact on western pond turtle. The mitigation includes but is not limited to surveys conducted both one week before and immediately before (within 24 hours) of work activity, use of a biological monitor if needed, and approval by CDFW for any required relocation of turtles.
59. Plan for Restoration of Disturbed Annual Grasslands (BIO-5c). Within 30 days prior to any ground disturbance, Permittee shall have a qualified biologist prepare a Grassland Restoration Plan in coordination with CDFW and subject to CDFW approval, to ensure that temporarily disturbed annual grasslands and areas planned for the removal of

permanent roads and turbine pad areas are restored to pre-Project conditions. The Grassland Restoration Plan shall conform to the requirements of Mitigation Measure BIO-5c in the MMRP.

The Grassland Restoration Plan shall include a requirement to monitor restoration areas annually (between March and October) for up to three years following the year of restoration. The restoration will be considered successful when the percent cover for restored areas is 70% absolute cover of the planted/seeded species compared to the percent absolute cover of nearby reference sites.

The Permittee shall provide evidence to the Planning Director that CDFW has reviewed and approved the Grassland Restoration Plan. Additionally, the Permittee shall provide annual monitoring reports to the County by January 31 for three years or until restoration is deemed successful by the CDFW, summarizing the monitoring results and any remedial measures implemented (if any are necessary) during the previous year.

60. Pre-Construction Worker-Awareness Training for Archaeological Resources (MM CUL-2c). The Permittee shall provide for training overseen by a qualified professional archaeologist prior to the initiation of any site preparation and/or the start of construction. The Permittee shall ensure that all construction workers receive adequate training, and to ensure that forepersons and field supervisors can recognize archaeological resources (e.g., areas of shellfish remains, chipped stone or groundstone, historic debris, building foundations, human bone) in the event that any are discovered during construction.

DURING CONSTRUCTION

61. Implement Applicable BAAQMD Basic Construction Mitigation Measures (MM AQ-2a). The project proponents shall require all contractors to comply with the following requirements for all areas with active construction activities.
- a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day.
 - b. All haul trucks transporting soil, sand, or other loose material offsite will be covered.
 - c. All visible mud or dirt tracked out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
 - d. All vehicle speeds on unpaved roads will be limited to 15 mph.
 - e. All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
 - f. Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California

- airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points.
- g. All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified visible emissions evaluator.
 - h. Post a publicly visible sign with the telephone number and person to contact representing the Permittee regarding dust complaints. This person will respond and take corrective action within 48 hours. The Air District and County Building Official's phone numbers will also be visible to ensure compliance with applicable regulations.
62. Implement Applicable BAAQMD's Additional Construction Mitigation Measures (MM AQ-2b). The project proponents shall require all contractors and subcontractors to comply with the following requirements for all areas with active construction activities.
- a. During construction activities, all exposed surfaces will be watered at a frequency adequate to meet and maintain fugitive dust control requirements of the relevant air quality management entities.
 - b. All excavation, grading, and/or demolition activities will be suspended when average wind speeds exceed 20 mph, as measured at the Livermore Municipal Airport.
 - c. Wind breaks (e.g., trees, fences) will be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50% air porosity.
 - d. Vegetative ground cover (e.g., fast-germinating native grass seed) will be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
 - e. If feasible and practicable, the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time will be limited.
 - f. Construction vehicles and machinery, including their tires, will be cleaned prior to leaving the construction area to remove vegetation and soil. Cleaning stations will be established at the perimeter of the construction area.
 - g. Site accesses to a distance of 100 feet from the paved road will be treated with a 6 to 12-inch compacted layer of wood chips, mulch, or gravel.
 - h. Sandbags or other erosion control measures will be installed to prevent silt runoff to public roadways from sites with a slope greater than 1%.
 - i. The idling time of diesel-powered construction equipment will be minimized to 2 minutes.

- j. The project will develop a plan demonstrating that the offroad equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20% NOX reduction and 45% PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
 - k. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).
 - l. All construction equipment, diesel trucks, and generators will be equipped with BACT for emission reductions of NOX and PM.
 - m. All construction equipment shall meet ARB's most recent certification standard for offroad heavy duty diesel engines.
63. Reduce construction-related air pollutant emissions to below BAAQMD NOx thresholds (MM AQ-2c). The project proponents will ensure construction-related emissions do not exceed BAAQMD's construction NOX threshold of 54 pounds per day. In addition to implementing PEIR Mitigation Measures AQ-2a and AQ-2b, the project proponents will coordinate with BAAQMD (or the Clean Air Foundation) to purchase NOX credits to offset remaining NOX construction and operations emissions exceeding BAAQMD thresholds.

The project proponents will track construction activity, estimate emissions, and enter into a construction mitigation contract with BAAQMD to offset NOX emissions that exceed BAAQMD NOX maximum daily threshold of 54 pounds per day.

The maximum daily emissions will be calculated on a daily basis by determining total construction-related NOX emissions for each calendar day. BAAQMD will use the mitigation fees provided by the project proponents to implement emissions reduction efforts that offset project NOX emissions that exceed the BAAQMD threshold.

This mitigation includes the following specific requirements:

- a. The project proponents will require construction contractors to provide daily construction activity monitoring data for all construction activities associated with the project to estimate actual construction emissions, including the effect of equipment emissions reduction measures. The project proponents will submit the daily construction activity monitoring data and an estimate of actual daily construction emissions to the lead agency and BAAQMD for review by the 15th day of each month for the prior construction month. The lead agency will examine the construction and operational activity monitoring to ensure it is representative, and BAAQMD will examine the emissions estimate to ensure it is calculated properly.

- b. After acceptance of the emissions estimates by BAAQMD for the prior month, the project proponents will submit mitigation fees to BAAQMD to fund offsets for the portion of daily emissions that exceed the maximum daily NOX threshold. The mitigation fees will be based on the mitigation contract with BAAQMD (see discussion below) but will not exceed the emissions-reduction project cost-effectiveness limit set for the Carl Moyer Program for the year in which mitigation fees are paid. The current Carl Moyer Program cost-effectiveness limit is \$30,000 per weighted ton of criteria pollutants (NOX + ROG + [20*PM]). An administrative fee of 5% will be paid by the project proponents to BAAQMD to implement the program.
 - c. The mitigation fees will be used by BAAQMD to fund projects that are eligible for funding under the Carl Moyer Program guidelines or other BAAQMD emissions-reduction incentive programs that meet the Carl Moyer Program cost-effectiveness threshold and are real, surplus, quantifiable, and enforceable.
 - d. The project proponents will enter into a mitigation contract with BAAQMD for the emissions-reduction incentive program. The mitigation contract will include the following:
 - a. Identification of appropriate offsite mitigation fees required for the project.
 - b. Timing for submission of mitigation fees.
 - c. Processing of mitigation fees paid by the project proponents.
 - d. Verification of emissions estimates submitted by the project proponents.
 - e. Verification that offsite fees are applied to appropriate mitigation programs within the SFBAAB.
 - e. The mitigation fees will be submitted within 4 weeks of BAAQMD acceptance of an emissions estimate provided by the project proponents showing that the maximum daily NOX threshold was exceeded (when measured on a daily basis).
64. Compliance with NPDES Storm Water Requirements (MM WQ-1). Permittee shall implement the Storm Water Pollution Prevention Plan (SWPPP) required by Condition 45 and as required by Mitigation Measure WQ-1 in the MMRP, maintain compliance with the other requirements of the CGP and the County C.6 Stormwater Permit (inspection, sampling, reporting, etc.) and construct the stormwater treatment system(s) per the Stormwater Control Plan (SCP). The SCP, SWPPP, and the CGP and County Stormwater Permit inspection, sampling and reporting documentation shall be kept onsite during construction activity and shall be made available upon request to representatives of the County and Water Board staff.
65. Prevent Introduction, Spread, and Establishment of Invasive Plant Species (MM BIO-2). The Permittee shall implement Mitigation Measure BIO-2 as set forth in the MMRP, in order to avoid and minimize the introduction and spread of invasive nonnative plant species, including the following BMPs, and the other requirements of Mitigation Measure BIO-2.

- a. Construction vehicles and machinery will be cleaned prior to entering the construction area. Cleaning stations will be established at the perimeter of the construction area along all construction routes or immediately offsite.
- b. Vehicles will be cleaned only at approved areas. No cleaning of vehicles will occur at job sites.
- c. To discourage the introduction and establishment of invasive plant species, seed mixtures and straw used within natural vegetation will be either rice straw or weed-free straw, as allowed by state and federal regulation of stormwater runoff.

In addition, the project proponent will prepare and implement erosion and sediment control plans to control short-term and long-term erosion and sedimentation effects and to restore soils and vegetation in areas affected by construction activities (2020 Updated PEIR Mitigation Measure BIO-1b). Prior to initiating any construction activities that will result in temporary impacts on natural communities, a restoration and monitoring plan will be developed for temporarily affected habitats in each project area (PEIR Mitigation Measure BIO-5c). Restoration and monitoring plans will be submitted to the County and CDFW for approval. These plans will include methods for restoring soil conditions and revegetating disturbed areas, seed mixes, monitoring and maintenance schedules, adaptive management strategies, reporting requirements, and success criteria. Following completion of project construction, the project proponents will implement the revegetation plans to restore areas disturbed by project activities to a condition of equal or greater habitat function than occurred prior to the disturbance.

66. Retain a Biological Monitor During Ground-Disturbing Activities in Environmentally-Sensitive Areas (BIO-1e). As required by Mitigation Measure BIO-1e, the Permittee shall have a qualified biologist (as determined by the Alameda County Planning Director) conduct periodic monitoring of decommissioning, repowering, and reclamation activities that occur adjacent to sensitive biological resources (e.g., special-status species, sensitive vegetation communities, wetlands, etc.). Monitoring shall occur during initial ground disturbance where sensitive biological resources are present and weekly thereafter or as determined by the County in coordination with a qualified biologist. The biologist will assist the crew, as needed, to comply with all Project implementation restrictions and guidelines. In addition, the biologist will be responsible for ensuring that the Permittee or its contractors maintain exclusion areas adjacent to sensitive biological resources, and for documenting compliance with all biological resources-related mitigation measures.
67. Protection of Valley Elderberry Longhorn Beetle Habitat (MM BIO-4a). Where pre-construction surveys completed pursuant to Condition 18 (Mitigation Measure BIO-3a) indicate valley elderberry longhorn beetle habitat is present within proposed work areas or within 100 feet of these areas, the Permittee shall implement Mitigation Measure BIO-4a in the MMRP related to avoiding removal of elderberry shrubs, protecting elderberry

shrubs/clusters near construction areas, providing buffer areas approved by USFWS, fencing and monitoring.

Biological inspection reports on the presence and protective actions taken regarding valley elderberry longhorn beetle habitat will be provided to the Permittee, the County and USFWS.

68. Stop Work Procedures for Encounters With Hazardous Materials or Soil or Groundwater Contamination (MM HAZ-4). As required in part by Mitigation Measure HAZ-4 as set forth in the MMRP, the Permittee shall initiate stop-work procedures upon encounters with hazardous materials or soil or groundwater contamination during construction, demolition or reclamation activities, and implement appropriate health and safety procedures, including the use of appropriate personal protective equipment (e.g., respiratory protection, protective clothing, helmets and goggles). Any such discovery shall be reported immediately to the Alameda County Health Services Agency – Environmental Health Department, and complete procedures outlined in Mitigation Measure HAZ-4 in the MMRP and as described in Condition 22.
69. Stop Work Procedures for Encounters With Cultural Resources During Ground-Disturbing Activities (MM CUL-2d). As required by Mitigation Measure CUL-2d as set forth in the MMRP, the Permittee shall, in addition to providing construction specifications requiring stop-work procedures upon encounters with cultural resources during grading or other ground-disturbing activity (as required by Condition 52), the Permittee and any related contractor shall immediately halt all activity within 100 feet of the find until a qualified archaeologist can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil (“midden”) containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If the find is determined to be potentially significant, the archaeologist, in consultation with the Native American representative (if appropriate), will develop a treatment plan that could include site avoidance, capping, or data recovery.
70. Stop Work Procedures for Encounters With Human Remains During Ground-Disturbing Activities (MM CUL-3). In addition to providing construction specifications requiring stop-work procedures upon encounters with cultural resources during grading or other ground-disturbing activity, the Permittee shall ensure the construction specifications include a stop-work order if human remains are discovered during construction or demolition. There will be no further excavation or disturbance of the site within a 100-foot radius of the location of such discovery, or any nearby area reasonably suspected to overlie adjacent remains. The Alameda County Coroner will be notified and will make a determination as to whether the remains are Native American. If the Coroner determines

that the remains are not subject to his authority, he will notify the Native American Heritage Commission, who will attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this state law, then the landowner will re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. A final report will be submitted to Alameda County. This report will contain a description of the mitigation program and its results, including a description of the monitoring and testing resources analysis methodology and conclusions and a description of the disposition/curation of the resources.

71. Procedures and Preparation for Encounters with Paleontological Resources During Major Excavation (MMs GEO-7a, GEO-7b and GEO-7c). As required by Mitigation Measures GEO-7a, GEO-7b and GEO-7c in the MMRP, the Permittee shall retain a qualified professional paleontologist to monitor activities with the potential to disturb sensitive paleontological resources, and to determine if, on the basis of data gathered during detailed project design, where monitoring by a paleontologist during ground-disturbing activities will require monitoring. The Permittee shall implement Mitigation Measures GEO-7a, GEO-7b and GEO-7c as set forth in the MMRP related to paleontological resources.

The Permittee will ensure that all construction workers receive adequate training provided by a qualified professional paleontologist, and to ensure that forepersons and field supervisors can recognize fossil materials in the event any are discovered during construction.

If substantial fossil remains (particularly vertebrate remains) are discovered during earth disturbing activities, activities within 100 feet of the find will stop immediately until a state-registered professional geologist or qualified professional paleontologist can assess the nature and importance of the find and a qualified professional paleontologist can recommend appropriate treatment. Subsequent procedures are described in detail in the MMRP for Mitigation Measures GEO-7c.

72. Construction Signage. Permittee shall provide signage as required by the permitting authority (e.g. Fire Department, Building Department) including phone numbers of the facility operator for use in case of an emergency. The name of the Project and the names, titles, and phone numbers of individuals responsible for control of construction-related noise, dust, and traffic shall be maintained on all signage during construction. A 24-hour emergency number shall also be provided on all signage. The sign shall be kept up-to-date at all times.
73. Limit Construction to Daylight Hours (MM AES-1). As required by Mitigation Measure AES-1, major construction activities shall not be undertaken between sunset and sunrise or on weekends. Construction activity is specifically prohibited from using high-wattage lighting sources to illuminate work sites after sunset or before sunrise, with the exception

of nighttime deliveries under the approved transportation control plan or other construction activities that require nighttime work for safety considerations. For the purpose of this condition and Mitigation Measure AES-1, major construction activities shall be defined as those which are visibly obtrusive from residences and public recreational trails, based on the finding of significant impacts in the PEIR.

74. Noise-Reduction Practices During Construction (MM NOI-2). The Permittee shall employ noise-reducing practices during decommissioning and new turbine construction so that resulting noise does not exceed Alameda County noise ordinance standards. Measures to limit noise may include the following:
- Prohibit noise-generating activities before 7 a.m. and after 7 p.m. on any day except Saturday or Sunday, and before 8 a.m. and after 5 p.m. on Saturday or Sunday.
 - Locate equipment as far as practical from noise sensitive uses.
 - Require that all construction equipment powered by gasoline or diesel engines have sound-control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation.
 - Use noise-reducing enclosures around noise-generating equipment where practicable.
 - Implement other measures with demonstrated practicability in reducing equipment noise upon prior approval by the County.

In no case will the Permittee be allowed to use gasoline or diesel engines without muffled exhausts.

PRIOR TO DATE OF COMMERCIAL OPERATION

75. Remove Derelict Facilities and Restore Abandoned Roadways (MM AES-2b). As required by Mitigation Measure AES-2b as set forth in the MMRP, the Permittee shall clear the Project site of all derelict equipment, wind turbine components not required for the Project, and litter and debris from old turbine operations. Such litter and debris may include derelict turbines, obsolete anemometers, unused electrical poles and broken turbine blades. In addition, abandoned roads that are no longer in use on such parcels shall be restored and hydroseeded to reclaim the sites and remove visual traces from the viewscape, except in cases where state or federal resource agencies (i.e., USFWS and/or CDFW) recommend that the features be left in place for habitat purposes, or as specified by local landowners to facilitate continued ranching operations. All parcels with new turbines will be maintained in such a manner through the life of Project operations and until the parcels are reclaimed in accordance with the approved reclamation plan.
76. Compensate for Impacts on Special-Status Plant Species (BIO-1d). The project proponent will avoid or minimize temporary and permanent impacts on special-status plants that occur on the project site and will compensate for impacts on special-status plant species.

Although all impacts on large-flowered fiddleneck, diamond-petaled California poppy, and caper-fruited tropidocarpum will be avoided, impacts on other special-status plant species will be avoided to the extent feasible, and any unavoidable impacts will be addressed through compensatory mitigation.

Where avoidance of impacts on a special-status plant species is infeasible, loss of individuals or occupied habitat of a special-status plant species occurrence will be compensated for through the acquisition, protection, and subsequent management in perpetuity of other existing occurrences at a minimum 2:1 ratio (occurrences preserved:occurrences impacted). For focal species identified in the EACCS (San Joaquin spearscale, big tarplant, Congdon's tarplant, palmate-bracted bird's-beak, Livermore Valley tarplant, and recurved larkspur), loss of individuals and occupied habitat will be compensated at 5:1, consistent with the EACCS. The project proponent will provide detailed information to the County and CDFW on the location of the preserved occurrences, quality of the preserved habitat, feasibility of protecting and managing the areas in-perpetuity, responsibility parties, and other pertinent information. The preserved habitat will be confirmed to support populations of the impacted species and will be preserved in perpetuity via deed restriction, establishment of a conservation easement, or similar preservation mechanism. A qualified botanist or plant ecologist will prepare a preservation plan or long-term management plan for the site containing at a minimum: a monitoring plan and performance criteria for the preserved plant population; a description of remedial measures to be performed in the event that performance criteria are not met; a description of maintenance activities to be conducted on the site, including weed control, trash removal, irrigation, and control of herbivory by livestock and wildlife; and an adequate funding mechanism to ensure long-term management of the preserved habitat. If suitable occurrences of a special-status plant species are not available for preservation, then the project will be redesigned to remove features that would result in impacts on that species.

77. Conservation Measures to Compensate for Avian Mortality (BIO-11h). The Permittee shall provide a plan for compensation for impacts on avian species, including raptors as well as smaller birds, are currently available, employing one or more of the options set forth in Mitigation Measure BIO-11h in the MMRP. The objective is to provide or improve habitat for raptors and avian species within the APWRA on a long-term basis, or in ten-year increments, to be adjusted on the basis of avian monitoring results only every ten years or once within each ten-year period. An avian conservation strategy, to be outlined in the draft APP required by Mitigation Measure 11a, shall be implemented within one year of the commercial operations date (or of 75 percent of the turbine capacity if construction is staged), unless compliance with the conservation strategy includes complying with compensatory mitigation measures in an Eagle Take Permit (ETP) from the USFWS, in which case compensation shall be provided according to terms of the eagle permit. Strategic measures may include retrofitting of high-risk electrical infrastructure; measures outlined in an approved Eagle Conservation Plan and Bird and Bat Conservation Strategy; contributions to avian conservation efforts such as

those undertaken by the California Raptor Center or the East Bay Regional Park District; contributions to regional conservation of avian habitat; contribution to efforts benefitting eagles and other raptors; and other conservation measures to be identified in the future by USFWS and non-governmental organizations. . If the ETP results in retrofitting of high-risk power poles outside of the APWRA, it will be accepted as compensatory mitigation only if required by an ETP from the USFWS, or if other compensatory mitigation measures causes a delay to the Project or results in a greater cost than would be incurred by high-risk power pole retrofits.

78. Compensate for Direct and Indirect Effects on Valley Elderberry Longhorn Beetle (BIO-4b). If elderberry shrubs cannot be avoided and protected as outlined in Mitigation Measure BIO-4a, the Permittee shall obtain an incidental take permit from USFWS and compensate for the loss of any elderberry shrubs. Surveys of elderberry shrubs to be transplanted will be conducted by a qualified biologist prior to transplantation. Surveys will be conducted in accordance with the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (U.S. Fish and Wildlife Service 1999). Permittee shall comply with the specific requirements of Mitigation Measure BIO-4b of the MMRP to mitigate for effects on valley elderberry longhorn beetle.

The Project proponent will be responsible for funding and providing monitoring reports to USFWS in each of the years in which a monitoring report is required. As specified in the *Conservation Guidelines*, the report will include information on timing and rate of irrigation, growth rates, and survival rates and mortality.

79. Compensate for Loss of Habitat for Special-Status Amphibians, Reptiles, Western Burrowing Owl, San Joaquin Kit Fox and American Badger (MMs BIO-5b, BIO-7b, BIO-9 and BIO-10b). Where impacts on aquatic and upland habitat for special-status amphibians, reptiles special-status and non-special-status tree/shrub- and ground-nesting birds and burrowing owls, cannot be avoided or minimized, Permittee shall provide compensatory mitigation in accordance with mitigation ratios and requirements developed under the EACCS (Appendix C). In the event that take authorization is required, compensatory mitigation will be undertaken in accordance with the terms of the authorization in consultation with USFWS and/or CDFW.
80. Compensate for the Loss of Riparian Habitat, Wetlands and Streams (MMs BIO-15, BIO-16 and BIO-18; if applicable). If wetlands or streams are filled or disturbed as part of the repowering Project, the Permittee shall compensate for the loss of this habitat to ensure no net loss of habitat functions and values. Compensation ratios will be based on site-specific information and determined through coordination with state and federal agencies (CDFW, USFWS, United States Army Corps of Engineers, or USACE). Unless specified otherwise by a resource agency, the compensation will be at a minimum 1:1 ratio (1 acre restored or created for every 1 acre filled) and may be a combination of onsite restoration/ creation, offsite restoration, and mitigation credits. A restoration and

monitoring plan will be developed and implemented. The plan will describe how alkali meadow habitat, riparian habitat or wetlands will be created and monitored.

81. Conduct Preconstruction Surveys and Implement Protection Measures for Western Bumble Bee (MMs BIO-22a and BIO-22b). As required by MM BIO-22a, prior to the start of construction, qualified biologist(s) will conduct botanical surveys in late spring/early summer to identify and map concentrations of flowering plants that provide food resources for western bumble bee. If moderate to high quality foraging habitat for western bumble bee is identified in the project area based on the habitat assessment, these areas will be surveyed by qualified invertebrate biologist(s) (with experience conducting bumble bee surveys) within 1 year prior to the start of construction. If western bumble bee is determined not to be present at the project site or a qualified invertebrate biologist (experienced with bumble bees) concludes that there is a very low likelihood that the species is present, then no additional mitigation is required. If western bumble bees are determined to be present at the project site, then the project proponent will implement MM BIO-22b.

As required by MM BIO-22b, the following is required if western bumble bees are present on the Project site:

- The project biologist would conduct additional preconstruction surveys within the project disturbance footprint for active bee nest colonies and associated floral resources (i.e., flowering vegetation on which bees from the colony are observed foraging) no more than 30 days prior to any ground disturbance between March and September.
- To minimize temporary disturbance of suitable foraging and nesting habitat for western bumble bee, ground disturbance within suitable annual grassland habitat will be restricted to the minimum area necessary to perform construction activities.
- To encourage growth of additional nectar and pollen producing plants at the project site, disturbed grasslands that are revegetated in accordance with PEIR Mitigation Measure BIO-5c will use a seed mix combination that includes nectar and pollen producing plants commonly used as a food source by western bumble bee.
- To minimize impacts on bees from herbicide drift, herbicide application around tower foundations will be performed using handheld equipment and will be restricted to a 20-foot radius buffer area around the tower foundations.

Additional conservation measures or conditions of approval may be required in applicable project permits.

82. Evidence of Compliance with the Federal Aviation Administration (FAA). Prior to the date of commercial operation, the Permittee shall provide a copy of the FAA Determination of No Hazard to the Alameda County Planning Director for a hearing by the Alameda County Airport Land Use Commission.

PERFORMANCE STANDARDS

83. Windfarm Fire Requirements. To provide a reasonable level of fire protection and safety for ongoing windfarm operations, the Permittee shall be responsible for compliance with the Altamont Pass Windfarms Fire Requirements dated September 22, 2005 adopted by Alameda County (ACFD) and which were reviewed and re-adopted on November 12, 2014. In addition, the Permittee shall make a reasonable attempt to maintain the telephone numbers of the inhabitants of all adjacent properties and give timely notification to same in the event of an on-site fire.
84. Safety Reporting. Permittee shall notify the County Building Official and Planning Director of any tower collapse, blade throw, fire, or injury to worker within five (5) days of any such occurrence.
85. Screen Surplus Parts and Materials (MM AES-2c). As required by Mitigation Measure AES-2c, the Permittee shall have surplus parts and materials that are kept onsite maintained in a neat and orderly fashion and screened from view, which may be accomplished by using a weatherproof camouflage material that can be draped over surplus parts and materials stockpiles. Draping materials shall be changed at least twice per year from green to brown and back again according to the season so that stockpiles are effectively camouflaged to match the predominant color of surrounding grass areas.
86. Site Maintenance. Litter and debris shall be contained in appropriate receptacles and shall be disposed of promptly. All construction trailers, construction materials and construction-related debris shall be removed following cessation of construction activity, or within 30 days of authorization of commercial operation.
87. Removal of Inoperative Equipment. Any inoperative windfarm or windfarm site that is determined to be substantially inoperative shall be restored or reclaimed consistent with the approved *Restoration and Reclamation Plan* (Condition 11), under the following procedures:
- a) The Planning Director and Director of Public Works shall make a determination that the permitted wind farm operations have been abandoned or have produced less than 5 percent of the rated output of the wind farm in one year, verified by the annual status reports and there is no demonstrated plan provided by the Permittee or property owner, satisfactory to the Planning Director, to restore the equipment to a productive operating condition.
 - b) The Planning Director and Director of Public Works may instead make a determination that more than 50% of the turbines are actively being removed or are in

disrepair and there is no demonstrated plan, satisfactory to the Planning Director, to restore the equipment to a productive operating condition.

Upon determination by the Planning Director that either of the above criteria is present on the property, the Planning Director shall give notice to the property owner/wind operator of the following requirements:

- a. Within 30 days from the date of the notice by the Planning Director, the Permittee shall secure a building permit to inspect all inoperable or abandoned wind turbines; and
 - b. The application for a building permit shall be accompanied by a cash performance deposit to restore the site subject to the approved *Restoration and Reclamation Plan*.
88. Noise Standards. In the event a reasonable complaint is received by the Environmental Health Director alleging the presence of sound levels from one or more wind turbines exceeding the levels described in the application, or exceeding 55 dBA (Ldn) as measured at the exterior of any dwelling unit:
- a. The Environmental Health Director shall report this matter to the Permittee and to the Planning Director and upon receipt of such report, this matter shall be brought to hearing pursuant to Section 17.54.030.
 - b. Upon receipt of the report from the Environmental Health Director, the Planning Director shall require the Permittee to have a qualified firm furnish a site specific study with recommendations on the circumstances, if any, which would render the Project in conformance with all applicable noise conditions; the report shall also include a recommendation to the Planning Director who will make the final determination as to whether subsection (d) shall be imposed.
 - c. For a minimum 30 day period from the date of notification from the Environmental Health Director, at the time and place as may be agreed upon by the parties involved, Permittee shall attempt in good faith to negotiate a resolution of this matter with the party making the allegation; the results of such negotiation shall be reported to the Planning Director in a timely manner.
 - d. Following the review period as provided under subsection (c) and until the conclusion of the revocation procedures as provided by Section 17-54.030, one or more wind turbines authorized by this permit to be constructed or maintained that are in closest proximity to the dwelling or building site of the party making the allegation, may be required to be made inoperative.

The measurement standard for the A-weighted scale shall be adjusted by the Planning Director to allow any sound device that is installed on or around the turbine as a mitigation for bird collisions.

Methods for measuring and reporting acoustic emissions from wind turbines and wind-farms shall be equal to or exceed the minimum standards for precision described by the

International Electrotechnical Commission (IEC) in its 61400 series – Standards and Technical Specifications – *IEC 61400-11: Acoustic Noise Measurement Techniques*.

The Planning Director, in consultation with the Alameda County Environmental Health Services, shall establish criterion for noise samples and measurement parameters such as the duration of data collection, time of day, wind speed, atmospheric conditions and direction as set forth in the Wyle Research Report.

89. Electromagnetic Interference. If it has been demonstrated to the Planning Director that the turbine is causing disruptive electromagnetic interference, the Permittee shall promptly mitigate the disruptive interference, which may include discontinued operation of one or more turbine.

MONITORING AND SUBSEQUENT REVIEW

90. Initial Status Report. Six months from the issuance of grading and/or building permits, the Permittee shall submit to the Planning Director a status report describing compliance with conditions of the permit.
91. Annual Status Report. Following commercial operation date (COD), and on each annual anniversary of said commencement, Permittee shall submit to the Planning Director a brief status report containing the following information: description and rated capacity of all equipment installed, relevant meteorological data collected, and actual MW electric power generated to date broken down into appropriate time categories.
92. Post-Construction Avian Fatality Monitoring (MM BIO-11g). As required by Mitigation Measure BIO-11g as set forth in the MMRP, the Permittee shall provide for a post-construction monitoring program to be conducted for the Project for a minimum of three (3) years beginning on the COD. Monitoring may continue beyond 3 years if construction is completed in phases. Moreover, if the results of the first 3 years indicate that baseline fatality rates (i.e., non-repowered fatality rates) are exceeded, monitoring will be extended until the average annual fatality rate has dropped below baseline fatality rates for 2 years, and to assess the effectiveness of adaptive management measures specified in Mitigation Measure BIO-11i. An additional 2 years of monitoring will be implemented at year 10 (i.e., the tenth anniversary of the COD). Project proponents will provide access to qualified third parties authorized by the County to conduct any additional monitoring after the initial 3-year monitoring period has expired and before and after the additional 2-year monitoring period, provided that such additional monitoring utilizes scientifically valid monitoring protocols. Monitoring shall be in conformance with the protocols and specifications of Mitigation Measure BIO-11g, including the formation of a technical advisory committee (TAC) to oversee the monitoring program and to advise the County on implementation of adaptive management measures.
93. Post-Construction Bat Fatality Monitoring (MM BIO-14b). As required by Mitigation Measure 14b in the MMRP, the Permittee shall implement a scientifically defensible,

post-construction bat fatality monitoring program that is consistent with the protocols and sample size established and recognized by bat biologists in the APWRA, to estimate actual bat fatalities and determine if additional mitigation is required. Such monitoring shall take place concurrent with the 3-year post-construction monitoring program required by Mitigation Measure BIO-11g, developed in accordance with California Energy Commission and California Department of Fish and Game (2007), and shall incorporate bat-specific components and protocols as specified by Mitigation Measure 14b in the MMRP, including having at least one biologist with significant experience in bat research on the TAC, performing post-construction bat fatality monitoring using trained dogs with handlers, and conducting bat acoustic surveys concurrently with fatality monitoring at the Project site. If recommended by the TAC, such a monitoring program shall recommence for two (2) years beginning on the tenth anniversary of the COD.

94. Annual Monitoring Reports on Bat Use and Fatalities (MM BIO-14c). The Permittee shall have annual reports of bat use results and fatality monitoring prepared by a qualified biologist within 3 months of the end of the last day of each year's fatality monitoring as required by Mitigation Measure BIO-14b, and submit such reports to the TAC and Planning Director. Special-status bat species records will be reported to the California Natural Diversity Data Base (CNDDB).
95. Technical Advisory Committee (MM BIO-11g). The County shall convene a Technical Advisory Committee (TAC) to oversee the post-construction monitoring program as required by Mitigation Measure BIO-11g and Condition 92 and to advise the County on adaptive management measures required by Mitigation Measure BIO-11i and Condition 96. The roles and responsibilities of the TAC membership shall be established by the Planning Director following consultation with the East County Board of Zoning Adjustments (based on a public hearing to be held for such specific purpose on or before December 18, 2014). The TAC shall include representatives from the County (including one or more technical consultants, such as a biostatistician, an avian biologist, and a bat biologist), and wildlife agencies (CDFW, USFWS) and as determined following the above-mentioned consultation. The TAC will have a standing meeting, which shall be open to the public, every 6 months to review monitoring reports produced pursuant to Mitigation Measure BIO-11g and Condition 92. Formation and operation of the TAC shall otherwise be consistent with Mitigation Measure BIO-11g.

The TAC may be the same TAC as may be formed and meeting for the purpose of prior repowering projects, such as Golden Hills—Phase 1; no new TAC is either required or encouraged. An adjunct or auxiliary advisory committee for the TAC composed of landowners, special district representatives, environmental advocacy groups and other stakeholders shall be convened by the Planning Director to confer with the 'core' TAC members on an as-needed basis, particularly on issues of establishing conservation easements and providing for landscape-scale mitigation as required by Condition 76.

96. Implement an Avian Adaptive Management Program (MM BIO-11i). If fatality monitoring described in Mitigation Measure BIO-11g results in an estimate that exceeds the preconstruction baseline fatality estimates (i.e., estimates at the non-repowered turbines as described in the PEIR) for any focal species or species group (i.e., individual focal species, all focal species, all raptors, all non-raptors, all birds combined), the Permittee shall prepare a Project-specific adaptive management plan within 2 months following the availability of the fatality monitoring results. The County shall review and approve such plan in consultation with the TAC and it shall be implemented within 2 months of such approval. Follow-up monitoring will be required to determine if specific measures shall be sustained, revised or replaced with other measures. Measures, as outlined in Mitigation Measure BIO-11i, include but are not limited to visual modifications, anti-perching measures, prey-reduction strategies, use of experimental technologies, turbine curtailment (including real-time curtailment), cut-in speed adjustments based on a focused study of such a strategy, or condor evaluation and curtailment strategies.
97. Develop and Implement a Bat Adaptive Management Plan (MM BIO-14d). The Permittee shall develop adaptive management plans to reduce bat mortality, in concert with Mitigation Measure BIO-14b, using appropriate feasible measures, and using both currently available and emerging information. The goals of the adaptive management plans are to ensure that the best available science and emerging technologies are used to assess impacts on bats, and that impacts are minimized to the greatest extent possible while maintaining energy production. Specific bat-related measures shall conform to the guidelines set forth in Mitigation Measure BIO-14d in the MMRP, including identified adaptive management measures.
98. Injured Bat Rehabilitation Compensation (MM BIO-14e). Project proponent shall pay in full the cost of reasonable, licensed rehabilitation efforts for any injured bats taken to wildlife care facilities from the Project area.
99. Stormwater Control Plan: Permittee shall carry out the operation and maintenance (O&M) of all installed stormwater protective system(s) as directed in the approved Stormwater Control Plan (SCP) and in compliance with Provision C.3 of the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (MRP) and with the terms and conditions of the County Stormwater Permit, as required by Condition 45.
100. Monitor Substation Circuit Breakers for SF₆ Leakage. (MM GHG-2b). Permittee shall provide ensure that any new circuit breaker installed at a substation has a guaranteed SF₆ leak rate of 0.5% by volume or less. The applicant will provide Alameda County with documentation of compliance, such as specification sheets, prior to installation of the circuit breaker. In addition, the applicant will monitor the SF₆-containing circuit breakers at the substation consistent with Scoping Plan Measure H-6 for the detection and repair of leaks.

101. Optional Review/Revocation/Revision. At any time during the term of this permit and after notice as provided for in the initial hearing, this matter may be set for rehearing if the Planning Director has made an initial determination based on substantial evidence that the use of the site for generation of electrical energy from wind turbine operations has ceased for a period of six months, or has produced less than 5 percent of the rated output of the wind farm in one year, and if therefore the permit should be revoked. In addition, pursuant to Section 17.54.030, the permit may be revoked if the permit has otherwise been exercised unlawfully or contrary to any condition or limitation of its issuance. As part of such rehearing, and/or reconsideration for the permit, the Board may determine that conditions previously imposed should be modified or new condition should be added to assure continued affirmative findings for this permit. This reconsideration may include imposition of other requirements, treatments and measures to ensure public safety and applicable policies of the East County Area Plan. Any condition modified or added shall have the same force and effect as if originally imposed.
102. Transfer of Operations. Any entity that has acquired the facilities as authorized under this permit may maintain the benefits of the existing use permit provided that a letter of notification is submitted to the Board of Zoning Adjustments within six months after such transaction, and all conditions of approval for the subject facility are carried out by the new operator/Permittee.
103. Site Restoration. Permittee shall provide written notification to the Planning Director upon cessation of operations on the site by the Permittee. During operation of the Project, no abandoned turbine tower, rotor, ground or other equipment components shall be stored onsite outside designated storage areas. A wind turbine shall be deemed abandoned for the purposes of this Resolution if it has not produced electricity for one year or has produced less than 5 percent of the rated output of the wind farm in one year.
- If all operations have been terminated, the Permittee and/or property owner shall be required to remove all improvements authorized under this permit from the site and the property shall be returned within twelve months of cessation to a condition with no wind facilities, subject to the requirements of the County.
104. Termination. Said Conditional Use Permit shall terminate after 30 years, on the 30th anniversary of the date of approval of this application, and shall remain revocable for cause in accordance with Section 17.54.030 of the Alameda County Zoning Ordinance. Permittee shall either remove the turbines and improvements approved herein in accordance with the approved reclamation plan or shall apply for new use conditional permits in accordance with Section 17.54.130 of the Zoning Ordinance.

Exhibit A

Mulqueeney Ranch Wind Repowering Project Written Findings of Significant Effects

The California Environmental Quality Act (CEQA) Public Resources Code Sections 21000 et seq., state that if a project would result in significant environmental impacts it may be approved, if feasible mitigation measures or feasible alternatives can avoid or substantially lessen the impact or if there are specific economic, social, or other considerations which make it infeasible to substantially lessen or avoid the impacts. Therefore, when an environmental impact report ("EIR") has been completed which identifies one or more potentially significant environmental impacts, the approving agency must make one or more of the following findings for each identified significant impact:

- a) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
- b) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- c) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

In accordance with CEQA Guidelines Section 15091, the following findings and supporting facts summarize each significant environmental impact and the mitigation measures adopted to avoid or substantially reduce the magnitude of the effect, as identified in the Final Supplemental EIR (SEIR) prepared pursuant to CEQA Guidelines Section 15162 as a supplement to the Altamont Pass Wind Resource Area Repowering Program EIR (PEIR), which the County of Alameda (County) certified in November 2014. Also set forth in these Findings are those impacts that the County, as the Lead Agency, finds cannot with certainty be avoided or reduced to a less-than-significant level even with the adoption of all feasible mitigation measures proposed in the SEIR. In adopting these findings and mitigation measures, the County also adopts a Statement of Overriding Considerations. The Statement of Overriding Considerations describes the economic, social, and other benefits of the Project that will render these significant unavoidable environmental impacts acceptable.

The findings described below are organized by resource issue, in the same order as the effects are discussed in the SEIR. The Lead Agency's findings regarding the Project follow the individual effect findings. The findings reference the final SEIR (part of the record upon which the East County Board of Zoning Adjustments [EBZA] bases its decision on the project) and mitigation measures in support of the findings. For specific resource mitigation measures, the section number where the full text of the mitigation measure occurs is noted in the finding.

Introduction

The Project area is located in the Altamont Hills of eastern Alameda County near the San Joaquin County line, north and south of Interstate (I-) 580 and approximately 56 miles east of San Francisco.

The Altamont Hills are at the geographical interface between the Coast Ranges and the Central Valley. Existing predominant uses of the area are windfarms and cattle grazing.

The proposed project would entail installation of up to 36 new wind turbines, replacing the 518 old generation wind turbines that were removed from the project site in 2016. The new turbines would have individual generating capacities between 2.2 and 4.2 MW and would have a combined maximum generating capacity of 80 MW. The exact turbine model is still being evaluated but would be selected based on project economics and energy cost driven by site constraints, data obtained from meteorological monitoring of the wind resources, civil and electrical construction costs and turbine availability as well as environmental considerations, bird use survey results, and avian micro-siting considerations. Existing roads would be used where possible, and temporary widening and some new roads would be necessary. The project would also require installation of underground electrical lines connecting the turbines to a new substation that would be constructed adjacent to PG&E's Tesla substation where the project would connect to the grid. Given the proximity of the project substation to the Tesla substation, construction of an overhead high-voltage transmission line will not be required except for a short span (less than 300 feet) between the two substations.

The proposed project components are listed below.

- A total nameplate generation capacity of 80 MW.
- Installation of up to 36 new wind turbine generators, towers, foundations, and pad-mounted transformers.
- Development of project access roads (including the use of existing roads to the extent possible).
- Installation of a temporary construction staging area.
- Installation of up to three permanent meteorological towers.
- Installation of an underground power collection system.
- Construction of a new substation.

The SEIR is intended to identify the anticipated environmental impacts of the project that may be approved by Alameda County (County) for installation of up to 36 new wind turbines in the Alameda County portion of the APWRA.

Record of Proceedings and Custodian of Record

The record upon which all findings and determinations related to the approval of the project are based comprises the items listed below.

- The SEIR and all documents referenced in or relied upon by the SEIR.
- All information (including written evidence and testimony) provided by County staff to the EBZA relating to the SEIR, the approvals, and the project.
- All information (including written evidence and testimony) presented to the EBZA by the environmental consultants who prepared the SEIR or incorporated into reports presented to the EBZA.

- All information (including written evidence and testimony) presented to the County from other public agencies related to the project or the SEIR.
- All applications, letters, testimony, and presentations relating to the project.
- All information (including written evidence and testimony) presented at any County hearing related to the project and the SEIR.
- All County-adopted or County-prepared land use plans, ordinances, including without limitation general plans, specific plans, and ordinances, together with environmental review documents, findings, mitigation monitoring programs, and other documents relevant to land use within the area.
- The Mitigation Monitoring and Reporting Program for the project.
- All other documents composing the record pursuant to Public Resources Code Section 21167.6(e).

The custodian of the documents and other materials that constitute the record of the proceedings upon which the County's decisions are based is Andrew Young, Senior Planner, or his designee. Such documents and other material are located at 224 Winton Avenue, Room 111, Hayward, California 94544.

Consideration and Certification of the PEIR

In accordance with CEQA, the EBZA certifies that the SEIR has been completed in compliance with CEQA. The EBZA has independently reviewed the record and the SEIR prior to certifying the SEIR and approving the Project. By these findings, the EBZA confirms, ratifies, and adopts the findings and conclusions of the SEIR as supplemented and modified by these findings. The SEIR and these findings represent the independent judgment and analysis of the County and the EBZA. The EBZA recognizes that the SEIR may contain clerical errors. The EBZA reviewed the entirety of the SEIR and bases its determination on the substance of the information it contains. The EBZA certifies that the SEIR is adequate to support the approval of the action that is the subject of the Resolution to which these CEQA findings are attached.

The EBZA certifies that the SEIR is adequate to support approval of the proposed Project described in the staff report, each component and phase of the project described in the SEIR, any alternative of the project described in the PEIR, any minor modifications to the project or variants of the project described in the PEIR, and the components of the project.

Absence of Significant New Information

The EBZA recognizes that the Final SEIR incorporates information obtained and produced after the Draft SEIR was completed, and that the Final SEIR contains additions, clarifications, and modifications. The EBZA has reviewed and considered the Final SEIR and all of this information. The Final SEIR does not add significant new information to the Draft SEIR that would require recirculation of the SEIR pursuant to CEQA Guidelines Section 15088.5. More specifically, the new information added to the SEIR does not involve a new significant environmental impact, a

substantial increase in the severity of an environmental impact, or a feasible mitigation measure or alternative considerably different from others previously analyzed that the project sponsor declines to adopt and that would clearly lessen the significant environmental impacts of the project. No information indicates that the Draft SEIR was inadequate or conclusory or that the public was deprived of a meaningful opportunity to review and comment on the Draft SEIR. Thus, recirculation of the SEIR is not required. The EBZA finds that the changes and modifications made to the SEIR after the Draft SEIR was circulated for public review and comment do not individually or collectively constitute significant new information within the meaning of Public Resources Code Section 21092.1 or Section 15088.5 of the State CEQA Guidelines.

Severability

If any term, provision, or portion of these Findings or the application of these Findings to a particular situation is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions of these Findings, or their application to other actions related to the project, shall continue in full force and effect unless amended or modified by the County.

Findings and Recommendations Regarding Significant and Unavoidable Impacts

Biological Resources

Impact BIO-11: Avian mortality resulting from interaction with wind energy facilities

Potential Impact: The operation of wind energy facilities has been shown to cause avian fatalities through collisions with wind turbines and powerlines and through electrocution on powerlines. Although repowering is intended to reduce fatalities, enough uncertainty remains in light of project- and site-specific data to warrant a conservative approach in the impact analysis. Accordingly, the continued or increased loss of birds (including special-status species) at a rate exceeding the baseline rate would be a significant adverse impact.

The PEIR concluded that repowering would result in significant and unavoidable impacts associated with avian mortality, although it anticipated that overall mortality rates may decrease with the transition from old-generation to new-generation turbines. The PEIR acknowledged, however, that the avian mortality estimates were uncertain, stating that: "... while repowering is intended to reduce fatalities, enough uncertainty remains in light of project- and site-specific data to warrant a conservative approach in the impact analysis. Accordingly, the continued or increased loss of birds (including special-status species) *at a rate potentially greater than the existing baseline fatality rates* is considered a significant and unavoidable impact" [emphasis added] (Alameda County Community Development Agency 2014:3.4-103).¹

¹ Similar statements are repeated throughout the PEIR; see page 3.4-121:

As described above, for all avian focal species analyzed, a fully repowered program area would be expected to reduce estimated fatality rates. However, fatalities would still be expected to result from the operation of the repowered turbines, and uncertainty surrounding the accuracy of the estimated fatality rates and the types of species potentially affected remains. Considering this information, and despite the anticipated reductions in

While the PEIR set forth multiple measures to address avian mortality, it concluded that these measures would not reduce the impact to a less-than-significant level. This conclusion holds true for the project. The project's impact on protected and special-status avian species would be a significant and unavoidable impact.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure BIO-11a: Prepare a Project-specific avian protection plan

All project proponents will prepare a project-specific APP to specify measures and protocols consistent with the program-level mitigation measures that address avian mortality. The project-specific APPs will include, at a minimum, the following components.

- Information and methods used to site turbines to minimize risk.
- Documentation that appropriate turbine designs are being used.
- Documentation that avian-safe practices are being implemented on project infrastructure.
- Methods used to discourage prey for raptors.
- A detailed description of the postconstruction avian fatality monitoring methods to be used (consistent with the minimum requirements outlined in Mitigation Measure BIO-11g).
- Methods used to compensate for the loss of raptors (consistent with the requirements of 2020 Updated PEIR Mitigation Measure BIO-11h).

Each project applicant will prepare and submit a draft project-specific APP to the County. The draft APP will be reviewed by the TAC for consistency and the inclusion of appropriate mitigation measures that are consistent with the PEIR and recommended for approval by the County. Each project applicant must have an approved Final APP prior to commercial operation.

2020 Updated PEIR Mitigation Measure BIO-11b: Site turbines to minimize potential mortality of birds

Consistent with PEIR Mitigation Measure BIO-11b, and in recognition that focused siting of turbines using analyses of landscape features and location-specific bird use and behavior data to identify locations with reduced collision risk may result in reduced fatalities (Smallwood et al. 2009), project proponents will conduct a siting process and prepare a micro-siting analysis to select turbine locations to minimize potential impacts on bird and bat species. The proponent has utilized existing data and collected new site-specific data as part of the siting analysis.

The project proponent will utilize currently available guidelines published by the Alameda County Scientific Review Committee (SRC) for siting wind turbines (Alameda County SRC 2010)

avian impacts compared to the baseline rates, the County has determined to use a conservative approach for the impact assessment, concluding that turbine related fatalities could constitute a substantial adverse effect on avian species because the rates for some or all of the species could be greater than the baseline rates. This impact would be significant. Implementation of Mitigation Measures BIO-11a through BIO-11i would reduce this impact, but not to a less-than-significant level; accordingly, this impact is considered significant and unavoidable.

and/or other currently available research or guidelines to conduct siting analysis. Additionally, project proponents will use the results of previous siting efforts to inform the analysis and siting methods as appropriate such that the science of siting continues to be advanced. All project proponents will collect field data that identify or confirm the behavior, utilization, and distribution patterns of affected avian and bat species prior to the installation of turbines. Project proponents will collect and utilize available existing information, including but not necessarily limited to: siting reports and monitoring data from previously installed projects; published use and abundance studies and reports; topographic features known to increase collision risk (trees, riparian areas, water bodies, and wetlands); and changes to the landscape caused by grading for the placement of turbine foundations.

Project proponents will also collect and utilize additional field data as necessary to inform the siting analysis for golden eagle. As required in 2020 Updated Mitigation Measure BIO-8a, surveys will be conducted to locate golden eagle nests within 2 miles of proposed project areas. Siting of turbines within 2 miles of an active or alternative golden eagle nest or active golden eagle territory will be based on a site-specific analysis of risk based on the estimated eagle territories, conducted in consultation with USFWS.

Project proponents will utilize methods (i.e., computer models) to identify dangerous locations for birds and bats based on site-specific risk factors informed by the information discussed above. The project proponents will compile the results of the siting analyses for each turbine and document these in the project-level APP, along with the specific location of each turbine. Consistent with past practice for previously approved repowering projects, the proponent shall submit the siting analysis for review and recommendations to the Alameda County Wind Repowering/Avian Protection Technical Advisory Committee, which includes representatives of the CDFW and the USFWS, prior to applying for any building or grading permit. The County planning director shall have the authority to approve or deny such permits on the basis of the siting analysis and the recommendations of the Technical Advisory Committee.

PEIR Mitigation Measure BIO-11c: Use turbine designs that reduce avian impacts

Use of turbines with certain characteristics is believed to reduce the collision risk for avian species. Project proponents will implement the design-related measures listed below.

- Turbine designs will be selected that have been shown or that are suspected to reduce avian fatalities, based on the height, color, configuration, or other features of the turbines.
- Turbine design will limit or eliminate perching opportunities. Designs will include a tubular tower with internal ladders; external catwalks, railings, or ladders will be prohibited.
- Turbine design will limit or eliminate nesting or roosting opportunities. Openings on turbines will be covered to prevent cavity-nesting species from nesting in the turbines.
- Lighting will be installed on the fewest number of turbines allowed by FAA regulations, and all pilot warning lights will fire synchronously. Turbine lighting will employ only red or dual red-and-white strobe, strobe-like, or flashing lights (U.S. Fish and Wildlife Service 2012a). All lighting on turbines will be operated at the minimum allowable intensity, flashing frequency, and quantity allowed by FAA (Gehring et al. 2009; U.S. Fish and Wildlife Service 2012a). Duration between flashes will be the longest allowable by the FAA.

PEIR Mitigation Measure BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure

The Project proponent will apply the following measures when designing and siting turbine-related infrastructure. These measures will reduce the risk of bird electrocution and collision.

- Permanent meteorological stations will avoid use of guy wires. If it is not possible to avoid using guy wires, the wires will be at least 4/0 gauge to ensure visibility and will be fitted with bird deterrent devices.
- All permanent meteorological towers will be unlit unless lighting is required by FAA. If lighting is required, it will be operated at the minimum allowable intensity, flashing frequency, and quantity allowed by FAA.
- To the extent possible, all powerlines will be placed underground. However, lines may be placed aboveground immediately prior to entering the substation. All aboveground lines will be fitted with bird flight diverters or visibility enhancement devices (e.g., spiral damping devices). When lines cannot be placed underground, appropriate avian protection designs must be employed. As a minimum requirement, the collection system will conform with the most current edition of the Avian Power Line Interaction Committee guidelines to prevent electrocutions.
- Lighting will be focused downward and minimized to limit skyward illumination. Sodium vapor lamps and spotlights will not be used at any facility (e.g., laydown areas, substations) except when emergency maintenance is needed. Lighting at collection facilities, including substations, will be minimized using downcast lighting and motion-detection devices. The use of high-intensity lighting; steady-burning or bright lights such as sodium vapor, quartz, or halogen; or other bright spotlights will be minimized. Where lighting is required it will be designed for the minimum intensity required for safe operation of the facility. Green or blue lighting will be used in place of red or white lighting.

PEIR Mitigation Measure BIO-11e: Retrofit existing infrastructure to minimize risk to raptors

Any existing power lines in a specific project area that are owned by the wind project operator and that are associated with electrocution of an eagle or other raptor will be retrofitted within 30 days to make them raptor-safe according to Avian Power Line Interaction Committee guidelines. All other existing structures to remain in a project area during repowering will be retrofitted, as feasible, according to specifications of PEIR Mitigation Measure BIO-11c prior to repowered turbine operation.

PEIR Mitigation Measure BIO-11f: Discourage prey for raptors

The Project proponent will apply the following measures when designing and siting turbine-related infrastructure. These measures are intended to minimize opportunities for fossorial mammals to become established and thereby create a prey base that could become an attractant for raptors.

- Rodenticide will not be utilized on the Project site to avoid the risk of raptors scavenging the remains of poisoned animals.

- Boulders (rocks more than 12 inches in diameter) excavated during Project construction may be placed in aboveground piles in the Project area so long as they are more than 500 meters (1,640 feet) from any turbine. Existing rock piles created during construction of first- and second-generation turbines will also be moved at least 500 meters (1,640 feet) from turbines.
- Gravel will be placed around each tower foundation to discourage small mammals from burrowing near turbines.

2020 Updated PEIR Mitigation Measure BIO-11g: Implement postconstruction avian fatality monitoring for all repowering projects

A postconstruction monitoring program will be conducted at each repowering project for a minimum of 3 years beginning on the commercial operation date (COD) of the project. Monitoring may continue beyond 3 years if construction is completed in phases. Moreover, if the results of the first 3 years indicate that baseline fatality rates (i.e., non-repowered fatality rates) are exceeded, monitoring will be extended until the average annual fatality rate has dropped below baseline fatality rates for 2 years, and to assess the effectiveness of adaptive management measures specified in Mitigation Measure BIO-11i. An additional 2 years of monitoring will be implemented at year 10 (i.e., the tenth anniversary of the COD). Project proponents will provide access to qualified third parties authorized by the County to conduct any additional monitoring after the initial 3-year monitoring period has expired and before and after the additional 2-year monitoring period, provided that such additional monitoring utilizes scientifically valid monitoring protocols.

A TAC will be formed to oversee the monitoring program and to advise the County on adaptive management measures that may be necessary if fatality rates substantially exceed those predicted for the project (as described below in Mitigation Measure BIO-11i). The TAC will have a standing meeting, which will be open to the public, every 6 months to review monitoring reports produced by operators in the program area. In these meetings, the TAC will discuss any issues raised by the monitoring reports and recommend to the County next steps to address issues, including scheduling additional meetings, if necessary.

The TAC will comprise representatives from the County (including one or more technical consultants, such as a biostatistician, an avian biologist, and a bat biologist), and wildlife agencies (CDFW, USFWS). Additional TAC members may also be considered (e.g., a representative from Audubon, a landowner in the program area, a representative of the operators) at the discretion of the County. The TAC will be a voluntary and advisory group that will provide guidance to the County Planning Department. To maintain transparency with the public, all TAC meetings will be open to the public, and notice of meetings will be given to interested parties.

The TAC will have three primary advisory roles: (1) to review and advise on project planning documents (i.e., project-specific APPs) to ensure that project-specific mitigation measures and compensatory mitigation measures described in this PEIR are appropriately and consistently applied, (2) to review and advise on monitoring documents (protocols and reporting) for consistency with the mitigation measures, and (3) to review and advise on implementation of the adaptive management plans.

Should fatality monitoring reveal that impacts exceed the baseline thresholds established in the PEIR, the TAC will advise the County on requiring implementation of adaptive management

measures as described in Mitigation Measure BIO-11i. The County will have the decision-making authority, as it is the organization issuing the CUPs. However, the TAC will collaboratively inform the decisions of the County.

Operators are required to provide for avian use surveys to be conducted within the project area boundaries for a minimum of 30 minutes duration. Surveyors will be qualified and trained and subject to approval by the County.

Carcass surveys will be conducted at every turbine for projects with 20 or fewer turbines. For projects with more than 20 turbines, such surveys will be required at a minimum of 20 turbines, and a sample of the remaining turbines may be selected for carcass searches. The operator will be required to demonstrate that the sampling scheme and sample size are statistically rigorous and defensible. Where substantial variation in terrain, land cover type, management, or other factors may contribute to significant variation in fatality rates, the sampling scheme will be stratified to account for such variation. The survey protocol for sets and subsets of turbines, as well as proposed sampling schemes that do not entail a search of all turbines, must be approved by the County in consultation with the TAC prior to the start of surveys.

The search interval will not exceed 7 days for the minimum of 20 turbines to be surveyed; however, the search interval for the additional turbines (i.e., those exceeding the 20-turbine minimum) that are to be included in the sampling scheme may be extended up to 28 days or longer if recommended by the TAC.

The estimation of detection probability is a rapidly advancing field. Carcass placement trials, broadly defined, will be conducted to estimate detection probability during each year of monitoring. Sample sizes will be large enough to potentially detect significant variation by season, carcass size, and habitat type.

Operators will be required to submit copies of all raw data forms to the County annually, will supply raw data in a readily accessible digital format to be specified by the County, and will prepare raw data for inclusion as appendices in the annual reports. The intent is to allow the County to conduct independent analyses and meta-analyses of data across the APWRA, and to supply these data to the regulatory agencies if requested.

Annual reports submitted to the County will provide a synthesis of all information collected to date. Each report will provide an introduction; descriptions of the study area, methods, and results; a discussion of the results; and any suitable recommendations. Reports will provide raw counts of fatalities, adjusted fatality rates, and estimates of project-wide fatalities on both a per MW and per turbine basis.

2020 Updated PEIR Mitigation Measure BIO-11h: Compensate for the loss of avian species, including golden eagles, by contributing to conservation efforts

Discussion

Several options to compensate for impacts on avian species, including raptors as well as smaller birds, are currently available. Some are targeted to benefit certain species, but they may also have benefits for other species. For example, USFWS's Eagle Conservation Plan (ECP) Guidelines currently outline a compensatory mitigation strategy for golden eagles using the retrofit of high-risk power poles (poles known or suspected to electrocute and kill eagles). The goal of this strategy is to eliminate hazards for golden eagles. However, because the poles are also dangerous

for other large raptors (e.g., red-tailed hawk, Swainson's hawk), retrofitting them can benefit such species as well as golden eagles.

Conversely, although the retrofitting of electrical poles may have benefits for large raptors, such an approach may provide minimal benefits for smaller birds such as American kestrel or tricolored blackbird. Consequently, additional measures would be required in an overall mitigation package to compensate for impacts on avian species in general.

The Secretary of the Interior issued Order 3330 in October 2013, outlining a "landscape-scale" approach to mitigation policies and practices of the U.S. Department of the Interior to provide for mutual benefit to multiple species when adopting strategies aimed at individual species, thereby benefitting the ecological landscape as a whole. The Order was intended for use by federal agencies, and thus the County was not required to take any particular action; however, the PEIR indicated confidence that such an approach would likely have the greatest mitigation benefits, especially when considering ongoing and long-term impacts from wind energy projects. In 2017, then Secretary of the Interior Ryan Zinke, acting on a presidential executive order, revoked Order 3330 and several other related environmental directives, primarily to ensure that federal policy did not burden the development or use of domestic oil, natural gas, coal, or nuclear energy resources. However, while the current federal administration (under Secretary of the Interior Deb Haaland) is not known to have formally reversed the 2017 revocation of Order 3330, it is expected to have effectively restored it with a shift of priorities towards protection of ecological values while also accelerating the development of renewable energy production such as from wind, solar and geothermal projects. For this reason, the County considers it to be in its interest to promote policies that benefit one species that also have high potential for benefit to additional species, or to a whole ecological system or habitat.

With Order 3330 in mind, the PEIR outlined several options that are deemed available to compensate for impacts on avian species. The options discussed below are currently considered acceptable approaches to compensation for such impacts. Although not every option is appropriate for all species, it is hoped that as time proceeds, a more comprehensive approach to mitigation will be adopted to benefit a broader suite of species than might benefit from more species-specific measures. The County recognizes that the science of wind energy impacts on avifauna is continuing to evolve and that the suite of available compensation options may consequently change during implementation of approved projects.

Conservation Measures

To promote the conservation of avian species, project proponents will compensate for avian fatalities estimated within their project areas. Mitigation will be provided in 10-year increments, with the first increment based on the estimates (fatalities/MW/year and fatalities/ha RSA/year) provided in this analysis for existing repowered projects (Table 3.4-8). Each project proponent will conduct postconstruction fatality monitoring for at least 3 years beginning at project startup (date of commercial operation) and again for 2 years at year 10, as required under Mitigation Measure BIO-11g, to estimate the average number of birds taken each year by each individual project. The project proponent will compensate for this number of birds in subsequent 10-year increments for the life of the project (i.e., three 10-year increments) as outlined below. Mitigation Measure BIO-11g also requires additional fatality monitoring at year 10 of the project. The results of the first 3 years of monitoring and/or the monitoring at year 10 may lead to revisions of the estimated average number of birds taken, and mitigation provided

may be adjusted accordingly on a one-time basis within each of the first two 10-year increments, based on the results of the monitoring required by Mitigation Measure BIO-11g, in consultation with the TAC.

Prior to the start of operations, project proponents will submit for County approval an avian conservation strategy, as part of the project-specific APP outlined in PEIR Mitigation Measure BIO-11a, outlining the estimated number of avian fatalities based on the number and type of turbines being constructed, and the type or types of compensation options to be implemented. Project proponents will use the avian conservation strategy to craft an appropriate strategy using a balanced mix of the options presented below, as well as considering new options suggested by the growing body of knowledge during the course of the project lifespan, as supported by a Resource Equivalency Analysis (REA) (see example in Appendix C4) or similar type of compensation assessment acceptable to the County that demonstrates the efficacy of proposed mitigation for impacts on avian species.

The County Planning Director, in consultation with the TAC, will consider, based on the REA, whether the proposed avian conservation strategy is adequate, including consideration of whether each avian mitigation plan incorporates a landscape-scale approach such that the conservation efforts achieve the greatest possible benefits. Compensation measures as detailed in an approved avian conservation strategy must be implemented within 1 year of the date of commercial operations. Avian conservation strategies will be reviewed and may be revised by the County every 10 years, and on a one-time basis in each of the two 10-year increments based on the monitoring required by 2020 Updated PEIR Mitigation Measure BIO-11g.

- **Retrofitting high-risk electrical infrastructure.** USFWS's ECP Guidelines outline a compensatory mitigation strategy using the retrofit of high-risk power poles (poles known or suspected to electrocute and kill eagles). USFWS has developed an REA (U.S. Fish and Wildlife Service 2013) as a tool to estimate the compensatory mitigation (number of retrofits) required for the take of eagles. The REA takes into account the current understanding of eagle life history factors, the effectiveness of retrofitting poles, the expected annual take, and the timing of implementation of the pole retrofits. The project proponents may need to contract with a utility or a third-party mitigation account (such as the National Fish and Wildlife Foundation) to retrofit the number of poles needed as demonstrated by a project-specific REA. If contracting directly, the project proponent will consult with utility companies to ensure that high-risk poles have been identified for retrofitting. Proponents will agree in writing to pay the utility owner/operator to retrofit the required number of power poles and maintain the retrofits for 10 years and will provide the County with documentation of the retrofit agreement. The first retrofits will be based on the estimated number of eagle fatalities as described above in this measure or as developed in the project-specific EIR for future projects. Subsequent numbers of retrofits required for additional 10-year durations will be based on the results of project-specific fatality monitoring as outlined in PEIR Mitigation Measure BIO-11g. If fewer eagle fatalities are identified through the monitoring, the number of future required retrofits may be reduced through a project-specific REA. Although retrofitting poles has not been identified as appropriate mitigation for other large raptors, they would likely benefit from such efforts, as they (particularly red-tailed and Swainson's hawks) constitute the largest non-eagle group to suffer electrocution on power lines (Avian Power Line Interaction Committee 2006).

- Measures outlined in an approved Eagle Conservation Plan and Bird and Bat Conservation Strategy.** Project proponents may elect to apply for eagle incidental take permits from USFWS. The eagle incidental take permit process currently involves preparation of an ECP and a Bird and Bat Conservation Strategy (BBCS). The ECP specifies avoidance and minimization measures, advanced conservation practices, and compensatory mitigation for eagles—conditions that meet USFWS’s criteria for issuance of a permit. The BBCS outlines measures being implemented by the applicant to avoid and minimize impacts on migratory birds, including raptors. If eagle incidental take permits are obtained by project proponents, those permit terms, including the measures outlined in the approved ECP and BBCS, may constitute an appropriate conservation measure for estimated take of golden eagles and other avian species, provided such terms are deemed by the County to be comparable to or more protective of birds than the other options listed herein.
- Contribute to avian conservation efforts.** Project proponents will contribute funds, in an amount equal to the average cost to rehabilitate one raptor at the California Raptor Center, affiliated with the UC Davis School of Veterinary Medicine—which receives more than 200 injured or ill raptors annually (Stedman pers. comm.). The funds would be paid prior to commercial operation based on the projected/anticipated, worst-case raptor fatalities indicated in Table 3.4-8a, and for this purpose defined as 95 raptors per year, in 10-year increments to local and/or regional conservation efforts designed to protect, recover, and manage lands for raptors, or to conduct research involving methods to reduce raptor fatalities or increase raptor productivity. Ten-year installments are more advantageous than more frequent installments for planning and budgeting purposes.

The funds will be contributed to an entity or entities engaged in these activities, such as the East Bay Regional Park District and the Livermore Area Regional Park District. Conservation efforts may include constructing and installing nest boxes and perches, conducting an awareness campaign to reduce the use of rodenticide, and conducting research to benefit raptors and other birds. The specific conservation effort to be pursued will be submitted to the County for approval as part of the avian conservation strategy review process. The donation receipt will be provided to the County as evidence of payment.

The first contributions for any given project will be based on the estimated number of avian fatalities as estimated in this EIR. Funds for subsequent 10-year installments will be provided on the basis of the average annual avian fatality rates determined through postconstruction monitoring efforts, allowing for a one-time adjustment within each 10-year increment after the results of the monitoring efforts are available. If fewer avian fatalities are detected through the monitoring effort, the second installment amount may be reduced to account for the difference between the first estimated numbers and the monitoring results. In the event of such an adjustment, and on each 10-year anniversary, projected costs shall be adjusted for inflation (from the base amount described above) according to the consumer price index (CPI) through the remainder of the 10-year term or the subsequent 10-year term. Review shall occur at the time that monitoring reports are accepted by the Planning Director showing a change in total avian fatalities for the project. All avian species listed in Table 3.4-4 shall be accounted for in estimating the payment.

- Contribute to regional conservation of avian habitat.** Project proponents may address regional conservation of habitat for raptors and other birds by funding the acquisition of conservation easements within the APWRA or on lands in the same eco-region outside the APWRA, subject to County approval, for the purpose of long-term regional conservation of

raptor habitat. Lands proposed for conservation must provide habitat similar to and in area proportional to habitats on lands within the project site. Project proponents will fund the regional conservation and improvement of lands (through habitat enhancement, lead abatement activities, elimination of rodenticides, and/or other measures) using a number of acres equivalent to the conservation benefit of the avian recovery and conservation efforts described above, or as determined through a project-specific REA (see example REA in PEIR Appendix C4). The conservation lands must be provided for compensation of a minimum of 10 years of avian fatalities, as 10-year increments will minimize the transaction costs associated with the identification and conservation of lands, thereby increasing overall cost effectiveness. The conservation easements will be held by an organization whose mission is to purchase and/or otherwise conserve lands, such as The Trust for Public Lands, The Nature Conservancy, California Rangeland Trust, or the East Bay Regional Parks District. The project proponents will obtain approval from the County regarding the amount of conserved lands, any enhancements proposed to increase raptor and other avian habitat value, and the entity holding the lands and/or conservation easement.

- **Contribute to efforts benefitting eagles and other raptors.** In addition to the conservation of avian habitat, the project proponent will also contribute to additional efforts for the benefit of eagles and other raptors in an amount equal to \$12,500/MW of installed capacity. The mitigation contribution is based on the per MW amount (\$10,500/MW) established under the 2010 Settlement Agreement between NextEra Energy Resources and the California Attorney General, adjusted for inflation and rounded up to the nearest \$100 increment. The funds will be used to support efforts that USFWS accepts as mitigation for an eagle take permit for the project. Such efforts may include, but are not limited to: retrofit of high-risk power poles; efforts that contribute to the regional management of eagle and raptor habitat; efforts that support the additional conservation of lands for the benefit of eagles and other raptors; and efforts that support the reduction of rodenticide use in wildlands, which can have negative effects on raptor populations.
- **Other Conservation Measures Identified in the Future.** As noted above, additional conservation measures for raptors and other birds may become available in the future. Conservation measures for avian species are currently being developed by USFWS and nongovernmental organizations (e.g., American Wind Wildlife Institute). Additional options for conservation could include purchasing credits at an approved mitigation bank, credits for the retirement of windfarms that are particularly dangerous to birds, the curtailment of prey elimination programs (e.g., ceasing the use of rodenticide use), and hunter-education programs that remove sources of lead from the environment. Under this option, the project proponent may make alternative proposals to the County for conservation measures—based on an REA or similar compensation assessment—that the County may accept as mitigation if they are deemed by the County to be comparable to or more protective of raptor species than the other options described herein.

2020 Updated PEIR Mitigation Measure BIO-11i: Implement an avian adaptive management program

If fatality monitoring described in Mitigation Measure BIO-11g results in an estimate that exceeds the preconstruction baseline fatality estimates (i.e., estimates at the non-repowered turbines as described in this PEIR) for any focal species or species group (i.e., individual focal species, all focal species, all raptors, all non-raptors, all birds combined), project proponents will

prepare a project-specific adaptive management plan within 2 months following the availability of the fatality monitoring results. These plans will be used to adjust operation and mitigation to the results of monitoring, new technology, and new research to ensure that the best available science is used to minimize impacts to below baseline. Project-specific adaptive management plans will be reviewed by the TAC, revised by project proponents as necessary, and approved by the County. The TAC will take current research and the most effective impact reduction strategies into account when reviewing adaptive management plans and suggesting measures to reduce impacts. The project-specific adaptive management plans will be implemented within 2 months of approval by the County. The plans will include a stepped approach whereby an adaptive measure or measures are implemented, the results are monitored for success or failure for a year, and additional adaptive measures are added as necessary, followed by another year of monitoring, until the success criteria are achieved (i.e., estimated fatalities are below the baseline). Project proponents should use the best measures available when the plan is prepared in consideration of the specific adaptive management needs. For example, if only one threshold is exceeded, such as golden eagle fatalities, the plan and measures used will target that species. As set forth in other agreements in the APWRA, project proponents may also focus adaptive management measures on individual or multiple turbines if those turbines are shown to cause a significantly disproportionate number of fatalities.

In general, the following types of measures will be considered by the TAC, in the order they are presented below; however, the TAC may recommend any of these or other measures that are shown to be successful in reducing the impact.

ADMM-1: Visual Modifications. The project proponent will paint a pattern on a proportion of the turbine blades. The proportion and the pattern of the blades to be painted will be determined by the County in consultation with the TAC. Previous laboratory work has shown that painting a turbine blade may reduce *motion smear*—the blurring of turbine blades due to rapid rotation that renders them less visible and hence more perilous to birds in flight (Hodos 2003). A test of blade painting, performed in Norway, suggests that the technique can reduce avian fatalities by 70% (May et al. 2020). Suggested techniques include painting blades with staggered stripes or painting one blade black. The project proponent will conduct fatality studies on a controlled number of painted and unpainted turbines. The project proponent will coordinate with the TAC to determine the location of the painted turbines, but the intent is to implement this measure in areas that appear to be contributing most to the high number of fatalities detected.

ADMM-2: Anti-Perching Measures. The County will consult with the TAC regarding the use of anti-perching measures to discourage bird use of the area. The TAC will use the most recent research and information available to determine, on a case-by-case basis, if anti-perching measures will be an effective strategy to reduce impacts. If determined to be feasible, antiperching devices will be installed on artificial structures, excluding utility poles, within 1 mile of project facilities (with landowner permission) to discourage bird use of the area.

ADMM-3: Prey Reduction. The project proponent will implement a prey reduction program around the most hazardous turbines. Examples of prey reduction measures may include changes in grazing practices to make the area less desirable for prey species, active reduction through direct removal of prey species, or other measures provided they are consistent with management goals for threatened and endangered species.

ADMM-4: Implementation of Experimental Technologies. Project proponents can deploy experimental technologies at their facilities to test their efficacy in reducing turbine-related fatalities. Examples may include, but are not limited to, visual deterrents, noise deterrents, and active radar systems.

ADMM-5: Turbine Curtailment. If postconstruction monitoring indicates patterns of turbine-caused fatalities—such as seasonal spikes in fatalities, topographic or other environmental features associated with high numbers of fatalities, fatalities related to proximity to raptor nesting sites (nest trees, lattice towers or burrowing owl colonies), or other factors that can potentially be manipulated and that suggest that curtailment of a specific turbine's operation would result in reducing future avian fatalities—the project operator will curtail operations of the offending turbine or turbines. Curtailment restrictions would be developed in coordination with the TAC and based on currently available fatality data, use data, and research.

ADMM-6: Cut-in Speed Study. Changes in cut-in speed could be conducted to see if changing cut-in speeds from 3 meters per second to 5 meters per second (for example) would significantly reduce avian fatalities. The proponent will coordinate with the TAC in determining the feasibility of the measure for the particular species affected as well as the amount of the change in the cut-in speed.

ADMM-7: Real-Time Turbine Curtailment. The project proponent can employ a real-time turbine curtailment program designed in consultation with the TAC. The intent would be to deploy a biologist to monitor onsite conditions and issue a curtailment order when raptors are near operating turbines. Alternatively, radar, video, or other monitoring measures could be deployed in place of a biological monitor if there is evidence to indicate that such a system would be as effective and more efficient than use of a human monitor.

ADMM-8: Condor Evaluation and Curtailment. On an annual basis, the project proponent will review the known distribution of the California condor, relative to the project area, by coordinating with USFWS, CDFW, and U.S. Geological Survey regarding data tracking condor movements, and will use this data to identify all condor overflights in the project area, as well as evaluating trends in condor use of neighboring areas. The project proponent will report their findings to the County. If those data show California condors flying over the project area, the project proponent will coordinate with USFWS and CDFW regarding the risk assessment, and if necessary, measures to minimize the risk of fatalities. These measures could include the use of regional electronic monitoring to inform project operators of condors flying into the area, with responses including curtailment or implementing a visual detection system to reduce risks to condors; other effective measures may also be proposed. Measures implemented would depend on the extent of condor use in the project area and the evaluation of the risk of a condor mortality. The project proponent will inform the County of discussions with USFWS and CDFW and efforts it will undertake to reduce the risk of condor mortality, if necessary.

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR BIO-11a, 2020 Updated PEIR BIO-11b, PEIR BIO-11c, PEIR BIO-11d, PEIR BIO-11e, PEIR BIO-11f, 2020 Updated PEIR BIO-11g, 2020 Updated PEIR BIO-11h, and 2020 Updated PEIR BIO-11i will reduce the rate of avian mortality associated with the project but will not mitigate this impact to a less-than-significant level, as there is no feasible way to avoid the significant impact.

Remaining Impacts: Remaining impacts related to the project impacts on avian mortality will be significant and unavoidable.

Overriding Considerations: As more fully explained in the Statement of Overriding Considerations contained in Exhibit C to the Resolution to which these CEQA Findings are attached, the County finds that there are environmental, economic, or other benefits of the approved project that override the remaining significant and unavoidable impacts on biological resources. There are no other feasible mitigation measures, or changes to the project that would reduce this impact to a less-than-significant level.

Impact BIO-14: Turbine-related fatalities of special-status and other bats

Potential Impact: Resident and migratory bats flying in and through the project area may be killed by collision with wind turbine blades or other interaction with the wind turbine generators. Extrapolating from existing fatality data and from trends observed at other wind energy facilities where fourth-generation turbines are in operation, it appears likely that fatalities would primarily be associated with wind speeds of less than 5-6 m/s; that fatalities would occur predominantly in the late summer to mid-fall migration period; that fatalities would consist mostly of migratory bats, particularly Mexican free-tailed bat and hoary bat; that fatalities would occur sporadically at other times of year; and that fatalities of one or more other species would occur in smaller numbers. Despite the high level of uncertainty in estimates of bat fatality rates, all available data suggest that implementation of the project would result in a substantial increase in bat fatalities.

The PEIR concluded that “Insufficient data are currently available to develop accurate fatality estimates for individual bat species,” but subsequent analyses using more frequent and intensive surveys, and especially surveys using trained dogs and handlers, have produced fatality estimates that are both more confident and substantially larger; though, there are still reasons to suspect that observed fatality rates may be biased low. Overall, the PEIR found that “Despite the high level of uncertainty in estimates of bat fatality rates, all available data suggest that *repowering would result in a substantial increase in bat fatalities.*” [emphasis added] The recently available information further supports this conclusion in the PEIR and does not alter its significance with regard to the proposed project, but it does provide further insight into bat use of the APWRA. While the PEIR set forth multiple measures to address bat mortality, it concluded that these measures would not reduce the impact to a less-than-significant level. This conclusion holds true for the project, and, although it remains difficult to estimate bat mortality rates with certainty, continued monitoring using techniques that are already well established, specifically, the use of trained dogs and their handlers, would contribute to the body of knowledge informing this effort, as noted in the recent H. T. Harvey & Associates (2020) monitoring report, the study of search effectiveness presented by Smallwood and Bell (2019), and multiple additional sources cited therein.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-14a: Site and select turbines to minimize potential mortality of bats

The project proponent will use the best information available to site turbines and to select from turbine models in such a manner as to reduce bat collision risk. The siting and selection process will take into account bat use of the area (e.g., proximity to maternity colony sites, hibernacula,

and cover types that provide foraging habitat for bats). Procedures followed should be consistent with guidance provided by the California guidelines for reducing impacts on birds and bats from wind energy development (California Energy Commission and California Department of Fish and Game 2007).

To generate site-specific “best information” to inform turbine siting and operation decisions, a bat habitat assessment and roost survey will be conducted in the project area to identify and map habitat of potential significance to bats, such as potential roost sites (trees and shrubs, significant rock formations, artificial structures) and water sources. Turbine siting decisions will incorporate relevant bat use survey data and bat fatality records published by other projects in the APWRA. Roost surveys will be carried out according to the methods described in PEIR Mitigation Measure BIO-12a.

Consistent with past practice for previously approved repowering projects, the proponent shall submit the siting analysis for review and recommendations to the Alameda County Wind Repowering/Avian Protection Technical Advisory Committee, which includes representatives of the CDFW and the USFWS, prior to applying for any building or grading permit. The County planning director shall have the authority to approve or deny such permits on the basis of the siting analysis and the recommendations of the Technical Advisory Committee.

2020 Updated PEIR Mitigation Measure BIO-14b: Implement postconstruction bat fatality monitoring program for all repowering projects

A scientifically defensible, postconstruction bat fatality monitoring program will be implemented to estimate actual bat fatalities and determine if additional mitigation is required. Bat-specific modifications to the 3-year postconstruction monitoring program described in PEIR Mitigation Measure BIO-11g, developed in accordance with California Energy Commission and California Department of Fish and Game (2007) will be implemented.

In addition to the requirements outlined in 2020 Updated PEIR Mitigation Measure BIO-11g, the following three bat-specific requirements will be added.

- Include on the TAC at least one biologist with significant expertise in bat research and wind energy impacts on bats.
- Perform postconstruction bat fatality monitoring using trained dogs with handlers. In order to optimize monitoring success, these efforts should also include searching to a maximum radius around wind turbines that includes all deposited carcasses, searching along transects spaced closely together, and searching frequently. Recognizing that most bat fatalities in the APWRA are recorded from September through November, it is appropriate to concentrate search efforts during that period, while still maintaining some level of search effort throughout the year.
- Conduct bat acoustic surveys concurrently with fatality monitoring at the project site to estimate nightly, seasonal, or annual variations in relative activity and species use patterns, and to contribute to the body of knowledge on seasonal bat movements and relationships between acoustic bat activity and turbine fatality. Should emerging research support the approach, these data may be used to generate site-specific predictive models to increase the precision and effectiveness of mitigation measures (e.g., the season specific, multivariate models described by Weller and Baldwin 2011:11). Acoustic bat surveys will be designed, and data analysis conducted by qualified biologists with significant experience in acoustic

bat survey techniques. Methods will be informed by the latest available guidelines (California Energy Commission and California Department of Fish and Game 2007), except where best available science supports technological or methodological updates. High-quality, sensitive acoustic equipment will be used to produce data of sufficient quality to generate species identifications. Survey design and methods will be scientifically defensible and will include, at a minimum, the following elements:

- Acoustic detectors will be installed at multiple stations to adequately sample range of habitats at the project site for both resident and migratory bats. The number of detector arrays installed per project site will incorporate emerging research on the density of detectors required to adequately meet sampling goals and inform mitigation approaches (Weller and Baldwin 2011:10).
- Acoustic detector arrays will sample multiple airspace heights including as close to the repowered rotor swept area as possible. Vertical structures used for mounting may be preexisting or may be installed for the project (e.g., temporary or permanent meteorological towers).
- Surveys will be conducted such that data are collected continuously from early July to early November to cover the activity transition from maternity to migration season and determine if there is elevated activity during migration. Survey season may be adjusted to more accurately reflect the full extent of the local migration season and/or season(s) of greatest local bat fatality risk, if scientifically sound data support doing so.
- Anticipated adaptive management goals, such as determining justifiable timeframes to reduce required periods of cut-in speed adjustments, will be reviewed with the TAC and incorporated in designing the acoustic monitoring and data analysis program.

Modifications to the fatality search protocol will be implemented to obtain better information on the number and timing of bat fatalities (e.g., Johnston et al. 2013:85). Modifications will include decreases in the transect width and search interval for a period of time coinciding with high levels of bat mortality, i.e., the fall migration season (roughly August to early November, or as appropriate in the view of the TAC). The nature of bat-specific transect distance and search intervals will be determined in consultation with the TAC and will be guided by scientifically sound and pertinent data on rates of bat carcass detection at wind energy facilities (e.g., Johnston et al. 2013:54–55) and site-specific data from APWRA repowering project fatality monitoring programs as these data become available.

Other methods to achieve the goals of the bat fatality monitoring program while avoiding prohibitive costs may be considered subject to approval by the TAC, if these methods have been peer reviewed and evidence indicates the methods are effective. For example, if project proponents wish to have the option of altering search methodology to a newly developed method, such as searching only roads and pads, a statistically robust field study to index the results of the methodology against standard search methods will be conducted concurrently to ensure site-specific, long-term validity of the new methods.

Finally, detection probability trials will utilize bat carcasses to develop bat-specific detection probabilities. Care should be taken to avoid introducing novel disease reservoirs; such avoidance will entail using onsite fatalities or using carcasses obtained from within a reasonably anticipated flight distance for that species.

PEIR Mitigation Measure BIO-14c: Prepare and publish annual monitoring reports on the findings of bat use of the Project area and fatality monitoring results

Annual reports of bat use results and fatality monitoring will be produced within 3 months of the end of the last day of fatality monitoring. Special-status bat species records will be reported to CNDDB.

2020 Updated PEIR Mitigation Measure BIO-14d: Develop and implement a bat adaptive management plan

In concert with 2020 Updated PEIR Mitigation Measure BIO-14b, the project proponent will develop adaptive management plans to ensure appropriate, feasible, and current incorporation of emerging information. The goals of the adaptive management plans are to ensure that the best available science and emerging technologies are used to assess impacts on bats, and that impacts are minimized to the greatest extent possible while maximizing energy production.

The project-specific adaptive management plans will be used to adjust operation and mitigation to incorporate the results of project area monitoring and new technology and research results when sufficient evidence exists to support these new approaches. These plans will be reviewed by the TAC and approved by the County. All adaptive management measures (ADMMs) will be implemented within a reasonable timeframe. Based on fatality rates recorded at Golden Hills and Golden Hills North, it is reasonably certain that the threshold fatality rate identified in the PEIR of 3.207 bats/MW/year will be exceeded at the proposed project². For this reason, ADMM-7 will be implemented at the commencement of project operations. If ADMM-7 is not successful in reducing bat fatalities to below threshold levels, ADMM-8 or ADMM-9 will be implemented within a timeframe sufficient to allow the measures to take effect in the first fall migration season following the year of monitoring in which the adaptive management threshold was crossed. The ADMMs may be modified by the County in consultation with the TAC to take into account current research, site-specific data, and the most effective impact reduction strategies. ADMMs will include a scientifically defensible, controlled research component and minimum post-implementation monitoring time to evaluate the effectiveness and validity of the measures.

The TAC may also direct implementation of adaptive management measures for other appropriate reasons, such as an unexpectedly and markedly high fatality rate observed for any bat species, or special-status species being killed in unexpectedly high numbers.

ADMMs for bats may be implemented using a stepped approach until necessary fatality reductions are reached, and monitoring methods must be revised as needed to ensure accurate measurement of the effectiveness of the ADMMs. Additional ADMMs for bats should be developed as new technologies or science supports doing so.

ADMM-7: Seasonal Turbine Cut-in Speed Increase. Cut-in speed increases offer the most promising and immediately available approach to reducing bat fatalities at fourth-generation wind turbines. Reductions in fatalities of as much as 93% have been observed when increasing modern turbine cut-in speeds (Good et al. 2012:iii). A recent study in the APWRA documented significant reductions in fatalities using curtailment during the peak migration period

² The PEIR identified predicted total fatality rates of 1.679 fatalities/MW/year from the Vasco Winds repowering project. That fatality rate has been revised upwards to 3.207 fatalities/MW/year, taking into account the correction noted on page 3.4-69 of this Final SEIR.

(Smallwood and Bell 2019). Work at a site in Wisconsin has shown that a site-specific, real-time curtailment algorithm using wind speed and bat activity information (referred to as “smart-curtailment”) can yield 74-92% fatality reductions at a 3.2% cost in revenue from the turbines (Hayes et al. 2019). Other curtailment studies, also performed in sites outside the APWRA, have shown comparable effectiveness (e.g. Hein et al. 2014). The optimal cut-in speed increase is not yet well developed, and may vary between sites or regions, however most current research points to significant benefits using a cut in speed change of at least 5.0 m/s, with greater cut-in speed increases yielding improved benefit (Hayes et al. 2019).

Cut-in speed increases will be implemented as outlined below, with effectiveness assessed annually.

- Beginning with initial project operations, the project proponent will observe a cut-in speed of 5.0 m/s from sunset to sunrise from August 1 through October 31, which corresponds to the peak bat migration season in the APWRA. This measure shall apply for the first three full years of project operations.
- If, after the first three full years of project operations, fatalities are still exceeding established thresholds, the project proponent will:
 - increase the cut in speed in 0.5 m/s increments (up to a maximum of a 6.0 m/s cut in speed change), or
 - implement an additional 1-month spring cut in speed change to 5.0 m/s (with the timing to be determined based on the results of the initial 3 years of fatality monitoring), or
 - a combination of cut in speed increases and the spring cut in speed change.
- At any time following the end of the first three full years of project operations, the project proponent may request modifications to the initial operational requirements, including a changed cut-in speed or a change in the dates of curtailment, or to implement a smart-curtailment operations regime. The project proponent must present evidence in support of such changes, including evidence from fatality monitoring during the first three years of project monitoring, acoustic survey or other evidence documenting bat activity during the migration season, and such other evidence as the project proponent deems relevant. Should resource agencies and the TAC find there is sufficient evidence to authorize the proposed changes, the supporting evidence will be documented for the public record and the revised operational requirements may be implemented.
- When the project proponent requests a modification of operational requirements, the TAC shall also consider whether evidence from the APWRA or other sites supports the institution of additional requirements to further minimize bat fatalities. Such requirements may include further cut-in speed increases or changes to the timing or duration of curtailment.
- The project proponent may request exceptions to cut-in speed increases for particular weather events or wind patterns if substantial evidence is available from onsite acoustic or other monitoring to support such exceptions (i.e., all available literature and onsite surveys indicate that bat activity ceases during specific weather events or other predictable conditions).

ADMM-8: Acoustic Deterrents. The project proponent shall present to the TAC a proposal for the evaluation of acoustic deterrents to reduce bat fatalities. Any such proposal shall incorporate a paired study in which at least 12 operational turbines are subject to monitoring

under 2020 Updated PEIR Mitigation Measure BIO-14b, with half of the turbines carrying acoustic deterrents and half reserved as a control group. The study shall at a minimum include one spring and one fall migration season. The acoustic deterrents shall be of a design similar to those described by Weaver et al. (2020), who demonstrated bat fatality rate reductions of up to 78% for hoary bat, which is the second-most-commonly killed bat documented in surveys at the APWRA. Based on the results of this study the TAC may call for permanent implementation of acoustic deterrents on all project turbines.

ADMM-9: Emerging Technology as Mitigation. The project proponent may request, with consultation and approval from agencies, replacement or augmentation of cut-in speed increases with developing technology or another mitigation approach that has been proven to achieve similar bat fatality reductions.

The project proponent may also request the second tier of adaptive management to be the adoption of a promising but not fully proven technology or mitigation method. These requests are subject to review and approval by the TAC and must include a controlled research component designed by a qualified principal investigator so that the effectiveness of the method may be accurately assessed.

Some examples of such emerging technologies and research areas that could be incorporated in adaptive management plans are listed below.

- The use of altitude-specific radar, night vision and/or other technology allowing bat use monitoring and assessment of at-risk bat behavior (Johnston et al. 2013: 90-91) if research in these areas advances sufficiently to allow effective application of these technologies.
- Application of emerging peer-reviewed studies on bat biology (such as studies documenting migratory corridors or bat behavior in relation to turbines) that support specific mitigation methods.

PEIR Mitigation Measure BIO-14e: Compensate for expenses incurred by rehabilitating injured bats

The cost of reasonable, licensed rehabilitation efforts for any injured bats taken to wildlife care facilities from the program area will be assumed in full by Project proponents.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-14a, 2020 Updated PEIR BIO-14b, PEIR BIO-14c, 2020 Updated PEIR BIO-14d, and PEIR BIO-14e will reduce the rate of bat mortality associated with the project but will not mitigate this impact to a less-than-significant level, as there is no feasible way to avoid the significant impact.

Remaining Impacts: Remaining impacts related to the project impacts on bat mortality will be significant and unavoidable.

Overriding Considerations: As more fully explained in the Statement of Overriding Considerations contained in Exhibit C to the Resolution to which these CEQA Findings are attached, the County finds that there are environmental, economic, or other benefits of the approved project that override the remaining significant and unavoidable impacts on biological

resources. There are no other feasible mitigation measures, or changes to the project that would reduce this impact to a less-than-significant level.

Impact BIO-19: Potential impact on the movement of any native resident or migratory wildlife species or established native resident or migratory wildlife corridors, and the use of native wildlife nursery sites

Potential Impact: Construction activities associated with the program and fencing of work areas may temporarily impede wildlife movement through the work area or cause animals to travel longer distances to avoid the work area. This could result in higher energy expenditure and increased susceptibility to predation for some species and is a potentially significant impact. Because the construction period for the Project would be up to 7 months, it would likely encompass the movement/migration period for some species (e.g., California tiger salamander movement to/from breeding ponds). In particular, smaller animals, whose energy expenditures to travel around or avoid the area would be greater than for larger animals, could be more severely affected. The operation of wind turbines after repowering would adversely affect raptors, other birds, and bats migrating through and wintering in the program area because they could be injured or killed if they fly through the rotor plane of operating wind turbines. This would be a significant and unavoidable impact.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

The project proponent will ensure that the following BMPs, in accordance with practices established in the EACCS, will be incorporated into the final project design and construction documents.

- Employees and contractors performing ground-disturbing activities, including construction and maintenance activities will receive environmental sensitivity training. Training will include review of environmental laws, mitigation measures, permit conditions, and other requirements that must be followed by all personnel to reduce or avoid effects on special-status species and sensitive habitats during construction activities.
- Environmental tailboard trainings will take place on an as-needed basis in the field. These trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during construction and maintenance activities. Directors, managers, superintendents, and the crew leaders will be responsible for ensuring that crewmembers comply with the guidelines.
- Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.
- Off-road vehicle travel outside the project footprint will be avoided and minimized to the extent possible within the project footprint.
- Material will be stockpiled only in areas that do not support special-status species or sensitive habitats.

- Grading will be restricted to the minimum area necessary.
- Prior to ground-disturbing activities in sensitive habitats, project construction boundaries and access areas will be flagged and temporarily fenced during construction to reduce the potential for vehicles and equipment to stray into adjacent habitats.
- Vehicles or equipment will not be refueled within 100 feet of a wetland, stream, or other waterway unless a bermed and lined refueling area (i.e., a created berm made of sandbags or other removable material) is constructed.
- Erosion control measures will be implemented to reduce sedimentation in nearby aquatic habitat when activities are the source of potential erosion. Plastic monofilament netting (erosion control matting) or similar material containing netting will not be used at the project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
- Significant earth moving-activities will not be conducted in riparian areas within 24 hours of predicted storms or after major storms (defined as 1-inch of rain or more).
- The following will not be allowed at or near work sites for project activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations).

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

The project proponents will retain a qualified biologist (as determined by Alameda County) to conduct periodic monitoring of decommissioning, repowering, and reclamation activities that occur adjacent to sensitive biological resources (e.g., special-status species, sensitive vegetation communities, wetlands). Monitoring will occur during initial ground disturbance where sensitive biological resources are present and weekly thereafter or as determined by the County in coordination with a qualified biologist. The biologist will assist the crew, as needed, to comply with all project implementation restrictions and guidelines. In addition, the biologist will be responsible for ensuring that the project proponent or its contractors maintain exclusion areas adjacent to sensitive biological resources, and for documenting compliance with all biological resource-related mitigation measures.

PEIR Mitigation Measure BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species

No more than 3 years prior to ground-disturbing repowering activities, a qualified biologist (as determined by Alameda County) will conduct field surveys within decommissioning, repowering, and restoration work areas and their immediate surroundings to determine the presence of habitat for special-status wildlife species. The project proponent will submit a report documenting the survey results to Alameda County for review prior to conducting any repowering activities. The report will include the location and description of all proposed work areas, the location and description of all suitable habitat for special-status wildlife species, and the location and description of other sensitive habitats (e.g., vernal pools, wetlands, riparian areas). Additionally, the report will outline where additional species- and/or habitat-specific mitigation measures are required. This report may provide the basis for any applicable permit applications where incidental take may occur.

2020 Updated PEIR Mitigation Measure BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians

The project proponent will ensure that BMPs and other appropriate measures, in accordance with measures developed for the EACCS, be incorporated into the appropriate design and construction documents. *Implementation of some of these measures will require that the project proponent obtain incidental take permits from USFWS (California red-legged frog and California tiger salamander) and from CDFW (California tiger salamander only) before construction begins.* Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., ESA or CESA incidental take authorization). The applicant will comply with the State Water Board NPDES construction general requirements for stormwater.

- Ground-disturbing activities will be limited to dry weather between April 15 and October 31. No ground-disturbing work will occur during wet weather. Wet weather is defined as when there has been 0.25 inch of rain in a 24-hour period. Ground disturbing activities halted due to wet weather may resume when precipitation ceases and the National Weather Service 72-hour weather forecast indicates a 30% or less chance of precipitation. No ground-disturbing work will occur during a dry-out period of 48 hours after the above-referenced wet weather.
- Where applicable, barrier fencing will be installed around the worksite to prevent amphibians from entering the work area. Barrier fencing will be removed within 72 hours of completion of work. The need and location of barrier fencing will be identified by a qualified biologist in cooperation with the County and/or any applicable resource agencies with the purpose of protecting dispersing special-status amphibians.
- Before construction begins, a qualified biologist will locate appropriate relocation areas and prepare a relocation plan for special-status amphibians that may need to be moved during construction. The proponent will submit this plan to USFWS and CDFW for review a minimum of 2 weeks prior to the start of construction.
- A qualified biologist will conduct preconstruction surveys (i.e., visual surveys of the ground surface and areas within burrows visible from the surface) immediately prior to ground-disturbing activities (including equipment staging, vegetation removal, grading). The biologist will survey the work area and all suitable habitats within 300 feet of the work area. If individuals (including adults, juveniles, larvae, or eggs) are found, work will not begin until USFWS and/or CDFW is contacted to determine if moving these life-stages is appropriate. If relocation is deemed necessary, it will be conducted in accordance with the relocation plan. Incidental take permits are required for relocation of California tiger salamander (USFWS and CDFW) and California red-legged frog (USFWS). Relocation of western spadefoot toad requires a letter of permission or permit from CDFW authorizing this activity.
- No monofilament plastic will be used for erosion control.
- All project activity will terminate 30 minutes before sunset and will not resume until 30 minutes after sunrise during the migration/active season from November 1 to June 15. Sunrise and sunset times are established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area where the project is located.
- Vehicles will not exceed a speed limit of 15 mph on unpaved roads within natural land cover types, or during offroad travel.

- Trenches or holes more than 6 inches deep will be provided with one or more escape ramps constructed of earth fill or wooden planks and will be inspected by a qualified biologist prior to being filled. Any such features that are left open overnight will be searched each day prior to construction activities to ensure no covered species are trapped. Work will not continue until trapped animals have moved out of open trenches.
- Work crews or the onsite biological monitor will inspect open trenches, pits, and under construction equipment and material left onsite in the morning and evening to look for amphibians that may have become trapped or are seeking refuge.
- If special-status amphibians are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist who is USFWS and/or CDFW-approved under a biological opinion and/or incidental take permit for the specific project, will trap and move special-status amphibians in accordance with the relocation plan. Relocation of western spadefoot toad requires a separate letter of permission or permit from CDFW authorizing this activity.

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

Within 30 days prior to any ground disturbance, a qualified biologist will prepare a Grassland Restoration Plan in coordination with CDFW and subject to CDFW approval, to ensure that temporarily disturbed annual grasslands and areas planned for the removal of permanent roads and turbine pad areas are restored to preproject conditions. The Grassland Restoration Plan will include but not be limited to the following measures.

- Gravel will be removed from areas proposed for grassland restoration.
- To the maximum extent feasible, topsoil will be salvaged from within onsite work areas prior to construction. Imported fill soils will be limited to weed-free topsoil similar in texture, chemical composition, and pH to soils found at the restoration site.
- Where appropriate, restoration areas will be seeded (hydroseeding is acceptable) to ensure erosion control. Seed mixes will be tailored to closely match that of reference site(s) within the program area and should include native or naturalized, noninvasive species sourced within the project area or from the nearest available location.
- Reclaimed roads will be restored in such a way as to permanently prevent vehicular travel.

The plan will include a requirement to monitor restoration areas annually (between March and October) for up to 3 years following the year of restoration. The restoration will be considered successful when the percent cover for restored areas is 70% absolute cover of the planted/seeded species compared to the percent absolute cover of nearby reference sites. No more than 5% relative cover of the vegetation in the restoration areas will consist of invasive plant species rated as “high” in California Invasive Plant Council’s California Invasive Plant Inventory Database (<http://www.cal-ipc.org>). Remedial measures prescribed in the plan will include supplemental seeding, weed control, and other actions as determined necessary to achieve the long-term success criteria. Monitoring may be extended, if necessary, to achieve the success criteria or if drought conditions preclude restoration success. Other performance standards may also be required as they relate to special-status species habitat; these will be identified in coordination with CDFW and included in the plan. The project proponent will provide evidence that CDFW has reviewed and approved the Grassland Restoration Plan. Additionally, the project proponent will provide annual monitoring reports to the County by

January 31 of each year, summarizing the monitoring results and any remedial measures implemented (if any are necessary) during the previous year.

PEIR Mitigation Measure BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles

Where suitable habitat for Blainville's horned lizard, California glossy snake, Alameda whip-snake, or San Joaquin coachwhip is identified in proposed work areas, all project proponents will ensure that BMPs and other appropriate measures, in accordance with measures developed for the EACCS, be incorporated into the appropriate design and construction documents. Implementation of some of these measures may require that the project proponent obtain incidental take permits from USFWS and CDFW (Alameda whipsnake) before construction begins. Additional conservation measures or conditions of approval may be required in applicable project permits (i.e., ESA incidental take permit).

- A qualified biologist will conduct preconstruction surveys immediately prior to ground-disturbing activities (e.g., equipment staging, vegetation removal, grading) associated with the program. If any Blainville's horned lizards, California glossy snake, Alameda whipsnakes, or San Joaquin coachwhips are found, work will not begin until they are moved out of the work area to a USFWS- and/ or CDFW-approved relocation site. Incidental take permits from USFWS and CDFW are required for relocation of Alameda whipsnake. Relocation of Blainville's horned lizard, California glossy snake, and San Joaquin coachwhip requires a letter from CDFW authorizing this activity.
- No monofilament plastic will be used for erosion control.
- Where applicable, barrier fencing will be used to exclude Blainville's horned lizard, California glossy snake, Alameda whipsnake, and San Joaquin coachwhip. Barrier fencing will be removed within 72 hours of completion of work.
- Work crews or an onsite biological monitor will inspect open trenches and pits and under construction equipment and materials left onsite for special-status reptiles each morning and evening during construction.
- Ground disturbance in suitable habitat will be minimized.
- Vegetation within the proposed work area will be removed prior to grading. Prior to clearing and grubbing operations, a qualified biologist will clearly mark vegetation within the work area that will be avoided. Vegetation outside the work area will not be removed. Where possible hand tools (e.g., trimmer, chain saw) will be used to trim or remove vegetation. All vegetation removal will be monitored by the qualified biologist to minimize impacts on special-status reptiles.
- If special-status reptiles are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist who is USFWS- and/or CDFW-approved under an incidental take permit for the specific project will trap and move the animal(s) to a USFWS and/or CDFW approved relocation area. Incidental take permits from USFWS and CDFW are required for relocation of Alameda whipsnake. Relocation of Blainville's horned lizard, California glossy snake, and San Joaquin coachwhip requires a letter or permit from CDFW authorizing this activity.

2020 Updated PEIR Mitigation Measure BIO-8a: Implement measures to avoid and minimize potential construction-related impacts on special-status and non-special-status nesting birds

Where suitable habitat is present for raptors within 1 mile (within 2 miles for golden eagles) and for tree/shrub- and ground-nesting migratory birds (non-raptors) within 50 feet (1,300 feet for tricolored blackbird) of proposed work areas, the following measures will be implemented to ensure that the proposed project does not have a significant impact on nesting special-status and non-special-status birds.

- Remove suitable nesting habitat (shrubs and trees) during the non-breeding season (September 1–January 31) for nesting birds. .
- To the extent feasible, avoid construction activities in or near suitable or occupied nesting habitat during the breeding season of birds (generally February 1–August 31).
- If construction activities (including vegetation removal, clearing, and grading) will occur during the nesting season for migratory birds, a qualified biologist will conduct a total of three preconstruction nesting bird and raptor surveys. The construction area and a 1-mile buffer will be surveyed for tree-nesting raptors (except for golden eagles as addressed below), a 500-foot buffer will be surveyed for northern harrier, and a 1,300-foot buffer will be surveyed for tricolored blackbird if potential tricolored blackbird nesting substrates are present (i.e., flooded, thorny, or spiny vegetation such as cattails, tules, willows, blackberries, thistles, or nettles), and a 50-foot buffer will be surveyed for all other bird species. The first survey will be conducted within the areas described above between 30-60 days prior to the start of construction to identify potential nesting habitat that could be used by special-status and non-special-status birds and raptors within the survey area and to document any nesting behavior or activity. A second survey will be conducted no less than 14 days prior to starting construction to verify current occupancy status of nesting birds and raptors. A final survey will be conducted immediately prior to initiating ground-disturbing activities within disturbance areas and appropriate species buffers. The final surveys may be phased on the project site depending on which areas/components of the project would begin ground-disturbing activities, so that they are conducted immediately prior to ground disturbing activities within a specific area.
- Surveys to locate eagle nests within 2 miles of construction will be conducted during the breeding season prior to construction. A 1-mile no-disturbance buffer will be implemented for construction activities to protect nesting eagles from disturbance. Through coordination with USFWS, the no-disturbance buffer may be reduced to 0.5 mile if construction activities are not within line-of-sight of the nest.
- If an active nest (other than golden eagle) is identified near a proposed work area and work cannot be conducted outside the nesting season (February 1–August 31), a no-activity zone will be established around the nest by a qualified biologist in coordination with USFWS and/or CDFW. Fencing and/or flagging will be used to delineate the no-activity zone. To minimize the potential to affect the reproductive success of the nesting pair, the extent of the no-activity zone will be based on the distance of the activity to the nest, the type and extent of the proposed activity, the duration and timing of the activity, the sensitivity and habituation of the species, and the dissimilarity of the proposed activity to background activities. The no-activity zone will be large enough to avoid nest abandonment and will be between 50 feet and 1 mile from the nest, or as otherwise required by USFWS and/or CDFW.

2020 Updated PEIR Mitigation Measure BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl

Where suitable habitat for western burrowing owl is in or within 500 feet of proposed work areas, the following measures will be implemented to avoid or minimize potential adverse impacts on burrowing owls.

- To the maximum extent feasible (e.g., where the construction footprint can be modified), construction activities within 500 feet of active burrowing owl burrows will be avoided during the nesting season (February 1–August 31).
- A qualified biologist will conduct a total of three preconstruction take avoidance surveys for burrowing owl. The first pre-construction survey will be conducted between 30-60 days prior to the start of construction to identify potential nest sites and to determine current occupancy status. A second survey will be conducted no less than 14 days prior to starting construction to verify current occupancy status. A final survey will be conducted within 24 hours of initiating ground-disturbing activities, or phased as discussed above (2020 Updated PEIR Mitigation Measure BIO-8a). The survey area will encompass the work area and a 500-foot buffer around this area.
- If an active burrow is identified near a proposed work area and work cannot be conducted outside the nesting season (February 1–August 31), a no-activity zone will be established by a qualified biologist in coordination with CDFW. The no-activity zone will be large enough to avoid nest abandonment and will extend a minimum of 250 feet around the burrow.
- If burrowing owls are present at the site during the non-breeding season (September 1–January 31), a qualified biologist will establish a no-activity zone that extends a minimum of 150 feet around the burrow.
- If the designated no-activity zone for either breeding or non-breeding burrowing owls cannot be established, a wildlife biologist experienced in burrowing owl behavior will evaluate site-specific conditions and, in coordination with CDFW, recommend a smaller buffer (if possible) and/or other measure that still minimizes disturbance of the owls (while allowing reproductive success during the breeding season). The site-specific buffer (and/or other measure) will consider the type and extent of the proposed activity occurring near the occupied burrow, the duration and timing of the activity, the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity to background activities.
- If burrowing owls are present in the direct disturbance area and cannot be avoided during the non-breeding season (generally September 1 through January 31), burrowing owls may be excluded from burrows through the installation of one-way doors at burrow entrances. A burrowing owl exclusion plan, prepared by the project proponent, must be approved by CDFW prior to exclusion of owls. One-way doors (e.g., modified dryer vents or other CDFW approved method), which will be left in place for a minimum of 1 week and monitored daily to ensure that the owl(s) have left the burrow(s). Excavation of the burrow will be conducted using hand tools. During excavation of the burrow, a section of flexible plastic pipe (at least 3 inches in diameter) will be inserted into the burrow tunnel to maintain an escape route for any animals that may be inside the burrow. Owls will be excluded from their burrows as a last resort and only if other avoidance and minimization measures cannot be implemented.

- Avoid destruction of unoccupied burrows outside the work area and place visible markers near burrows to ensure that they are not collapsed.
- Conduct ongoing surveillance of the project site for burrowing owls during project activities. If additional owls are observed using burrows within 500 feet of construction, the onsite biological monitor will determine, in coordination with CDFW, if the owl(s) are or would be affected by construction activities and if additional exclusion zones are required.

2020 Updated PEIR Mitigation Measure BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger

Where suitable habitat is present for San Joaquin kit fox and American badger in and adjacent to proposed work areas, the following measures, consistent with measures developed in the EACCS, will be implemented to ensure that proposed project does not have a significant impact on San Joaquin kit fox or American badger. *Implementation of some of these measures will require that the Project proponent obtain incidental take permits from USFWS and CDFW (San Joaquin kit fox) before construction begins.* Implementation of state and federal requirements contained in such authorization may constitute compliance with corresponding measures in the PEIR.

- To the maximum extent feasible, suitable dens for San Joaquin kit fox and American badger will be avoided.
- All project proponents will retain qualified approved biologists (as determined by USFWS) to conduct a preconstruction survey for potential San Joaquin kit fox dens. Resumes of biologists will be submitted to USFWS for review and approval prior to the start of the survey.
- Preconstruction surveys for American badgers will be conducted in conjunction with San Joaquin kit fox preconstruction surveys.
- The preconstruction survey will be conducted no less than 14 days and no more than 30 days before the beginning of ground disturbance, or any activity likely to affect San Joaquin kit fox. The biologists will conduct den searches by systematically walking transects through the project area and a buffer area to be determined in coordination with USFWS and CDFW. Transect distance should be based on the height of vegetation such that 100% visual coverage of the project area is achieved. If a potential or known den is found during the survey, the biologist will measure the size of the den, evaluate the shape of the den entrances, and note tracks, scat, prey remains, and recent excavations at the den site. The biologists will also determine the status of the dens and map the features. Dens will be classified in one of the following four den status categories defined by USFWS.
 - Potential den: Any subterranean hole within the species' range that has entrances of appropriate dimensions and for which available evidence is sufficient to conclude that it is being used or has been used by a kit fox. Potential dens include (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, ground squirrel) that otherwise has appropriate characteristics for kit fox use; or an artificial structure that otherwise has appropriate characteristics for kit fox use.
 - Known den: Any existing natural den or artificial structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records; past or current radiotelemetry or spotlighting data; kit fox sign such as tracks, scat, and/or prey remains; or other reasonable proof that a given den is being or has

been used by a kit fox (USFWS discourages use of the terms *active* and *inactive* when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly).

- Known natal or pupping den: Any den that is used, or has been used at any time in the past, by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two; therefore, for purposes of this definition either term applies.
- Known atypical den: Any artificial structure that has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

Written results of the survey including the locations of any potential or known San Joaquin kit fox dens will be submitted to USFWS within 5 days following completion of the survey and prior to the start of ground disturbance or construction activities.

- After preconstruction den searches and before the commencement of repowering activities, exclusion zones will be established as measured in a radius outward from the entrance or cluster of entrances of each den. Repowering activities will be prohibited or greatly restricted within these exclusion zones. Only essential vehicular operation on existing roads and foot traffic will be permitted. All other repowering activities, vehicle operation, material and equipment storage, and other surface-disturbing activities will be prohibited in the exclusion zones. Barrier fencing will be removed within 72 hours of completion of work. Exclusion zones will be established using the following parameters.
 - Potential and atypical dens: A total of four or five flagged stakes will be placed 50 feet from the den entrance to identify the den location.
 - Known den: Orange construction barrier fencing will be installed between the work area and the known den site at a minimum distance of 100 feet from the den. The fencing will be maintained until construction-related disturbances have ceased. At that time, all fencing will be removed to avoid attracting subsequent attention to the den.
 - Natal/pupping den: USFWS will be contacted immediately if a natal or pupping den is discovered in or within 200 feet of the work area.
- Any occupied or potentially occupied badger den will be avoided by establishing an exclusion zone consistent with a San Joaquin kit fox potential burrow (i.e., four or five flagged stakes will be placed 50 feet from the den entrance).
- In cases where avoidance is not a reasonable alternative, limited destruction of potential San Joaquin kit fox dens may be allowed as follows.
 - Natal/pupping dens: Natal or pupping dens that are occupied will not be destroyed until the adults and pups have vacated the dens and then only after consultation with USFWS.

Removal of natal/pupping dens requires incidental take authorization from USFWS and CDFW.

- Known dens: Known dens within the footprint of the activity must be monitored for 3 days with tracking medium or an infrared camera to determine current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use. If kit fox activity is observed during this period, the den will be monitored for at least 5 consecutive days from the time of observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged by partially plugging its entrance(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied will the den be excavated under the direction of a biologist. If the fox is still present after 5 or more consecutive days of monitoring, the den may be excavated when, in the judgment of the biologist, it is temporarily vacant, such as during the fox's normal foraging activities. Removal of known dens requires incidental take authorization from USFWS and CDFW.
- Potential dens: If incidental take permits have been received (from USFWS and CDFW), potential dens can be removed (preferably by hand excavation) by biologist or under the supervision of a biologist without monitoring, unless other restrictions were issued with the incidental take permits. If no take authorizations have been issued, the potential dens will be monitored as if they are known dens. If any den was considered a potential den but was later determined during monitoring or destruction to be currently or previously used by kit foxes (e.g., kit fox sign is found inside), then all construction activities will cease and USFWS and CDFW will be notified immediately.
- Nighttime work will be minimized to the extent possible. The vehicular speed limit will be reduced to 10 miles per hour during nighttime work.
- Pipes, culverts, and similar materials greater than 4 inches in diameter will be stored so as to prevent wildlife species from using these as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved.
- A representative appointed by the project proponent will be the contact for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured, or entrapped kit fox. The representative will be identified during environmental sensitivity training (2020 Updated PEIR Mitigation Measure BIO-1b) and his/her name and phone number will be provided to USFWS and CDFW. Upon such incident or finding, the representative will immediately contact USFWS and CDFW.
- The Sacramento USFWS office and CDFW will be notified in writing within 3 working days of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, and location of the incident, and any other pertinent information.

2020 Updated PEIR Mitigation Measure BIO-11b: Site turbines to minimize potential mortality of birds

PEIR Mitigation Measure BIO-11c: Use turbine designs that reduce avian impacts

PEIR Mitigation Measure BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure**PEIR Mitigation Measure BIO-11e: Retrofit existing infrastructure to minimize risk to raptors****2020 Updated PEIR Mitigation Measure BIO-11i: Implement an avian adaptive management program****PEIR Mitigation Measure BIO-12a: Conduct bat roost surveys**

Prior to development of any repowering project, a qualified bat biologist will conduct a roost habitat assessment to identify potential colonial roost sites of special-status and common bat species within 750 feet of the construction area. If suitable roost sites are to be removed or otherwise affected by the proposed project, the bat biologist will conduct targeted roost surveys of all identified sites that would be affected. Because bat activity is highly variable (both spatially and temporally) across the landscape and may move unpredictably among several roosts, several separate survey visits may be required. Surveys will be repeated at different times of year if deemed necessary by the bat biologist to determine the presence of seasonally active roosts (hibernacula, migratory stopovers, maternity roosts). Appropriate field methods will be employed to determine the species, type, and vulnerability of the roost to construction disturbance. Methods will follow best practices for roost surveys such that species are not disturbed, and adequate temporal and spatial coverage is provided to increase likelihood of detection.

Roost surveys may consist of both daylight surveys for signs of bat use and evening/night visit(s) to conduct emergence surveys or evaluate the status of night roosts. Survey timing should be adequate to account for individual bats or species that might not emerge until well after dark.

Methods and approaches for determining roost occupancy status should include a combination of the following components as the biologist deems necessary for the particular roost site.

- Passive and/or active acoustic monitoring to assist with species identification.
- Guano traps to determine activity status.
- Night-vision equipment.
- Passive infrared camera traps.

At the completion of the roost surveys, a report will be prepared documenting areas surveyed, methods, results, and mapping of high-quality habitat or confirmed roost locations.

PEIR Mitigation Measure BIO-12b: Avoid removing or disturbing bat roosts

- Active bat roosts will not be disturbed and will be provided a minimum buffer of 500 feet where preexisting disturbance is moderate or 750 feet where preexisting disturbance is minimal. Confirmation of buffer distances and determination of the need for a biological monitor for active maternity roosts or hibernacula will be obtained in consultation with CDFW. At a minimum, when an active maternity roost or hibernaculum is present within 750 feet of a construction site, a qualified biologist will conduct an initial assessment of the

roost response to construction activities and will recommend buffer expansion if there are signs of disturbance from the roost.

- Structures (natural or artificial) showing evidence of significant bat use within the past year will be left in place as habitat wherever feasible. Should such a structure need to be removed or disturbed, CDFW will be consulted to determine appropriate buffers, timing and methods, and compensatory mitigation for the loss of the roost.
- All project proponents will provide environmental awareness training to construction personnel, establish buffers, and initiate consultation with CDFW if needed.
- Artificial night lighting within 500 feet of any roost will be shielded and angled such that bats may enter and exit the roost without artificial illumination and the roost does not receive artificial exposure to visual predators.
- Tree and vegetation removal will be conducted outside the maternity season (April 1–September 15) to avoid disturbance of maternity groups of foliage-roosting bats.
- If a maternity roost or hibernaculum is present within 500 feet of the construction site where preexisting disturbance is moderate or within 750 feet where preexisting disturbance is minimal, a qualified biological monitor will be onsite during groundbreaking activities.

2020 Updated PEIR Mitigation Measure BIO-14a: Site and select turbines to minimize potential mortality of bats

2020 Updated PEIR Mitigation Measure BIO-14d: Develop and implement a bat adaptive management plan

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-3a, 2020 Updated PEIR BIO-5a, PEIR BIO-5c, PEIR BIO-7a, 2020 Updated PEIR BIO-8a, 2020 Updated PEIR BIO-8b, 2020 Updated PEIR BIO-10a, 2020 Updated PEIR BIO-11b, PEIR BIO-11c, PEIR BIO-11d, PEIR BIO-11e, 2020 Updated PEIR BIO-11i, PEIR BIO-12a, PEIR BIO-12b, 2020 Updated PEIR BIO-14a, and 2020 Updated PEIR BIO-14d will reduce the project's impacts on native resident or migratory wildlife corridors, and the use of native wildlife nursery sites, but will not mitigate this impact to a less-than-significant level, as there is no feasible way to avoid the significant impact.

Remaining Impacts: Remaining impacts related to the project impacts on the movement of any native resident or migratory wildlife species or established native resident or migratory wildlife corridors, and the use of native wildlife nursery sites will be significant and unavoidable.

Overriding Considerations: As more fully explained in the Statement of Overriding Considerations contained in Exhibit C to the Resolution to which these CEQA Findings are attached, the County finds that there are environmental, economic, or other benefits of the approved project that override the remaining significant and unavoidable impacts on biological resources. There are no other feasible mitigation measures, or changes to the project that would reduce this impact to a less-than-significant level.

Findings and Recommendations Regarding Significant Impacts that are Mitigated to a Less-Than-Significant Level

Aesthetics

Impact AES-1: Potential to have a substantial adverse effect on a scenic vista

Potential Impact: Temporary visual impacts would be caused by construction activities. The PEIR also concluded that construction activities associated with the repowering program could result in a significant impact, particularly for highly sensitive viewers such as residents and recreationists. The analysis specifically called out Bethany Reservoir, which is surrounded by the Project area, as well as scenic roadways and recreation trails such as the California Aqueduct Bikeway. Although the project site is not visible from Bethany Reservoir or the California Aqueduct Bikeway, several of the southernmost turbines would be visible from the upper elevations of the Carnegie and Tesla sites, which lie about 2 miles south of the site. Construction of the proposed project is expected to last approximately 8 months. In general, views of construction activities and equipment, though temporary, could be adverse and disturbing to residents and the users of the recreational facilities in the project area, and high-powered construction nighttime lighting could be perceived as significant and adverse by area residents.

Although there are no formally designated scenic vistas in the Project area or vicinity, the PEIR analysis of the repowering program and the two projects evaluated at the project level (the Golden Hills and Patterson Pass projects) addressed scenic vistas available from local roadways and recreational trails. The analysis of the program indicated that new turbine structures located on ridges in the program area that were specifically identified for protection in the ECAP by Policy 105 would constitute a significant adverse visual impact, especially if they were located in areas that had not previously been developed with wind turbines or where they did not exist at the time the PEIR was being prepared (formally when the PEIR Notice of Preparation was circulated in 2010). Although these sensitive ridgelines and hilltops as referenced in Policy 105 are outside of the project area, a number of scenic vistas are available from the local Patterson Pass and Midway Roads, out and over the project site, which are protected by ECAP Policies 170 and 215, as discussed in the PEIR analysis of the program alternatives.

The analysis of program impacts on scenic vistas in the PEIR concluded that where no turbines currently exist the impact would be significant, but that in areas with existing older turbines the replacement of the many existing smaller and older turbines with proportionally far fewer and less intrusive fourth-generation turbines would be less than significant because it would serve ECAP Policies 170 and 215, and otherwise serve to protect and enhance scenic values.

Comparable to the project-level analysis provided in the PEIR of the Golden Hills project, it is recognized that within the Mulqueeney Ranch project vicinity, many views, as shown in the existing conditions Viewpoints 5 through 7 in Figures 3.1-7 through 3.1-9, currently do not include wind turbines. Although the project site is not currently developed with wind turbines, the site had several hundred turbines at the time the PEIR was published and up until 2016, and as reflected in photos taken of the project site as it was in 2013 (Figures 3.1-3 through 3.1-5). In addition, the project site is part of the area designated by the County as the wind resource area and was intended

to be repowered as is currently proposed. In addition, as shown in Viewpoint 8 in Figure 3.1-10, the new turbines would be widely spaced compared to the concentration and density of existing, older turbines and the spacing of the proposed turbines would detract much less from the natural landscape than the existing string configuration within this view.

Consistent with the PEIR analysis, the wider configuration of turbines allows for views of the rolling, grassy terrain to become more prominent, back-dropped against the sky, and less interrupted by anthropogenic features. While the larger turbines would draw viewers' attention toward them, the eye is also able to follow the ridgeline of the hills in a more cohesive manner than when turbines are placed more closely together.

As stated in the PEIR, views of the proposed turbines may be more or less prevalent depending on a viewer's location within the landscape and if the viewer has more direct views of the turbines or views that are partially or fully screened by topography. However, all of the proposed turbines are within views that had turbines in place from the 1980s up until 2016, when the old generation wind turbines and towers on the project site were decommissioned and removed. As described above, the project site is in a state- and County-designated wind resource area and was intended to be repowered as is currently proposed, making the development of the site with new current-generation turbines part of the anticipated and customary visual conditions. Therefore, while the southernmost proposed turbines, especially those at elevations of more than 1,400 feet, would be visible from existing and planned park and trail areas south of Tesla Road, the distance of more than 2 miles indicates the impact would be less than significant, or effectively mitigated by distance. Further, while the painting of turbines for avian protection could make them slightly more visible, it is not anticipated that such measures would affect scenic views.

While installation of new turbines generally would not disrupt views from scenic vistas, significant impact on scenic vistas could still occur if the project site is not maintained in an orderly fashion, causing it to accumulate debris and resulting in haphazard visual conditions if surplus parts and materials become strewn about the site.

Mitigation Measures: The following mitigation measures, discussed in Section 3.1.3 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure AES-1: Limit construction to daylight hours

Major construction activities will not be undertaken between sunset and sunrise or on weekends. Construction activity is specifically prohibited from using high-wattage lighting sources to illuminate work sites after sunset and before sunrise, with the exception of nighttime deliveries under the approved transportation control plan or other construction activities that require nighttime work for safety considerations.

PEIR Mitigation Measure AES-2b: Maintain site free of debris and restore abandoned roadways

Project sites will be cleaned of all derelict equipment, wind turbine components not required for the project, and litter and debris from old turbines and past turbine operations. Such litter and debris may include derelict turbines, obsolete anemometers, unused electrical poles, and broken turbine blades. In addition, abandoned roads that are no longer in use on such parcels will be restored and hydroseeded to reclaim the sites and remove their visual traces from the

viewscape, except in cases where the resource agencies (USFWS and CDFW) recommend that the features be left in place for resource protection. All parcels with new turbines will be maintained in such a manner through the life of project operations and until the parcels are reclaimed in accordance with the approved reclamation plan.

PEIR Mitigation Measure AES-2c: Screen surplus parts and materials

Surplus parts and materials that are kept onsite will be maintained in a neat and orderly fashion and screened from view. This can be accomplished by using a weatherproof camouflage material that can be draped over surplus parts and materials stockpiles. Draping materials will be changed out to accommodate for seasonal variations so that surplus materials are camouflaged in an effective manner when grasses are both green and brown.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR AES-1, PEIR AES-2b, and PEIR AES-2c will ensure that the impacts associated with adverse effect on a scenic vista will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with scenic vistas will be less than significant.

Impact AES-2: Potential to substantially damage scenic resources along a scenic highway

Potential Impact: County-designated scenic roads and highways in the project vicinity are shown on Figure 3.1-1 of the SEIR and include Patterson Pass Road, Midway Road, and I-580. Because these routes were lined with previously existing turbines until those turbines were recently removed, motorists on these routes are accustomed to views of turbines. Although the new turbines would be substantially taller than the previously existing turbines, the new widely spaced configuration would detract less from the natural landscape than did the previously existing configuration. This would allow for views of the rolling, grassy terrain to become more prominent, back-dropped against the sky, and less interrupted by anthropogenic features. While the larger turbines would draw viewers' attention toward them, the eye would be able to follow the ridgeline of the hills in a more cohesive manner.

Although no turbines currently exist within the project site, it is in a County-designated wind resource area and was intended to be repowered as is currently proposed, making the development of the site with turbines part of the expected visual conditions seen from Patterson Pass Road and I-580. Because the removal of old turbines was anticipated in the PEIR, and the changed circumstances since the 2014 certification of the PEIR are considered part of the expected visual conditions in the project areas, construction of the new turbines, even after 5 years, would have less-than-significant impacts on scenic resources along a local scenic highway.

As discussed under Impact AES-1, although avian protective measures such as painting turbine blades with staggered stripes or painting one blade black may make turbine blades slightly more visible from scenic routes when the turbines are lit from the front or from above by the sun, the environmental offset of reducing avian mortality by as much as 70 percent would outweigh the visual impact associated with the blades being somewhat more visible in the landscape. In addition, public support for reducing avian mortality is likely to result in a positive viewer response toward such a visual change, compared to the traditional look of having blades being all one color.

Therefore, implementing the blade painting measures is not anticipated to negatively affect views from scenic routes associated with the proposed project to a greater degree than if the blades would be all one color. Significant impacts on scenic roadways could occur if the project site is not maintained in an orderly fashion, causing it to accumulate debris and resulting in haphazard visual conditions if surplus parts and materials become strewn about the site.

Mitigation Measures: The following mitigation measures, discussed in Section 3.1.3 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure AES-2b: Maintain site free of debris and restore abandoned roadways

PEIR Mitigation Measure AES-2c: Screen surplus parts and materials

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR AES-2b and PEIR AES-2c will ensure that the impacts associated with adverse effect on a scenic vista will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with scenic vistas will be less than significant.

Impact AES-3: Substantial degradation of the existing visual character or quality of the project site and its surroundings (less than significant with mitigation)

Potential Impact: As described above, I-580 and Patterson Pass Road are considered scenic routes. As stated in the PEIR, and as illustrated in Viewpoints 5 through 8 in Figures 3.1-6 through 3.1-10, there are portions of these roads where no turbines currently exist.

Although no turbines currently exist within the project site, it is in a County-designated wind resource area and was intended to be repowered as is currently proposed, making the development of the project site with turbines part of the expected visual conditions seen by nearby residents and motorists and recreational viewers on roadways surrounding the project site. In addition, motorists and recreational viewers are accustomed to seeing wind turbines along other routes within the project vicinity. Therefore, motorists, recreational viewers, and residents would not be adversely affected by the proposed project. As a result, the construction of new turbines would have less-than-significant impacts on visual character.

As discussed under Impact AES-1, although avian protective measures such as painting turbine blades with staggered stripes or painting one blade black may make turbine blades slightly more visible from scenic routes when the turbines are lit from the front or from above by the sun, the environmental offset of reducing avian mortality by as much as 70 percent would outweigh the visual impact associated with the blades being somewhat more visible in the landscape. In addition, public support for reducing avian mortality is likely to result in a positive viewer response toward such a visual change, compared to the traditional look of having blades being all one color. However, while significant effects associated with installation of the new turbines would not occur because the site has previously been developed with turbines, significant impacts on the existing visual character and quality of the project site could nonetheless occur if the project site is not maintained in an orderly fashion.

Mitigation Measure: The following mitigation measures, discussed in Section 3.1.3.3 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure AES-2b: Maintain site free of debris and restore abandoned roadways

PEIR Mitigation Measure AES-2c: Screen surplus parts and materials

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measures PEIR AES-2b and PEIR AES-2c will ensure that the impacts associated with visual quality in urbanized areas and conflicts with zoning will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with degradation of the visual character or quality of the project site and surroundings will be less than significant.

Air Quality

Impact AQ-2: Cumulatively considerable net increase of any criteria pollutant for which the Project region is a nonattainment area for an applicable federal or state ambient air quality standard

Potential Impact: The PEIR concluded that maximum daily unmitigated ROG and NO_x from construction of repowering projects would exceed BAAQMD's significance thresholds, resulting in a significant impact. Fugitive dust would also constitute a significant impact without application of best management practices (BMPs). Implementation of PEIR Mitigation Measures AQ-2a, *Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures*, and AQ-2b, *Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures*, would ensure that impacts related to fugitive dust would be less than significant. However, implementation of these measures would not reduce NO_x emissions to a less-than-significant level.

Implementation of an additional mitigation measure, 2020 NEW Mitigation Measure AQ-2c: *Reduce construction-related air pollutant emissions to below BAAQMD NO_x thresholds*, which has been added to this SEIR as a required mitigation measure for the project, would reduce NO_x emissions to a less-than-significant level. Neither long-term operation of the project nor material hauling in SJVAPCD during construction would exceed any air district thresholds, and impacts would be less than significant.

Mitigation Measures: The following mitigation measures, discussed in in Section 3.3.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures

The Project proponents will require all contractors to comply with the following requirements for all areas with active construction activities.

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered as needed to maintain dust control onsite—approximately two times per day.
- All haul trucks transporting soil, sand, or other loose material offsite will be covered.
- All visible mud or dirt track-out onto adjacent public roads will be removed 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 will be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points.
- All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified visible emissions evaluator.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person will respond and take corrective action within 48 hours. The air district's phone number will also be visible to ensure compliance with applicable regulations.

PEIR Mitigation Measure AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures

The Project proponents will require all contractors to comply with the following requirements for all areas with active construction activities.

- During construction activities, all exposed surfaces will be watered at a frequency adequate to meet and maintain fugitive dust control requirements of all relevant air quality management entities.
- All excavation, grading, and/or demolition activities will be suspended when average wind speeds exceed 20 mph, as measured at the Livermore Municipal Airport.
- Wind breaks (e.g., trees, fences) will be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50% air porosity.
- Vegetative ground cover (e.g., fast-germinating native grass seed) will be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- If feasible and practicable, the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time will be limited.

- Construction vehicles and machinery, including their tires, will be cleaned prior to leaving the construction area to remove vegetation and soil. Cleaning stations will be established at the perimeter of the construction area.
- Site accesses to a distance of 100 feet from the paved road will be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.
- Sandbags or other erosion control measures will be installed to prevent silt runoff to public roadways from sites with a slope greater than 1%.
- The idling time of diesel powered construction equipment will be minimized to 2 minutes.
- The Project will develop a plan demonstrating that the offroad equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a Project wide fleet-average 20% NO_x reduction and 45% PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
- Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).
- All construction equipment, diesel trucks, and generators will be equipped with BACT for emission reductions of NO_x and PM.
- All contractors will use equipment that meets ARB's most recent certification standard for offroad heavy duty diesel engines.

2020 NEW Mitigation Measure AQ-2c: Reduce construction-related air pollutant emissions to below BAAQMD NO_x thresholds

The project proponents will ensure construction-related emissions do not exceed BAAQMD's construction NO_x threshold of 54 pounds per day. In addition to implementing PEIR Mitigation Measures AQ-2a and AQ-2b, the project proponents will coordinate with BAAQMD (or the Clean Air Foundation) to purchase NO_x credits to offset remaining NO_x construction and operations emissions exceeding BAAQMD thresholds.

The project proponents will track construction activity, estimate emissions, and enter into a construction mitigation contract with BAAQMD to offset NO_x emissions that exceed BAAQMD NO_x maximum daily threshold of 54 pounds per day.

The maximum daily emissions will be calculated on a daily basis by determining total construction-related NO_x emissions for each calendar day. BAAQMD will use the mitigation fees provided by the project proponents to implement emissions reduction efforts that offset project NO_x emissions that exceed the BAAQMD threshold.

This mitigation includes the following specific requirements:

- The project proponents will require construction contractors to provide daily construction activity monitoring data for all construction activities associated with the project to estimate actual construction emissions, including the effect of equipment emissions reduction measures. The project proponents will submit the daily construction activity monitoring data and an estimate of actual daily construction emissions to the lead agency and BAAQMD

for review by the 15th day of each month for the prior construction month. The lead agency will examine the construction and operational activity monitoring to ensure it is representative, and BAAQMD will examine the emissions estimate to ensure it is calculated properly.

- After acceptance of the emissions estimates by BAAQMD for the prior month, the project proponents will submit mitigation fees to BAAQMD to fund offsets for the portion of daily emissions that exceed the maximum daily NO_x threshold. The mitigation fees will be based on the mitigation contract with BAAQMD (see discussion below) but will not exceed the emissions-reduction project cost-effectiveness limit set for the Carl Moyer Program for the year in which mitigation fees are paid. The current Carl Moyer Program cost-effectiveness limit is \$30,000 per weighted ton of criteria pollutants (NO_x + ROG + [20*PM]). An administrative fee of 5% will be paid by the project proponents to BAAQMD to implement the program.
- The mitigation fees will be used by BAAQMD to fund projects that are eligible for funding under the Carl Moyer Program guidelines or other BAAQMD emissions-reduction incentive programs that meet the Carl Moyer Program cost-effectiveness threshold and are real, surplus, quantifiable, and enforceable.
- The project proponents will enter into a mitigation contract with BAAQMD for the emissions-reduction incentive program. The mitigation contract will include the following:
 - Identification of appropriate offsite mitigation fees required for the project.
 - Timing for submission of mitigation fees.
 - Processing of mitigation fees paid by the project proponents.
 - Verification of emissions estimates submitted by the project proponents.
 - Verification that offsite fees are applied to appropriate mitigation programs within the SFBAAB.

The mitigation fees will be submitted within 4 weeks of BAAQMD acceptance of an emissions estimate provided by the project proponents showing that the maximum daily NO_x threshold was exceeded (when measured on a daily basis).

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR AQ-2a, PEIR AQ-2b, and 2020 NEW AQ-2c will ensure that the impacts associated with a cumulatively considerable net increase of criteria pollutants that exceed BAAQMD's thresholds will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with exceeding BAAQMD's significance thresholds will be less than significant.

Impact AQ-3: Exposure of sensitive receptors to substantial pollutant concentrations

Potential Impact: Long-term operation of the proposed Project would not result in a significant new source of emissions. Offsite truck trips during construction would be transitory and would use multiple roads over a widespread area, thereby helping to disperse toxic pollutants and minimize exposure. Onsite construction activities would generate DPM, but these activities would occur over a relatively short period—approximately 7 months, far less than the exposure duration of 30 years

that is typically associated with chronic cancer risk (Office of Environmental Health Hazard Assessment 2015). Emissions would also be spatially dispersed throughout the project area and at multiple turbine locations.

While exposure to DPM emissions would be of short duration, one receptor, the Mulqueeney Ranch, is within 1,000 feet of turbine work areas. This receptor may be exposed to increased health risks during construction that could exceed BAAQMD thresholds. Accordingly, this impact is conservatively concluded to be potentially significant.

Mitigation Measures: The following mitigation measures, discussed in Section 3.3.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures

PEIR Mitigation Measure AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR AQ-2a and PEIR AQ-2b will ensure that the impacts associated with the exposure of sensitive receptors to substantial pollutant concentrations will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with exposure of sensitive receptors to pollutant concentrations will be less than significant.

Biological Resources

Impact BIO-1: Potential for ground-disturbing activities to result in adverse effects on special-status plants or habitat occupied by special-status plants

Potential Impact: Ground-disturbing activities associated with the project could result in adverse effects on special-status plants or their habitat. Direct effects include those effects where plants may be removed, damaged, or crushed (seedlings) by ground-disturbing activities, the movement or parking of vehicles, and/or the placement of equipment and supplies. Ground disturbance can kill or damage mature individuals or eliminate their habitat. Excavation alters soil properties and may create conditions unsuitable for the growth of some species or favor their replacement by other species. The roots of shrubs and other perennial species are susceptible to damage from soil compaction by equipment or construction materials. Possible indirect effects on plants could result from erosion that degrades habitat or accidental ignition of a fire that damages or kills individuals. Because these ground-disturbing activities could have substantial adverse effects on special-status plant species, if present, this impact would be potentially significant. This conclusion is consistent with the analysis presented in the PEIR.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1a: Conduct surveys to determine the presence or absence of special-status plant species

The project proponent will conduct surveys for the special-status plant species within and adjacent to all project sites. All surveys will be conducted by qualified biologists in accordance with the appropriate protocols.

Special-status plant surveys will be conducted in accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (California Department of Fish and Wildlife 2018) during the season that special-status plant species would be evident and identifiable—i.e., during their blooming season. No more than 3 years prior to ground-disturbing repowering activities and during the appropriate identification periods for special-status plants (Table 3.4-2), a qualified biologist (as determined by Alameda County) will conduct field surveys within proposed construction areas, and the immediately adjacent areas to determine the presence of habitat for special-status plant species. The project proponent will submit a report documenting the survey results to Alameda County for review and approval prior to conducting any repowering activities. The report will include the location and description of all proposed work areas, the location and description of all suitable habitat for special-status plant species, and the location and description of other sensitive habitats (e.g., vernal pools, wetlands, riparian areas). Additionally, the report will outline where additional species and/or habitat-specific mitigation measures are required. This report will provide the basis for any applicable permit applications where incidental take of listed species may occur.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

The project proponent will ensure that the following BMPs, in accordance with practices established in the EACCS, will be incorporated into the final project design and construction documents.

- Employees and contractors performing ground-disturbing activities, including construction and maintenance activities will receive environmental sensitivity training. Training will include review of environmental laws, mitigation measures, permit conditions, and other requirements that must be followed by all personnel to reduce or avoid effects on special-status species and sensitive habitats during construction activities.
- Environmental tailboard trainings will take place on an as-needed basis in the field. These trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during construction and maintenance activities. Directors, managers, superintendents, and the crew leaders will be responsible for ensuring that crewmembers comply with the guidelines.
- Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.

- Off-road vehicle travel outside the project footprint will be avoided and minimized to the extent possible within the project footprint.
- Material will be stockpiled only in areas that do not support special-status species or sensitive habitats.
- Grading will be restricted to the minimum area necessary.
- Prior to ground-disturbing activities in sensitive habitats, project construction boundaries and access areas will be flagged and temporarily fenced during construction to reduce the potential for vehicles and equipment to stray into adjacent habitats.
- Vehicles or equipment will not be refueled within 100 feet of a wetland, stream, or other waterway unless a bermed and lined refueling area (i.e., a created berm made of sandbags or other removable material) is constructed.
- Erosion control measures will be implemented to reduce sedimentation in nearby aquatic habitat when activities are the source of potential erosion. Plastic monofilament netting (erosion control matting) or similar material containing netting will not be used at the project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
- Significant earth moving-activities will not be conducted in riparian areas within 24 hours of predicted storms or after major storms (defined as 1-inch of rain or more).
- The following will not be allowed at or near work sites for project activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations).

PEIR Mitigation Measure BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones

Where surveys determine that a special-status plant species is present in or adjacent to a project area, direct and indirect impacts of the Project on the species will be avoided through the establishment of activity exclusion zones, within which no ground-disturbing activities will take place, including construction of new facilities, construction staging, or other temporary work areas. Activity exclusion zones for special-status plant species will be established around each occupied habitat site, the boundaries of which will be clearly marked with standard orange plastic construction exclusion fencing or its equivalent. The establishment of activity exclusion zones will not be required if no construction-related disturbances will occur within 250 feet of the occupied habitat. The size of activity exclusion zones may be reduced through consultation with a qualified biologist and with concurrence from CDFW based on site-specific conditions.

2020 Updated PEIR Mitigation Measure BIO-1d: Compensate for impacts on special-status plant species

The project proponent will avoid or minimize temporary and permanent impacts on special-status plants that occur on the project site and will compensate for impacts on special-status plant species. Although all impacts on large-flowered fiddleneck, diamond-petaled California poppy, and caper-fruited tropidocarpum will be avoided, impacts on other special-status plant species will be avoided to the extent feasible, and any unavoidable impacts will be addressed through compensatory mitigation.

Where avoidance of impacts on a special-status plant species is infeasible, loss of individuals or occupied habitat of a special-status plant species occurrence will be compensated for through the acquisition, protection, and subsequent management in perpetuity of other existing occurrences at a minimum 2:1 ratio (occurrences preserved:occurrences impacted). For focal species identified in the EACCS (San Joaquin spearscale, big tarplant, Congdon's tarplant, palmate-bracted bird's-beak, Livermore Valley tarplant, and recurved larkspur), loss of individuals and occupied habitat will be compensated at 5:1, consistent with the EACCS. The project proponent will provide detailed information to the County and CDFW on the location of the preserved occurrences, quality of the preserved habitat, feasibility of protecting and managing the areas in-perpetuity, responsibility parties, and other pertinent information. The preserved habitat will be confirmed to support populations of the impacted species and will be preserved in perpetuity via deed restriction, establishment of a conservation easement, or similar preservation mechanism. A qualified botanist or plant ecologist will prepare a preservation plan or long-term management plan for the site containing at a minimum: a monitoring plan and performance criteria for the preserved plant population; a description of remedial measures to be performed in the event that performance criteria are not met; a description of maintenance activities to be conducted on the site, including weed control, trash removal, irrigation, and control of herbivory by livestock and wildlife; and an adequate funding mechanism to ensure long-term management of the preserved habitat. If suitable occurrences of a special-status plant species are not available for preservation, then the project will be redesigned to remove features that would result in impacts on that species.

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

The project proponents will retain a qualified biologist (as determined by Alameda County) to conduct periodic monitoring of decommissioning, repowering, and reclamation activities that occur adjacent to sensitive biological resources (e.g., special-status species, sensitive vegetation communities, wetlands). Monitoring will occur during initial ground disturbance where sensitive biological resources are present and weekly thereafter or as determined by the County in coordination with a qualified biologist. The biologist will assist the crew, as needed, to comply with all project implementation restrictions and guidelines. In addition, the biologist will be responsible for ensuring that the project proponent or its contractors maintain exclusion areas adjacent to sensitive biological resources, and for documenting compliance with all biological resource-related mitigation measures.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1a, 2020 Updated PEIR BIO-1b, PEIR BIO-1c, 2020 Updated PEIR BIO-1d, and PEIR BIO-1e will ensure that the impacts associated with the potential for ground-disturbing activities to result in adverse effects on special-status plants or habitat occupied by special-status plants will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with special-status plants will be less than significant.

Impact BIO-2: Potential for the introduction and spread of invasive plant species to result in adverse effects on special-status plants and natural communities

Potential Impact: Construction activities have the potential to facilitate the introduction and spread of invasive nonnative plant species by removing vegetation and disturbing soils. Construction vehicles and machinery are primary vectors for the spread of such species. Control of the introduction and spread of invasive species is required for federal agencies under Executive Order 11312. The introduction and spread of invasive nonnative plant species as a result of activities associated with the program would constitute a significant indirect impact.

Mitigation Measure: The following mitigation measures, discussed in Section 3.4.2 of the PEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-2: Prevent introduction, spread, and establishment of invasive plant species**

To avoid and minimize the introduction and spread of invasive nonnative plant species, the project proponent will implement the following BMPs.

- Construction vehicles and machinery will be cleaned prior to entering the construction area. Cleaning stations will be established at the perimeter of the construction area along all construction routes or immediately offsite.
- Vehicles will be washed only at approved areas. No washing of vehicles will occur at job sites.
- To discourage the introduction and establishment of invasive plant species, seed mixtures and straw used within natural vegetation will be either rice straw or weed-free straw, as allowed by state and federal regulation of stormwater runoff.
- In addition, the project proponent will prepare and implement erosion and sediment control plans to control short-term and long-term erosion and sedimentation effects and to restore soils and vegetation in areas affected by construction activities (2020 Updated PEIR Mitigation Measure BIO-1b). Prior to initiating any construction activities that will result in temporary impacts on natural communities, a restoration and monitoring plan will be developed for temporarily affected habitats in each project area (PEIR Mitigation Measure BIO-5c). Restoration and monitoring plans will be submitted to the County and CDFW for approval. These plans will include methods for restoring soil conditions and revegetating disturbed areas, seed mixes, monitoring and maintenance schedules, adaptive management strategies, reporting requirements, and success criteria. Following completion of project construction, the project proponents will implement the revegetation plans to restore areas disturbed by project activities to a condition of equal or greater habitat function than occurred prior to the disturbance.

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

Within 30 days prior to any ground disturbance, a qualified biologist will prepare a Grassland Restoration Plan in coordination with CDFW and subject to CDFW approval, to ensure that

temporarily disturbed annual grasslands and areas planned for the removal of permanent roads and turbine pad areas are restored to preproject conditions. The Grassland Restoration Plan will include but not be limited to the following measures.

- Gravel will be removed from areas proposed for grassland restoration.
- To the maximum extent feasible, topsoil will be salvaged from within onsite work areas prior to construction. Imported fill soils will be limited to weed-free topsoil similar in texture, chemical composition, and pH to soils found at the restoration site.
- Where appropriate, restoration areas will be seeded (hydroseeding is acceptable) to ensure erosion control. Seed mixes will be tailored to closely match that of reference site(s) within the program area and should include native or naturalized, noninvasive species sourced within the Project area or from the nearest available location.
- Reclaimed roads will be restored in such a way as to permanently prevent vehicular travel.

The plan will include a requirement to monitor restoration areas annually (between March and October) for up to 3 years following the year of restoration. The restoration will be considered successful when the percent cover for restored areas is 70% absolute cover of the planted/seeded species compared to the percent absolute cover of nearby reference sites. No more than 5% relative cover of the vegetation in the restoration areas will consist of invasive plant species rated as “high” in Cal-IPC’s California Invasive Plant Inventory Database (<http://www.cal-ipc.org>). Remedial measures prescribed in the plan will include supplemental seeding, weed control, and other actions as determined necessary to achieve the long-term success criteria. Monitoring may be extended if necessary to achieve the success criteria or if drought conditions preclude restoration success. Other performance standards may also be required as they relate to special-status species habitat; these will be identified in coordination with CDFW and included in the plan. The project proponent will provide evidence that CDFW has reviewed and approved the Grassland Restoration Plan. Additionally, the project proponent will provide annual monitoring reports to the County by January 31 of each year, summarizing the monitoring results and any remedial measures implemented (if any are necessary) during the previous year.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Project contractors will obtain coverage under the Construction General Permit before the onset of any construction activities, because the Project would disturb 1 acre or more. A SWPPP will be developed by a qualified engineer or erosion control specialist in accordance with the appropriate Water Board’s requirements for NPDES compliance and implemented prior to the issuance of any grading permit before construction. The SWPPP will be kept onsite during construction activities and will be made available upon request to representatives of the Regional Water Boards.

Compliance and coverage with the Storm Water Management Program and General Construction Permit will require controls of pollutant discharges that utilize BMPs and technology reduce erosion and sediments to meet water quality standards. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other nonpoint-source runoff. Measures range from source control, such as reduced surface disturbance, to the treatment of polluted runoff, such as detention basins.

BMPs to be implemented as part of the *Storm Water Management Program* and Construction General Permit (and SWPPP) may include the following practices.

- Temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) will be employed to control erosion from disturbed areas.
- Use a dry detention basin (which is typically dry except after a major rainstorm, when it will temporarily fill with stormwater), designed to decrease runoff during storm events, prevent flooding, and allow for off-peak discharge. Basin features will include maintenance schedules for the periodic removal of sediments, excessive vegetation, and debris that may clog basin inlets and outlets.
- Cover or apply nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more) that could contribute sediment to waterways.
- Enclose and cover exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways.
- Ensure that no earth or organic material will be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water.
- Prohibit the following types of materials from being rinsed or washed into the streets, shoulder areas, or gutters: concrete, solvents and adhesives, thinners, paints, fuels, sawdust, dirt, gasoline, asphalt and concrete saw slurry, and heavily chlorinated water.
- Ensure that grass or other vegetative cover will be established on the construction site as soon as possible after disturbance.

The contractor will select a combination of BMPs (consistent with Section A of the Construction General Permit) that is expected to minimize runoff and remove contaminants from stormwater discharges. The final selection of BMPs will be subject to approval by the San Francisco Bay Regional Water Board and the Central Valley Water Board.

The contractor will verify that a notice of intent has been filed with the State Water Board and that a SWPPP has been developed before allowing construction to begin. The contractor will perform inspections of the construction area, to verify that the BMPs specified in the SWPPP are properly implemented and maintained. The contractor will notify the appropriate Regional Water Board immediately if there is a noncompliance issue and will require compliance. If necessary, the contractor or their agent will require that additional BMPs be designed and implemented if those originally constructed do not achieve the identified performance standard.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-2, PEIR BIO-5c, and PEIR WQ-1 will ensure that the impacts associated with the potential for the introduction and spread of invasive plant species to result in adverse effects on special-status plants or habitat occupied by special-status plants will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with the potential for the introduction of invasive plant species to result in adverse effects on special-status plants or habitat occupied by special-status plants will be less than significant.

Impact BIO-3: Potential mortality of or loss of habitat for vernal pool branchiopods and curved-footed hygrotus diving beetle

Potential Impact: Ground-disturbing activities (i.e., excavation, grading, and stockpiling of soil) associated with constructing turbine foundations, building new and altering existing access roads, replacing culverts, installing a power collection system, and performing maintenance activities near or upslope of suitable habitat could result in the runoff of sediment, gasoline, oil, or other contaminants into suitable habitat, which could cause illness or mortality of vernal pool fairy shrimp and vernal pool tadpole shrimp (collectively referred to as vernal pool branchiopods) and curved-foot hygrotus diving beetle or their food resources. The use of horizontal directional drilling (HDD) methods during installation of the collection system to avoid sensitive habitats could result in an inadvertent release of drilling fluid containing bentonite near suitable habitat, which could also cause mortality of vernal pool branchiopods and curved-foot hygrotus diving beetle or contaminate habitat.

Effects associated with potential sediment and chemical runoff during construction would be avoided and minimized through implementation of construction BMPs requiring installation of sediment control devices and implementation of a spill response plan. However, new facilities or improvements to existing roads that impede or alter the flow of stormwater across the project site once the project has been constructed could reduce the suitability of vernal pool branchiopod and curved-foot hygrotus diving beetle habitat by altering the hydroperiod of those aquatic features. Therefore, direct and indirect impacts on vernal pool brachiopods and curved-foot hygrotus diving beetle would be significant because the project could reduce the local populations of a federally listed or locally rare species.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas****PEIR Mitigation Measure BIO-3b: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-footed hygrotus diving beetle**

Where suitable habitat for listed vernal pool branchiopods and curved-footed hygrotus diving beetle are identified within 250 feet (or another distance as determined by a qualified biologist based on topography and other site conditions) of proposed work areas, the following measures will be implemented to ensure that the repowering projects do not have adverse impacts on listed vernal pool branchiopods or curved-footed hygrotus diving beetle. Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., ESA incidental take permit).

- Avoid all direct impacts on sandstone rock outcrop vernal pools.

- Ground disturbance will be avoided from the first day of the first significant rain (1 inch or more) until June 1, or until pools remain dry for 72 hours and no significant rain is forecast on the day of such ground disturbance.
- If vernal pools, clay flats, alkaline pools, ephemeral stock tanks (or ponds), sandstone pools, or roadside ditches are present within 250 feet of the work area (or another appropriate distance as determined by a qualified biologist on the basis of topography and other site conditions), the biologist will stake and flag an exclusion zone prior to construction activities. The width of the exclusion zone will be based on site conditions and will be the maximum practicable distance that ensures protection of the feature from direct and indirect effects of the Project. Exclusion zones will be established around features whether they are wet or dry at the time. The exclusion zone will be fenced with orange construction zone and erosion control fencing (to be installed by construction crew).
- No herbicide will be applied within 100 feet of exclusion zones, except when applied to cut stumps or frilled stems or injected into stems. No broadcast applications will be allowed.
- Avoid modifying or changing the hydrology of aquatic habitats.
- Minimize the work area for stream crossings and conduct work during the dry season (June 1 through the first significant rain of the fall/winter).
- Install utility collection lines across perennial creeks by boring under the creek.

Where impacts cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the East Alameda County Conservation Strategy. In the event that an incidental take permit is required, compensatory mitigation will be undertaken in accordance with the terms of the permit in consultation with USFWS.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-3b, and PEIR WQ-1 will ensure that the impacts associated with the potential mortality of or loss of habitat for vernal pool branchiopods and curved-footed hygrotus diving beetle will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with the potential mortality of or loss of habitat for vernal pool branchiopods and curved-footed hygrotus diving beetle will be less than significant.

Impact BIO-4: Potential disturbance or mortality of and loss of suitable habitat for valley elderberry longhorn beetle (less than significant with mitigation)

Potential Impact: Riparian habitat supporting blue elderberry shrubs occurs along Patterson Run creek on the project site and provides suitable habitat for valley elderberry longhorn beetle. Two of the onsite elderberry shrubs are located along proposed power collection system routes and could be directly affected by activities associated with installing power collection system infrastructure. Potential construction-related impacts include breaking or trimming branches, disturbance of roots, or removal of shrubs. These impacts would be significant because the project could reduce the local populations of a federally listed species.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas****PEIR Mitigation Measure BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle**

If it is determined through preconstruction surveys conducted pursuant to Mitigation Measure BIO-3a that elderberry shrubs are present within proposed work areas or within 100 feet of these areas, the following measures will be implemented to ensure that the proposed project does not have a significant impact on valley elderberry longhorn beetle.

- Avoid removal of elderberry shrubs.
- Elderberry shrubs/clusters within 100 feet of the construction area that will not be removed will be protected during construction. A qualified biologist (i.e., with elderberry/species experience) will mark the elderberry shrubs and clusters that will be protected during construction. Orange construction barrier fencing will be placed at the edge of the buffer areas. The buffer area distances will be proposed by the biologist and approved by USFWS (if required by project permits). No construction activities will be permitted within the buffer zone other than those activities necessary to erect the fencing. Signs will be posted every 50 feet along the perimeter of the buffer area fencing. The signs will contain the following information: *This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment.*
- Buffer area fences around elderberry shrubs will be inspected weekly by a qualified biological monitor during ground-disturbing activities and monthly after ground-disturbing activities until project construction is complete or until the fences are removed, as approved by the biological monitor and the resident engineer. The biological monitor will be responsible for ensuring that the contractor maintains the buffer area fences around elderberry shrubs throughout construction. Biological inspection reports will be provided to the project proponent and USFWS (if required by project permits).

2020 Updated PEIR Mitigation Measure BIO-4b: Compensate for direct and indirect effects on valley elderberry longhorn beetle

If elderberry shrubs cannot be avoided and protected as outlined in PEIR Mitigation Measure BIO-4a, the project proponent will obtain an incidental take permit from USFWS and compensate for direct impacts on any elderberry shrubs (i.e., removed or trimmed). Surveys of elderberry shrubs to be transplanted will be conducted by a qualified biologist prior to transplantation or trimming. Surveys will be conducted in accordance with the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (U.S. Fish and Wildlife Service 2017) and will document the following: (1) presence/absence of exit holes; (2) evaluation of riparian/non-riparian habitat; and (3) suitability of shrubs to support valley elderberry longhorn beetle. Survey results and an analysis of the number of mitigation units that would be required based on the survey results will be submitted to USFWS in a biological assessment or an HCP. After receipt of an incidental take permit and before construction begins, the project proponent will compensate for direct effects on elderberry shrubs by transplanting shrubs that cannot be avoided to a USFWS-approved conservation area and planting additional elderberry shrubs and associated riparian habitat at a USFWS-approved conservation area. Any elderberry shrub containing stem(s) measuring 1 inch or more in diameter at ground level that is deemed suitable habitat and is adversely affected (i.e., trimmed, transplanted, or destroyed) will be mitigated by planting replacement habitat (i.e., elderberry shrub seedlings and associate plant species), in the conservation area, at a ratio ranging from 1:1 to 3:1 (mitigation unit to affected habitat). The number of mitigation units (1 unit = 0.041 acre) to be planted as replacement habitat are determined by either the acreage of habitat (elderberry shrub and associated riparian) removed or number of shrubs trimmed, as well as the presence or absence of exit holes and whether the shrub lies in a riparian or non-riparian habitat. Stock of either seedlings or cuttings would be obtained from local sources.

At the discretion of USFWS, shrubs that are unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation. In cases where transplantation is not possible, mitigation ratios could be increased to offset the additional habitat loss.

The relocation of the elderberry shrubs will be conducted according to USFWS-approved procedures outlined in the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (U.S. Fish and Wildlife Service 2017), or the most current USFWS guidance. If possible, elderberry shrubs within the project construction area that cannot be avoided will be transplanted during the plant's dormant phase (November through the first 2 weeks of February). A qualified biological monitor will remain onsite while the shrubs are being transplanted.

Evidence of valley elderberry longhorn beetle occurrence in the conservation area, the condition of the elderberry shrubs in the conservation area, and the general condition of the conservation area itself will be monitored. Monitoring protocols and reporting timelines will be determined as part of the endangered species coordination/consultation with USFWS for the project. The project proponent will be responsible for funding and providing monitoring reports to USFWS in each of the years in which a monitoring report is required. As specified in the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (U.S. Fish and Wildlife Service 2017), the report will include information on presence of exit holes, evaluation of success criteria, summary of weed control and site protection, assessment of threats to valley elderberry longhorn beetle on the site, and photo documentation of current habitat condition. Mitigation

credits may be purchased at a USFWS-approved mitigation bank in lieu of the above monitoring requirements, as determined during coordination/consultation with USFWS for the project.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-4a, and 2020 Updated PEIR BIO-4b will ensure that the impacts associated with the potential disturbance or mortality of and loss of suitable habitat for valley elderberry longhorn beetle will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with potential disturbance or mortality of and loss of suitable habitat for valley elderberry longhorn beetle will be less than significant.

Impact BIO-5: Potential disturbance or mortality of and loss of suitable habitat for California tiger salamander, western spadefoot, California red-legged frog, and foothill yellow-legged frog

Potential Impact: Construction activities such as excavation, grading, and stockpiling of soil and materials could remove or otherwise alter suitable habitat for or result in injury or mortality of California tiger salamanders, California red-legged frogs, and western spadefoots or their food resources. A spill of drilling fluid containing bentonite near suitable habitat could also cause mortality of California tiger salamander, western spadefoot, and California red-legged frog or contaminate habitat. Ground-disturbing activities associated with constructing new access roads, widening existing access roads, installing the power collection system, and performing maintenance activities would affect small areas of intermittent stream and alkali wetland that provide aquatic nonbreeding and dispersal habitat for California red-legged frog; however the majority of individual California red-legged frogs would be at suitable breeding ponds where there would be no disturbance. California tiger salamanders, western spadefoot toads, and California red-legged frogs in active work areas also could be killed or injured by being crushed by equipment, entrapped in open trenches or other project facilities or entombed in burrows that are covered or filled, or be run over by vehicles traveling on the project site or to the project site on Patterson Pass Road during construction and maintenance activities.

New facilities or improvements to existing roads that impede or alter the flow of stormwater across the project site once the project has been constructed could reduce the suitability of California tiger salamander, western spadefoot, and California red-legged frog aquatic habitats by altering the hydroperiod of those aquatic features. Because of the limited extent of impacts in relation to the size of the watershed, the project is not expected to significantly increase the amount of impervious surface or to alter local hydrology. Soil surfaces left unvegetated have the potential to lead to sedimentation of suitable aquatic breeding, foraging, and dispersal habitats, and project maintenance has the potential to result in degradation of water quality in aquatic habitats from runoff of petroleum-based products associated with equipment and vehicles used during maintenance activities.

Lighting around the new substation also has the potential to disrupt nighttime foraging and migration activities of California tiger salamander, western spadefoot, and California red-legged frog. However, because no ponds are located within 0.75 mile of the new substation and new lighting would be restricted to this area, would operate with motion sensors, and be directed downward, the effect of new lighting on these amphibians is expected to be minor or negligible.

Direct and indirect impacts on California tiger salamander, California red-legged frog, and western spadefoot would be significant because the project could reduce the local populations of state- and federally listed and locally rare species.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

2020 Updated PEIR Mitigation Measure BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians

The project proponent will ensure that BMPs and other appropriate measures, in accordance with measures developed for the EACCS, be incorporated into the appropriate design and construction documents. *Implementation of some of these measures will require that the project proponent obtain incidental take permits from USFWS (California red-legged frog and California tiger salamander) and from CDFW (California tiger salamander only) before construction begins.* Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., ESA or CESA incidental take authorization). The applicant will comply with the State Water Board NPDES construction general requirements for stormwater.

- Ground-disturbing activities will be limited to dry weather between April 15 and October 31. No ground-disturbing work will occur during wet weather. Wet weather is defined as when there has been 0.25 inch of rain in a 24-hour period. Ground disturbing activities halted due to wet weather may resume when precipitation ceases and the National Weather Service 72-hour weather forecast indicates a 30% or less chance of precipitation. No ground-disturbing work will occur during a dry-out period of 48 hours after the above-referenced wet weather.
- Where applicable, barrier fencing will be installed around the worksite to prevent amphibians from entering the work area. Barrier fencing will be removed within 72 hours of completion of work. The need and location of barrier fencing will be identified by a qualified biologist in cooperation with the County and/or any applicable resource agencies with the purpose of protecting dispersing special-status amphibians.
- Before construction begins, a qualified biologist will locate appropriate relocation areas and prepare a relocation plan for special-status amphibians that may need to be moved during construction. The proponent will submit this plan to USFWS and CDFW for review a minimum of 2 weeks prior to the start of construction.
- A qualified biologist will conduct preconstruction surveys (i.e., visual surveys of the ground surface and areas within burrows visible from the surface) immediately prior to ground-disturbing activities (including equipment staging, vegetation removal, grading). The biologist will survey the work area and all suitable habitats within 300 feet of the work area. If individuals (including adults, juveniles, larvae, or eggs) are found, work will not begin until USFWS and/or CDFW is contacted to determine if moving these life-stages is appropriate. If

relocation is deemed necessary, it will be conducted in accordance with the relocation plan. Incidental take permits are required for relocation of California tiger salamander (USFWS and CDFW) and California red-legged frog (USFWS). Relocation of western spadefoot toad requires a letter of permission or permit from CDFW authorizing this activity.

- No monofilament plastic will be used for erosion control.
- All project activity will terminate 30 minutes before sunset and will not resume until 30 minutes after sunrise during the migration/active season from November 1 to June 15. Sunrise and sunset times are established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area where the project is located.
- Vehicles will not exceed a speed limit of 15 mph on unpaved roads within natural land cover types, or during offroad travel.
- Trenches or holes more than 6 inches deep will be provided with one or more escape ramps constructed of earth fill or wooden planks and will be inspected by a qualified biologist prior to being filled. Any such features that are left open overnight will be searched each day prior to construction activities to ensure no covered species are trapped. Work will not continue until trapped animals have moved out of open trenches.
- Work crews or the onsite biological monitor will inspect open trenches, pits, and under construction equipment and material left onsite in the morning and evening to look for amphibians that may have become trapped or are seeking refuge. If special-status amphibians are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist who is USFWS and/or CDFW-approved under a biological opinion and/or incidental take permit for the specific project, will trap and move special-status amphibians in accordance with the relocation plan. Relocation of western spadefoot toad requires a separate letter of permission or permit from CDFW authorizing this activity.

PEIR Mitigation Measure BIO-5b: Compensate for loss of habitat for special-status amphibians

Where impacts on aquatic and upland habitat for special-status amphibians cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the East Alameda County Conservation Strategy. In the event that take authorization is required, compensatory mitigation will be undertaken in accordance with the terms of the authorization in consultation with USFWS and/or CDFW.

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, 2020 Updated PEIR BIO-5a, PEIR BIO-5b, PEIR BIO-5c, and PEIR WQ-1 will ensure that the impacts associated with the potential disturbance or mortality of and loss of suitable habitat for California tiger salamander, western spadefoot,

California red-legged frog, and foothill yellow-legged frog will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with potential disturbance or mortality of and loss of suitable habitat for California tiger salamander, western spadefoot, California red-legged frog, and foothill yellow-legged frog will be less than significant.

Impact BIO-6: Potential disturbance or mortality of and loss of suitable habitat for western pond turtle

Potential Impact: Suitable aquatic habitat (perennial ponds) for western pond turtle is located in lowland areas that would not be filled or directly disturbed by the installation of turbines and foundations. Ground-disturbing activities (i.e., excavation, grading, and stockpiling of soil) associated with constructing turbine foundations, new access roads, widening existing access roads, installing the power collection system, and performing maintenance activities near or upslope of suitable aquatic habitat could result in the runoff of sediment, gasoline, oil, or other contaminants into suitable aquatic habitat, which could cause illness or mortality of western pond turtle or its food resources. A spill of drilling fluid containing bentonite near suitable habitat could also cause mortality of western pond turtle or contaminate habitat. Widening of two access roads would be conducted near one pond that provide suitable habitat for western pond turtle. Disturbance of nonnative annual grassland near this pond would result in temporary and permanent impacts on suitable western pond turtle upland habitat and potential injury or mortality of individuals. Nests containing pond turtle eggs could be crushed or individuals could be injured or killed during movement of equipment or grading activities. Direct and indirect impacts on western pond turtle would be significant because the proposed project could diminish the local population of western pond turtles and lower reproductive potential, contributing to the further decline of the species.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

PEIR Mitigation Measure BIO-6: Conduct preconstruction surveys for western pond turtle and monitor construction activities if turtles are observed

If it is determined through preconstruction surveys conducted pursuant to Mitigation Measure BIO-3a that suitable aquatic or upland habitat for western pond turtle is present within proposed work areas, the following measures, consistent with measures developed for the EACCS, will be implemented to ensure that the proposed project does not have a significant impact on western pond turtle.

- One week before and within 24 hours of beginning work in suitable aquatic habitat, a qualified biologist (one who is familiar with different species of turtles) will conduct surveys for western pond turtle. The surveys should be timed to coincide with the time of day and year when turtles are most likely to be active (during the cooler part of the day between 8

a.m. and 12 p.m. during spring and summer). Prior to conducting the surveys, the biologist should locate the microhabitats for turtle basking (logs, rocks, brush thickets) and determine a location to quietly observe turtles. Each survey should include a 30-minute wait time after arriving onsite to allow startled turtles to return to open basking areas. The survey should consist of a minimum 15-minute observation period for each area where turtles could be observed.

- If western pond turtles are observed during either survey, a biological monitor will be present during construction activities in the aquatic habitat where the turtle was observed. The biological monitor also will be mindful of suitable nesting and overwintering areas in proximity to suitable aquatic habitat and will periodically inspect these areas for nests and turtles.
- If one or more western pond turtles are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist will remove and relocate the turtle to appropriate aquatic habitat outside and away from the construction area. Relocation of western pond turtle requires a letter from CDFW authorizing this activity.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, and BIO-6 will ensure that the impacts associated with the potential disturbance or mortality of and loss of suitable habitat for western pond turtle will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with potential disturbance or mortality of and loss of suitable habitat for western pond turtle will be less than significant.

Impact BIO-7: Potential disturbance or mortality of and loss of suitable habitat for Blainville's horned lizard, California glossy snake, Alameda whipsnake, and San Joaquin coachwhip

Potential Impact: Nonnative annual grassland and shrub/scrub in the project site provide suitable habitat for Blainville's horned lizard, California glossy snake, Alameda whipsnake, and San Joaquin coachwhip. Ground-disturbing activities (i.e., excavation, grading, and stockpiling of soil) that occur in these habitats could result in injury or mortality of these species if they are present in active work areas. Individuals could be run over by vehicles or equipment during construction and maintenance activities, or be entrapped in pits or trenches if these features are left open overnight. Individuals seeking shade or refuge under vehicles or equipment could be crushed when vehicles or equipment are moved. Construction activities would also permanently and temporarily disturb suitable habitat. Direct impacts on Blainville's horned lizard, California glossy snake, Alameda whipsnake, or San Joaquin coachwhip would be significant because the proposed project could diminish the local population of these species and lower reproductive potential, contributing to the further decline of the species.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas****PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands****2020 Updated PEIR Mitigation Measure BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles**

Where suitable habitat for Blainville's horned lizard, California glossy snake, Alameda whip-snake, or San Joaquin coachwhip is identified in proposed work areas, all project proponents will ensure that BMPs and other appropriate measures, in accordance with measures developed for the EACCS, be incorporated into the appropriate design and construction documents. Implementation of some of these measures may require that the project proponent obtain incidental take permits from USFWS and CDFW (Alameda whipsnake) before construction begins. Additional conservation measures or conditions of approval may be required in applicable project permits (i.e., ESA incidental take permit).

- A qualified biologist will conduct preconstruction surveys immediately prior to ground-disturbing activities (e.g., equipment staging, vegetation removal, grading) associated with the program. If any Blainville's horned lizards, California glossy snake, Alameda whipsnakes, or San Joaquin coachwhips are found, work will not begin until they are moved out of the work area to a USFWS- and/ or CDFW-approved relocation site. Incidental take permits from USFWS and CDFW are required for relocation of Alameda whipsnake. Relocation of Blainville's horned lizard, California glossy snake, and San Joaquin coachwhip requires a letter from CDFW authorizing this activity.
- No monofilament plastic will be used for erosion control.
- Where applicable, barrier fencing will be used to exclude Blainville's horned lizard, California glossy snake, Alameda whipsnake, and San Joaquin coachwhip. Barrier fencing will be removed within 72 hours of completion of work.
- Work crews or an onsite biological monitor will inspect open trenches and pits and under construction equipment and materials left onsite for special-status reptiles each morning and evening during construction.
- Ground disturbance in suitable habitat will be minimized.
- Vegetation within the proposed work area will be removed prior to grading. Prior to clearing and grubbing operations, a qualified biologist will clearly mark vegetation within the work area that will be avoided. Vegetation outside the work area will not be removed. Where possible hand tools (e.g., trimmer, chain saw) will be used to trim or remove vegetation. All vegetation removal will be monitored by the qualified biologist to minimize impacts on special-status reptiles.
- If special-status reptiles are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist who is USFWS- and/or CDFW-approved under an incidental take permit for the specific project will trap and move the animal(s) to a USFWS and/or CDFW approved relocation area. Incidental take permits from USFWS and

CDFW are required for relocation of Alameda whipsnake. Relocation of Blainville's horned lizard, California glossy snake, and San Joaquin coachwhip requires a letter or permit from CDFW authorizing this activity.

PEIR Mitigation Measure BIO-7b: Compensate for loss of habitat for special-status reptiles

Where impacts on habitat for special-status reptiles cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the EACCS. In the event that incidental take permits are required for Alameda whipsnake, compensatory mitigation will be undertaken in accordance with the terms of permits in consultation with USFWS and CDFW.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-5c, 2020 Updated PEIR BIO-7a, and PEIR BIO-7b will ensure that the impacts associated with the potential disturbance or mortality of and loss of suitable habitat for Blainville's horned lizard, California glossy snake, Alameda whipsnake, and San Joaquin coachwhip will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with potential disturbance or mortality of and loss of suitable habitat for Blainville's horned lizard, California glossy snake, Alameda whipsnake, and San Joaquin coachwhip will be less than significant.

Impact BIO-8: Potential construction-related disturbance or mortality of special-status and other raptors

Potential Impact: Several special-status, non-raptor migratory bird species could nest on the project site including tricolored blackbird, loggerhead shrike, and grasshopper sparrow. The project would result in the permanent removal and temporary disturbance of vegetated habitats that provide potential nesting habitat for special-status and other raptors. Habitat disturbance caused by construction of the project during the breeding season could destroy or disturb active bird or raptor nests, which could result in the incidental loss of fertile eggs or nestlings. Noise and visual disturbance from construction near active nests in trees, shrubs, on rock outcrops, transmission towers, or other structures could result in nest abandonment, disruption of feeding patterns, or forced fledging of young, and loss of migratory bird eggs, young, or adults that results from construction activities would violate the Migratory Bird Treaty Act and provisions of the California Fish and Game Code. This would result in a significant impact to special-status and other raptors.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

2020 Updated PEIR Mitigation Measure BIO-8a: Implement measures to avoid and minimize potential construction-related impacts on special-status and non-special-status nesting birds

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-5c, and 2020 Updated PEIR BIO-8a will ensure that the impacts associated with the potential construction-related disturbance or mortality of special status and non-special-status and other raptors will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with construction-related disturbance or mortality of special status and other raptors will be less than significant.

Impact BIO-8b: Potential construction-related disturbance or mortality of special-status and non-special-status raptors

Potential Impact: Permanent and temporary removal of grasslands could result in the loss of potential habitat and disturbance of ground nesting raptors. Construction of the project would avoid removal of large trees or disturbance of existing electrical towers that could provide nesting habitat for tree/structure-nesting raptors. However, if active nests are present in proximity to construction, they could be disturbed by noise and visual disturbances. Destruction or disturbance of active nests could result in the incidental loss of fertile eggs or nestlings. Noise and visual disturbance from construction near active nests in trees, shrubs, on rock outcrops, transmission towers, or other structures could result in nest abandonment, disruption of feeding patterns, or forced fledging of young. Loss of migratory bird eggs, young, or adults that results from construction activities would violate the MBTA and provisions of the California Fish and Game Code. Therefore, project construction would result in potentially significant impacts to white-tailed kite, Swainson's hawk, golden eagle, northern harrier, short-eared owl, western burrowing owl, and other non-special-status raptors.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

2020 Updated PEIR Mitigation Measure BIO-8a: Implement measures to avoid and minimize potential construction-related impacts on special-status and non-special-status nesting birds and raptors.

2020 Updated PEIR Mitigation Measure BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-5c, 2020 Updated PEIR BIO-8a, and 2020 Updated BIO-8b will ensure that the impacts associated with the potential construction-related disturbance or mortality of special status and non-special-status raptors will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with construction-related disturbance or mortality of special status and non-special-status raptors will be less than significant.

Impact BIO-9a: Permanent and temporary loss of occupied habitat for western burrowing owl

Potential Impact: Project construction activities, including excavation, grading, and culvert replacement, could result in the permanent or temporary loss of active burrowing owl burrows or refuge sites (i.e., culverts) on the project site. Permanent and temporary loss of grassland habitat would also reduce the available foraging habitat for burrowing owls. While there would be a small reduction in breeding and foraging habitat during the construction season, this loss is not expected to substantially reduce reproductive potential of burrowing owls in the project area, would be short-term (7 months). The temporary loss of burrowing owl habitat during project construction would be less than significant. However, permanent loss of occupied burrowing owl habitat could affect the local population and would be a significant impact.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas****PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands****2020 Updated PEIR Mitigation Measure BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl****PEIR Mitigation Measure BIO-9: Compensate for the permanent loss of occupied habitat for western burrowing owl**

If construction activities would result in the removal of occupied burrowing owl habitat (determined during preconstruction surveys described in 2020 Updated PEIR Mitigation Measure BIO-8b), this habitat loss will be mitigated by permanently protecting mitigation land through a conservation easement or by implementing alternative mitigation determined

through consultation with CDFW as described in its *Staff Report on Burrowing Owl Mitigation* (California Department of Fish and Game 2012:11–13). The project proponent will work with the CDFW to develop the compensation plan, which will be subject to County review and approval.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-5c, 2020 Updated PEIR BIO-8b, and PEIR BIO-9 will ensure that the impacts associated with the permanent and temporary loss of occupied habitat for western burrowing owl will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with permanent and temporary loss of occupied habitat for western burrowing owl will be less than significant.

Impact BIO-9b: Permanent and temporary loss of foraging habitat for tricolored blackbird and other special-status and non-special-status birds

Potential Impact: Implementation of the project would result in the temporary and permanent loss of grassland that provides suitable foraging habitat for tricolored blackbird and other special-status and non-special-status birds. Overall, the project would permanently remove approximately 26 acres of annual grassland, which is less than 1% of the approximately 4,370 acres of annual grassland of the entire project site. The loss of less than 1% of available foraging habitat at the project site is not expected to substantially reduce the availability of foraging habitat in the project region and will not adversely affect special-status and non-special-status bird species. Up to 264 acres of annual grassland would be temporarily disturbed during project construction. Temporary loss of foraging habitat on the project site would be a significant impact

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure 2020 PEIR BIO-5c will ensure that the impacts associated with the permanent and temporary loss of foraging habitat for tricolored blackbird and other special-status and non-special-status birds will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with permanent and temporary loss of foraging habitat for tricolored blackbird and other special-status and non-special-status birds will be less than significant.

Impact BIO-10: Potential injury or mortality of and loss of habitat for San Joaquin kit fox and American badger

Potential Impact: Project construction and maintenance activities of would occur within suitable denning, foraging, and dispersal habitat (nonnative annual grassland) for San Joaquin kit

fox and American badger, and could result in temporary and permanent losses of habitat. In addition to the permanent and temporary removal of habitat, other potential direct impacts include mortality or injury of individuals from construction vehicles or heavy equipment and direct mortality or injury of individuals from den covering and/or collapse. Lighting introduced at the project site also could affect these species; however, new lighting would be restricted in area, would operate with motion sensors, and would be directed downward, the effect of new lighting on San Joaquin kit fox and American badger is expected to be negligible since a minimal amount of natural area would be illuminated.

Direct impacts on San Joaquin kit fox or American badger would be significant because the project could diminish the local population of a state and federally listed species and a state species of special concern and lower reproductive potential, contributing to the further decline of these species.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

2020 Updated PEIR Mitigation Measure BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger

Where suitable habitat is present for San Joaquin kit fox and American badger in and adjacent to proposed work areas, the following measures, consistent with measures developed in the EACCS, will be implemented to ensure that proposed project does not have a significant impact on San Joaquin kit fox or American badger. *Implementation of some of these measures will require that the Project proponent obtain incidental take permits from USFWS and CDFW (San Joaquin kit fox) before construction begins.* Implementation of state and federal requirements contained in such authorization may constitute compliance with corresponding measures in the PEIR.

- To the maximum extent feasible, suitable dens for San Joaquin kit fox and American badger will be avoided.
- All project proponents will retain qualified approved biologists (as determined by USFWS) to conduct a preconstruction survey for potential San Joaquin kit fox dens. Resumes of biologists will be submitted to USFWS for review and approval prior to the start of the survey.
- Preconstruction surveys for American badgers will be conducted in conjunction with San Joaquin kit fox preconstruction surveys.
- The preconstruction survey will be conducted no less than 14 days and no more than 30 days before the beginning of ground disturbance, or any activity likely to affect San Joaquin kit fox. The biologists will conduct den searches by systematically walking transects through

the project area and a buffer area to be determined in coordination with USFWS and CDFW. Transect distance should be based on the height of vegetation such that 100% visual coverage of the project area is achieved. If a potential or known den is found during the survey, the biologist will measure the size of the den, evaluate the shape of the den entrances, and note tracks, scat, prey remains, and recent excavations at the den site. The biologists will also determine the status of the dens and map the features. Dens will be classified in one of the following four den status categories defined by USFWS.

- Potential den: Any subterranean hole within the species' range that has entrances of appropriate dimensions and for which available evidence is sufficient to conclude that it is being used or has been used by a kit fox. Potential dens include (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, ground squirrel) that otherwise has appropriate characteristics for kit fox use; or an artificial structure that otherwise has appropriate characteristics for kit fox use.
- Known den: Any existing natural den or artificial structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records; past or current radiotelemetry or spotlighting data; kit fox sign such as tracks, scat, and/or prey remains; or other reasonable proof that a given den is being or has been used by a kit fox (USFWS discourages use of the terms *active* and *inactive* when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly).
- Known natal or pupping den: Any den that is used, or has been used at any time in the past, by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two; therefore, for purposes of this definition either term applies.
- Known atypical den: Any artificial structure that has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

Written results of the survey including the locations of any potential or known San Joaquin kit fox dens will be submitted to USFWS within 5 days following completion of the survey and prior to the start of ground disturbance or construction activities.

- After preconstruction den searches and before the commencement of repowering activities, exclusion zones will be established as measured in a radius outward from the entrance or cluster of entrances of each den. Repowering activities will be prohibited or greatly restricted within these exclusion zones. Only essential vehicular operation on existing roads and foot traffic will be permitted. All other repowering activities, vehicle operation, material and equipment storage, and other surface-disturbing activities will be prohibited in the exclusion zones. Barrier fencing will be removed within 72 hours of completion of work. Exclusion zones will be established using the following parameters.

- Potential and atypical dens: A total of four or five flagged stakes will be placed 50 feet from the den entrance to identify the den location.
- Known den: Orange construction barrier fencing will be installed between the work area and the known den site at a minimum distance of 100 feet from the den. The fencing will be maintained until construction-related disturbances have ceased. At that time, all fencing will be removed to avoid attracting subsequent attention to the den.
- Natal/pupping den: USFWS will be contacted immediately if a natal or pupping den is discovered in or within 200 feet of the work area.
- Any occupied or potentially occupied badger den will be avoided by establishing an exclusion zone consistent with a San Joaquin kit fox potential burrow (i.e., four or five flagged stakes will be placed 50 feet from the den entrance).
- In cases where avoidance is not a reasonable alternative, limited destruction of potential San Joaquin kit fox dens may be allowed as follows.
 - Natal/pupping dens: Natal or pupping dens that are occupied will not be destroyed until the adults and pups have vacated the dens and then only after consultation with USFWS. Removal of natal/pupping dens requires incidental take authorization from USFWS and CDFW.
 - Known dens: Known dens within the footprint of the activity must be monitored for 3 days with tracking medium or an infrared camera to determine current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use. If kit fox activity is observed during this period, the den will be monitored for at least 5 consecutive days from the time of observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged by partially plugging its entrance(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied will the den be excavated under the direction of a biologist. If the fox is still present after 5 or more consecutive days of monitoring, the den may be excavated when, in the judgment of the biologist, it is temporarily vacant, such as during the fox's normal foraging activities. Removal of known dens requires incidental take authorization from USFWS and CDFW.
 - Potential dens: If incidental take permits have been received (from USFWS and CDFW), potential dens can be removed (preferably by hand excavation) by biologist or under the supervision of a biologist without monitoring, unless other restrictions were issued with the incidental take permits. If no take authorizations have been issued, the potential dens will be monitored as if they are known dens. If any den was considered a potential den but was later determined during monitoring or destruction to be currently or previously used by kit foxes (e.g., kit fox sign is found inside), then all construction activities will cease and USFWS and CDFW will be notified immediately.
- Nighttime work will be minimized to the extent possible. The vehicular speed limit will be reduced to 10 miles per hour during nighttime work.
- Pipes, culverts, and similar materials greater than 4 inches in diameter will be stored so as to prevent wildlife species from using these as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved.

- A representative appointed by the project proponent will be the contact for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured, or entrapped kit fox. The representative will be identified during environmental sensitivity training (2020 Updated PEIR Mitigation Measure BIO-1b) and his/her name and phone number will be provided to USFWS and CDFW. Upon such incident or finding, the representative will immediately contact USFWS and CDFW.
- The Sacramento USFWS office and CDFW will be notified in writing within 3 working days of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, and location of the incident, and any other pertinent information.

PEIR Mitigation Measure BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger

Where permanent impacts on habitat for San Joaquin kit fox and American badger cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the EACCS. In the event that incidental take permits are required for San Joaquin kit fox, compensatory mitigation will be undertaken in accordance with the terms of permits in consultation with USFWS and CDFW.

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-5c, 2020 Updated PEIR BIO-10a, and PEIR BIO-10b will ensure that the impacts associated with the potential for injury or mortality of and loss of habitat for San Joaquin kit fox and American badger will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with potential injury or mortality of and loss of habitat for San Joaquin kit fox and American badger will be less than significant.

Impact BIO-12: Potential mortality or disturbance of bats from roost removal or disturbance

Potential Impact: Some of the rock outcrops at the project site have crevices that may provide suitable roosting habitat for little brown bat, pallid bat, and other bats species that have been documented in the APWRA (western mastiff bat, silver-haired bat [night roosting only], Mexican free-tailed bat, big brown bat, or California myotis). Western red bat and hoary bat could roost in riparian habitat along Patterson Run Creek or in other groups of trees in the project site. Construction and maintenance of turbines could result in a temporary increase in noise and ground vibration during installation or removal of turbine generators and pads, which could disturb nearby active bat roosts. Several species of bat are sensitive to disturbance and may abandon flightless young, or they may simply not return to the roost once disturbed, resulting in the loss of that roost as habitat for the local population. Removal of a bat roost structure in a roost-limited habitat could result in the loss of a significant portion of the local bat population. These impacts would be significant.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species****PEIR Mitigation Measure BIO-12a: Conduct bat roost surveys**

Prior to development of any repowering project, a qualified bat biologist will conduct a roost habitat assessment to identify potential colonial roost sites of special-status and common bat species within 750 feet of the construction area. If suitable roost sites are to be removed or otherwise affected by the proposed project, the bat biologist will conduct targeted roost surveys of all identified sites that would be affected. Because bat activity is highly variable (both spatially and temporally) across the landscape and may move unpredictably among several roosts, several separate survey visits may be required. Surveys will be repeated at different times of year if deemed necessary by the bat biologist to determine the presence of seasonally active roosts (hibernacula, migratory stopovers, maternity roosts). Appropriate field methods will be employed to determine the species, type, and vulnerability of the roost to construction disturbance. Methods will follow best practices for roost surveys such that species are not disturbed and adequate temporal and spatial coverage is provided to increase likelihood of detection.

Roost surveys may consist of both daylight surveys for signs of bat use and evening/night visit(s) to conduct emergence surveys or evaluate the status of night roosts. Survey timing should be adequate to account for individual bats or species that might not emerge until well after dark.

Methods and approaches for determining roost occupancy status should include a combination of the following components as the biologist deems necessary for the particular roost site.

- Passive and/or active acoustic monitoring to assist with species identification.
- Guano traps to determine activity status.
- Night-vision equipment.
- Passive infrared camera traps.

At the completion of the roost surveys, a report will be prepared documenting areas surveyed, methods, results, and mapping of high-quality habitat or confirmed roost locations.

PEIR Mitigation Measure BIO-12b: Avoid removing or disturbing bat roosts

- Active bat roosts will not be disturbed, and will be provided a minimum buffer of 500 feet where preexisting disturbance is moderate or 750 feet where preexisting disturbance is minimal. Confirmation of buffer distances and determination of the need for a biological monitor for active maternity roosts or hibernacula will be obtained in consultation with CDFW. At a minimum, when an active maternity roost or hibernaculum is present within 750 feet of a construction site, a qualified biologist will conduct an initial assessment of the roost response to construction activities and will recommend buffer expansion if there are signs of disturbance from the roost.

- Structures (natural or artificial) showing evidence of significant bat use within the past year will be left in place as habitat wherever feasible. Should such a structure need to be removed or disturbed, CDFW will be consulted to determine appropriate buffers, timing and methods, and compensatory mitigation for the loss of the roost.
- All project proponents will provide environmental awareness training to construction personnel, establish buffers, and initiate consultation with CDFW if needed.
- Artificial night lighting within 500 feet of any roost will be shielded and angled such that bats may enter and exit the roost without artificial illumination and the roost does not receive artificial exposure to visual predators.
- Tree and vegetation removal will be conducted outside the maternity season (April 1–September 15) to avoid disturbance of maternity groups of foliage-roosting bats.
- If a maternity roost or hibernaculum is present within 500 feet of the construction site where preexisting disturbance is moderate or within 750 feet where preexisting disturbance is minimal, a qualified biological monitor will be onsite during groundbreaking activities.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-3a, PEIR BIO-12a, and PEIR BIO-12b will ensure that the impacts associated with the potential for mortality or disturbance of bats from roost removal or disturbance will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with potential mortality or disturbance of bats from roost removal or disturbance will be less than significant.

Impact BIO-13: Potential for construction activities to temporarily remove or alter bat foraging habitat

Potential Impact: Construction of the repowering project could degrade bat foraging habitat by replacing vegetation with nonvegetated land cover types. Project construction would create a temporary increase in traffic, noise, and artificial night lighting in the program area, reducing the extent of landscape available for foraging. Overall, the project would result in the permanent loss of less than 1% and temporary disturbance of only 6% of the available foraging habitat on the project site. The loss of less than 1% of available foraging habitat at the project site is not expected to substantially reduce the availability of foraging habitat in the project region and will not adversely affect foraging bat species in the project vicinity. However temporary disturbance of to 264 acres of annual grassland during project construction would result in a significant impact.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR BIO-5c will ensure that the impacts associated with the temporary removal or alteration of bat foraging habitat will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with the temporary removal or alteration of bat foraging habitat will be less than significant.

Impact BIO-16: Potential for road and electrical infrastructure upgrades to result in adverse effects on riparian habitat

Potential Impact: Riparian habitats, which are also wetlands that qualify as waters of the United States and waters of the state, are present at the project site. Access road expansion may temporarily affect riparian habitat, but no permanent effects on riparian habitats are anticipated. HDD methods may be used to avoid the surface disturbance of some aquatic habitats and also avoid riparian habitat during the installation of electrical infrastructure; however, the exact locations where HDD may be used are not currently known. Consequently, impacts on riparian habitats due to installation of electrical infrastructure are assumed to potentially occur, but may ultimately be less than those described. An Inadvertent Return Contingency Plan would be prepared and implemented to ensure that any inadvertent release of drilling fluids are contained and cleaned up immediately to avoid and minimize potential impacts on riparian habitats.

Additionally, some activities could have indirect effects on riparian habitats through potential changes in hydrology and water quality if the activities are conducted near streams and/or associated riparian habitats. Indirect effects could involve altered hydrology or runoff of sediment and other substances during road construction activities. Some effects, such as those due to runoff, would be avoided and minimized through implementation of erosion control BMPs and postconstruction reclamation. Installation of new and upgraded culverts would maintain existing hydrology.

Temporary loss of riparian habitat as a result of direct fill would be a substantial adverse effect on a sensitive natural community that is regulated by CDFW, USACE, and the Regional Water Board. This would be a significant impact.

Mitigation Measure: The following mitigation measure, discussed in Section 3.4.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

PEIR Mitigation Measure BIO-3b: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-foot hygrotus diving beetle

Where suitable habitat for listed vernal pool branchiopods and curved-foot hygrotus diving beetle are identified within 250 feet (or another distance as determined by a qualified biologist based on topography and other site conditions) of proposed work areas, the following measures will be implemented to ensure that the repowering projects do not have adverse impacts on listed vernal pool branchiopods or curved-foot hygrotus diving beetle. Additional conservation

measures or conditions of approval may be required in applicable project permits (e.g., ESA incidental take permit).

- Avoid all direct impacts on sandstone rock outcrop vernal pools.
- Ground disturbance will be avoided from the first day of the first significant rain (1 inch or more) until June 1, or until pools remain dry for 72 hours and no significant rain is forecast on the day of such ground disturbance.
- If vernal pools, clay flats, alkaline pools, ephemeral stock tanks (or ponds), sandstone pools, or roadside ditches are present within 250 feet of the work area (or another appropriate distance as determined by a qualified biologist on the basis of topography and other site conditions), the biologist will stake and flag an exclusion zone prior to construction activities. The width of the exclusion zone will be based on site conditions and will be the maximum practicable distance that ensures protection of the feature from direct and indirect effects of the project. Exclusion zones will be established around features whether they are wet or dry at the time. The exclusion zone will be fenced with orange construction zone and erosion control fencing (to be installed by construction crew).
- No herbicide will be applied within 100 feet of exclusion zones, except when applied to cut stumps or frilled stems or injected into stems. No broadcast applications will be allowed.
- Avoid modifying or changing the hydrology of aquatic habitats.
- Minimize the work area for stream crossings and conduct work during the dry season (June 1 through the first significant rain of the fall/winter).
- Install utility collection lines across perennial creeks by boring under the creek.

Where impacts cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the EACCS. In the event that an incidental take permit is required, compensatory mitigation will be undertaken in accordance with the terms of the permit in consultation with USFWS.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-3b, and PEIR WQ-1 will ensure that the impacts associated with the potential for road and electrical infrastructure upgrades to result in adverse effects on riparian habitat will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with the potential for road and electrical infrastructure upgrades to result in adverse effects on riparian habitat will be less than significant.

Impact BIO-18: Potential for road infrastructure upgrades to result in adverse effects on wetlands and streams

Potential Impact: Construction activities that result in ground disturbance (including temporary fill and extension of culverts and installation of electrical collection lines) could directly or indirectly affect wetlands and streams that qualify as waters of the United States and waters of the State.

Construction of turbines, the power collection system, the temporary construction area, and access road widening have the potential to permanently affect alkali wetland, pond, and intermittent stream (see Table 3.4-6). Temporary impacts could occur in these habitats, as well as in ephemeral stream (see Table 3.4-6). HDD methods may be used to avoid the surface disturbance of some aquatic habitats; however, the exact locations where HDD may be used are not currently known. Consequently, impacts on alkali wetland, pond, intermittent stream, and ephemeral stream habitats are assumed to potentially occur, but may ultimately be less than those described. An IRCP would be prepared and implemented to ensure that any inadvertent release of drilling fluids are contained and cleaned up immediately to avoid and minimize potential impacts on aquatic habitats.

Additionally, some activities would have indirect effects (not quantified) on some wetlands and streams through potential changes in hydrology and water quality if the activities are conducted near these aquatic habitats. Indirect effects could involve altered hydrology or runoff of sediment and other substances during road construction activities. Some effects, such as those due to runoff, would be avoided and minimized through implementation of erosion control BMPs and postconstruction reclamation. Installation of new and upgraded culverts would maintain existing hydrology.

Permanent and temporary loss of on alkali wetland, pond, intermittent stream, and ephemeral stream habitats from direct fill would be a substantial adverse effect on wetlands and streams that are regulated by USACE and the Regional Water Board. This would be a significant impact.

Mitigation Measure: The following mitigation measure, discussed in Section 3.4.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas****2020 Updated PEIR Mitigation Measure BIO-18: Compensate for the loss of wetlands and streams**

If wetlands or streams are filled or disturbed as part of a project, the project proponent will compensate for the loss to ensure no net loss of habitat functions and values. Compensation ratios will be based on site-specific information and determined through coordination with state and federal agencies (CDFW, USFWS, USACE, Regional Water Board). The compensation will be at a minimum 1:1 ratio (1 acre restored or created for every 1 acre filled) and may be a combination of onsite restoration/creation, offsite restoration, and mitigation credits. A

restoration and monitoring plan will be developed and implemented. The plan will describe how wetlands and streams will be created and monitored.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, 2020 Updated PEIR BIO-18, and PEIR WQ-1 will ensure that the impacts associated with the potential for road infrastructure upgrades to result in adverse effects on wetlands and streams will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with the potential for road infrastructure upgrades to result in adverse effects on wetlands and streams will be less than significant.

Impact BIO-20: Conflict with local plans or policies

Potential Impact: The ECAP encourages the preservation of areas known to support special-status species and no net loss of riparian and seasonal wetlands. Loss of special-status species and their habitat, loss of alkali wetland/drainage habitat and loss of existing wetlands and drainages as a result of implementing the project would be in conflict with these policies.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure BIO-1a: Conduct surveys to determine the presence or absence of special-status species

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species

PEIR Mitigation Measure BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones

PEIR Mitigation Measure BIO-1d: Compensate for impacts on special-status plant species

PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas

PEIR Mitigation Measure BIO-2: Prevent introduction, spread, and establishment of invasive plant species

PEIR Mitigation Measure BIO-3a: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-footed hygrotus diving beetle

2020 Updated PEIR Mitigation Measure BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians

PEIR Mitigation Measure BIO-5b: Compensate for loss of habitat for special-status amphibians

PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands

PEIR Mitigation Measure BIO-6: Conduct preconstruction surveys for western pond turtle and monitor construction activities if turtles are observed

PEIR Mitigation Measure BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles

2020 Updated PEIR Mitigation Measure BIO-8a: Implement measures to avoid and minimize potential construction-related impacts on special-status and non-special-status nesting birds and raptors

2020 Updated PEIR Mitigation Measure BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl

PEIR Mitigation Measure BIO-9: Compensate for the permanent loss of foraging habitat for western burrowing owl

2020 Updated PEIR Mitigation Measure BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger

PEIR Mitigation Measure BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger

PEIR Mitigation Measure BIO-11a: Prepare a Project-specific avian protection plan

2020 Updated PEIR Mitigation Measure BIO-11b: Site turbines to minimize potential mortality of birds

PEIR Mitigation Measure BIO-11c: Use turbine designs that reduce avian impacts

PEIR Mitigation Measure BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure

PEIR Mitigation Measure BIO-11e: Retrofit existing infrastructure to minimize risk to raptors

PEIR Mitigation Measure BIO-11f: Discourage prey for raptors

PEIR Mitigation Measure BIO-11g: Implement postconstruction avian fatality monitoring for all repowering projects

2020 Updated PEIR Mitigation Measure BIO-11h: Compensate for the loss of raptors and other avian species, including golden eagles, by contributing to conservation efforts

2020 Updated PEIR Mitigation Measure BIO-11i: Implement an avian adaptive management program**PEIR Mitigation Measure BIO-12a: Conduct bat roost surveys****PEIR Mitigation Measure BIO-12b: Avoid removing or disturbing bat roosts****2020 Updated PEIR Mitigation Measure BIO-14a: Site and select turbines to minimize potential mortality of bats****2020 Updated PEIR Mitigation Measure BIO-14d: Develop and implement a bat adaptive management plan****2020 Updated PEIR Mitigation Measure BIO-18: Compensate for the loss of wetlands and non-wetland waters**

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR BIO-1a, 2020 Updated PEIR BIO-1b, PEIR BIO-1c, PEIR BIO-1d, PEIR BIO-1e, PEIR BIO-2, PEIR BIO-3a, 2020 Updated PEIR BIO-5a, PEIR BIO-5b, PEIR BIO-5c, PEIR BIO-6, PEIR BIO-7a, 2020 Updated PEIR BIO-8a, 2020 Updated PEIR BIO-8b, PEIR BIO-9, 2020 Updated PEIR BIO-10a, PEIR BIO-10b, PEIR BIO-11a, 2020 Updated PEIR BIO-11b, PEIR BIO-11c, PEIR BIO-11d, PEIR BIO-11e, PEIR BIO-11f, PEIR BIO-11g, 2020 Updated PEIR BIO-11h, 2020 Updated PEIR BIO-11i, PEIR BIO-12a, PEIR BIO-12b, 2020 Updated PEIR BIO-14a, 2020 Updated PEIR BIO-14d, and 2020 Updated PEIR BIO-18 will ensure that the impacts associated with conflict with local plans or policies will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with conflict with local plans or policies will be less than significant.

Impact BIO-22: Potential disturbance or mortality of western bumble bee

Potential Impact: Potential effects on western bumble bee were not addressed in the PEIR because the species was not a candidate for state listing at the time that the PEIR was prepared. While there is low potential for western bumble bees to occupy areas where turbines are proposed, suitable foraging habitat for western bumble bees could be present along existing and proposed new access roads since many of these occur in low-lying areas. Overall, there is a moderate potential for western bumble bee to forage and nest along existing access roads proposed for widening and along proposed new access roads. Direct and indirect impacts on western bumble bee that could occur during project implementation would be significant because the project could reduce the local population of a species that is a state candidate for listing as endangered and is considered locally rare.

Mitigation Measures: The following mitigation measures, discussed in Section 3.4.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species**PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas****PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands****2020 New Mitigation Measure BIO-22a: Conduct a preconstruction habitat assessment and focused surveys for western bumble bee**

Prior to the start of construction, qualified biologist(s) will conduct botanical surveys in late spring/early summer to identify and map concentrations of flowering plants that provide food resources for western bumble bee. The areas containing higher densities and varieties of flowering plants will be evaluated by a qualified invertebrate biologist to determine if these areas provide suitable foraging habitat for western bumble bee. The habitat evaluation surveys would follow recommendations in the *Rusty Patched Bumble Bee Habitat Assessment Form and Guide* (Xerces Society for Invertebrate Conservation 2017).

If moderate to high quality foraging habitat for western bumble bee is identified in the project area based on the habitat assessment, these areas will be surveyed by qualified invertebrate biologist(s) (with experience conducting bumble bee surveys) within 1 year prior to the start of construction. Surveys would be conducted according to the methods in Thorp et al. (1983) or according to any future survey methodology specifically for western bumble bee proposed or approved by CDFW. The methods in Thorp et al. (1983) recommend surveys be conducted during four evenly spaced sampling periods during the flight season (March through September) (Thorp et al. 1983). For each sampling event, the biologist(s) would survey suitable habitat using nonlethal netting methods for 1 person-hour per 3 acres of the highest quality habitat or until 150 bumble bees are sighted, whichever comes first. If initial sampling of a given habitat area indicates that the habitat is of low quality or nonexistent, no further sampling of that area would be required. General guidelines and best practices for bumble bee surveys would follow USFWS' *Survey Protocols for the Rusty Patched Bumble Bee* (*Bombus affinis*) (U.S. Fish and Wildlife Service 2019b), which are consistent with other bumble bee survey protocols used by The Xerces Society (Hatfield et al. 2017; Washington Department of Fish and Wildlife et al. 2019).

If western bumble bee is determined not to be present at the project site or a qualified invertebrate biologist (experienced with bumble bees) concludes that there is a very low likelihood that the species is present, then no additional mitigation is required. If western bumble bees are determined to be present at the project site, then the project proponent will implement 2020 New Mitigation Measure BIO-22b.

2020 New Mitigation Measure BIO-22b: Implement protection measures to avoid and minimize effects on western bumble bee

If it is determined through preconstruction surveys conducted pursuant to 2020 New Mitigation Measure BIO-22a that western bumble bees are present at the project site, the following measures will be implemented to ensure that the proposed project does not have a significant impact on western bumble bee. *Implementation of some of these measures may require that the project proponent obtain incidental take permit from CDFW if western bumble bee remains a*

candidate or is formally listed under CESA before construction begins. Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., CESA incidental take permit).

- If bumble bee surveys identify occupied western bumble bee habitat within the project area, the project biologist would then conduct additional preconstruction surveys within the project disturbance footprint for active bee nest colonies and associated floral resources (i.e., flowering vegetation on which bees from the colony are observed foraging) no more than 30 days prior to any ground disturbance between March and September. The purpose of this preconstruction survey would be to identify active nest colonies and associated floral resources outside of permanent impact areas that could be avoided by construction personnel. The project biologist would establish, monitor, and maintain no-work buffers around nest colonies and floral resources identified during surveys. The size and configuration of the no-work buffer would be based on best professional judgment of the project biologist in coordination with the County. At a minimum, the buffer would provide at least 20 feet of clearance around nest entrances. Construction activities would not occur within the no-work buffers until the colony is no longer active (i.e., no bees are seen flying in or out of the nest for three consecutive days indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony). Monitoring of an active nest could be conducted using a motion-detecting wildlife trail camera.
- To minimize temporary disturbance of suitable foraging and nesting habitat for western bumble bee, ground disturbance within suitable annual grassland habitat will be restricted to the minimum area necessary to perform construction activities.
- To encourage growth of additional nectar and pollen producing plants at the project site, disturbed grasslands that are revegetated in accordance with PEIR Mitigation Measure BIO-5c will use a seed mix combination that includes nectar and pollen producing plants commonly used as a food source by western bumble bee. Plants of the following genus are appropriate: *Cirsium* sp., *Erigeron* sp., *Solidago* sp., *Aster* sp., *Centaurea* sp., and *Penstemon* sp. These annual plants would be incorporated into the seed mix, as applicable for the existing habitat conditions.
- To minimize impacts on bees from herbicide drift, herbicide application around tower foundations will be performed using handheld equipment and will be restricted to a 20-foot radius buffer area around the tower foundations. The contractor will use an herbicide that has been shown to be less toxic to amphibians and invertebrates, such as 2, 4 D. Herbicides containing the surfactant POEA (polyoxyethylene tallow amine) will not be used at the project site. The most current information on herbicide toxicity on wildlife will be used to inform future decisions about herbicide use during operations.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures 2020 Updated PEIR BIO-1b, PEIR BIO-1e, PEIR BIO-5c, 2020 New BIO-22a, and 2020 New BIO-22b will ensure that the impacts associated with potential disturbance or mortality of western bumble bee will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with potential disturbance or mortality of western bumble bee will be less than significant.

Cultural Resources

Impact CUL-2: Potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5

Potential Impact: The PEIR identified a variety of prehistoric and historic-era archaeological resources in the program area and determined that there is a possibility of encountering and damaging previously unrecorded archaeological resources during ground-disturbing activities. No previously undocumented archaeological resources were identified within the Project area during the pedestrian survey. Because project site and vicinity may have been used by prehistoric peoples, the nature of this land use would primarily have been resource collection, prehistoric artifacts and feature types on the project site could include projectile points and lithic tools, lithic debitage, bedrock mortars, and grinding stones. However, although the area could have been used for upland resource collection activities, the project site is located far from permanent water sources and is, therefore, expected to have moderate to low potential to contain prehistoric archaeological resources.

Mitigation Measures: The following mitigation measures, discussed in Section 3.5.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure CUL-2c: Conduct worker awareness training for archaeological resources prior to construction

Prior to the initiation of any site preparation and/or the start of construction, the Project applicant will ensure that all construction workers receive training overseen by a qualified professional archaeologist who is experienced in teaching nonspecialists, to ensure that forepersons and field supervisors can recognize archaeological resources (e.g., areas of shellfish remains, chipped stone or groundstone, historic debris, building foundations, human bone) in the event that any are discovered during construction.

PEIR Mitigation Measure CUL-2d: Stop work if cultural resources are encountered during ground-disturbing activities

The Project applicant will ensure that construction specifications include a stop-work order if prehistoric or historic-era cultural resources are unearthed during ground-disturbing activities. If such resources are encountered, the Project applicant will immediately halt all activity within 100 feet of the find until a qualified archaeologist can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil ("midden") containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If the find is determined to be potentially significant, the archaeologist, in consultation with the Native American representative (if appropriate), will develop a treatment plan that could include site avoidance, capping, or data recovery.

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR CUL-2c, and CUL-2d will ensure that the impacts with the potential to cause a substantial adverse change in the significance of an archaeological resource will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with a substantial adverse change in the significance of an archaeological resource will be less than significant.

Impact CUL-3: Disturbance of any human remains, including those interred outside of dedicated cemeteries

Potential Impact: The PEIR did not identify any known formal cemeteries or burials in the program area; however, the PEIR noted the possibility that ground-disturbing activities could uncover previously unknown buried human remains, which could cause a potentially significant impact. Although there are no known formal cemeteries within the project site, and there is no indication that the human remains are present on the project site, previously unknown buried human remains could be discovered during ground-disturbing activities.

Mitigation Measure: The following mitigation measure, discussed in Section 3.5.2 of the PEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure CUL-3: Stop work if human remains are encountered during ground-disturbing activities

The project applicant will ensure the construction specifications include a stop-work order if human remains are discovered during construction or demolition. There will be no further excavation or disturbance of the site within a 100-foot radius of the location of such discovery, or any nearby area reasonably suspected to overlie adjacent remains. The Alameda County Coroner will be notified and will make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he will notify the Native American Heritage Commission, who will attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this state law, then the landowner will re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. A final report will be submitted to Alameda County. This report will contain a description of the mitigation program and its results, including a description of the monitoring and testing resources analysis methodology and conclusions and a description of the disposition/curation of the resources

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure PEIR CUL-3 will ensure that the impacts with the potential to disturb human remains will be mitigated to a less-than-significant level.

Remaining Impacts: : Any remaining impact associated with disturbance of human remains will be less than significant.

Energy

Geology, Soils, Mineral Resources, and Paleontological Resources

Impact GEO-1: Potential substantial adverse effects involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides

Potential Impact: While no faults have been recorded within the project site, the site lies within a seismically active area with active faults in the immediate vicinity. The Corral Hollow Fault, the Marsh Creek Greenville Section of the Greenville Fault Zone, and the Las Positas Fault all lie west of the project site and are considered active and have experienced fault displacement within the last 15,000 years. The Midway fault is located directly northeast of the project site, and has been designated as a potentially active (i.e., active during the last 130,000 years).

Consistent with the analysis presented in the PEIR, if a turbine were constructed on or near a fault, rupture of that fault could damage a turbine or cause harm to personnel on the site. The turbine could be damaged or collapse and possibly injure personnel or property in the immediate area. However, with implementation of site-specific recommendations for siting project features, such impact would be less than significant.

Construction of turbines or power collection systems in areas with potential to experience non-seismic-related landsliding caused by heavy precipitation could also expose people or structures to potential substantial adverse effects. Damage or collapse resulting from landsliding could cause harm to personnel or property in the immediate area, as disclosed in the PEIR. Although the project must comply with existing building safety requirements, these requirements may not address all ground failure issues. Therefore, this impact would be significant.

Mitigation Measures: The following mitigation measure, discussed in the SEIR in Section 3.7.2, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report

Prior to construction activities at any site, the Project proponent will retain a geotechnical firm with local expertise in geotechnical investigation and design to prepare a site-specific geotechnical report. This report will be prepared by a licensed geotechnical engineer or engineering geologist and will be submitted to the County building department as part of the approval process. This report will be based on data collected from subsurface exploration, laboratory testing of samples, and surface mapping and will address the following issues.

- Potential for surface fault rupture and turbine site location: The geotechnical report will investigate the Greenville, Corral Hollow-Carnegie, and the Midway faults (as appropriate to the location) and determine whether they pose a risk of surface rupture. Turbine foundations and power collection systems will be sited according to recommendations in this report.

- Strong ground shaking: The geotechnical report will analyze the potential for strong ground shaking in Project area and provide turbine foundation design recommendations, as well as recommendations for power collection systems.
- Slope failure: The geotechnical report will investigate the potential for slope failure (both seismically and nonseismically induced) and develop site-specific turbine foundation and power collection system plans engineered for the terrain, rock and soil types, and other conditions present at the Project area in order to provide long-term stability.
- Expansive soils: The geotechnical report will assess the soil types in the Project area and determine the best engineering designs to accommodate the soil conditions.
- Unstable cut or fill slopes: The geotechnical report will address geologic hazards related to the potential for grading to create unstable cut or fill slopes and make site-specific recommendations related to design and engineering.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure PEIR GEO-1 will ensure that the impacts with the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, as a result of rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with the exposure of people or structures to potential substantial adverse effects will be less than significant.

Impact GEO-3: Placement of Project-related facilities on a geologic unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse

Potential Impact: Construction of turbines or power collection systems in areas with potential to experience non-seismic-related landsliding caused by heavy precipitation could also expose people or structures to potential substantial adverse effects. Damage or collapse resulting from landsliding could cause harm to personnel or property in the immediate area, as disclosed in the PEIR. Although the project must comply with existing building safety requirements, these requirements may not address all ground failure issues.

Mitigation Measure: The following mitigation measure, discussed in Section 3.7.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR GEO-1 will ensure that the impacts associated with being located on expansive soil, including risks to life and property, as a result of landsliding will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with being located on expansive soil will be less than significant.

Impact GEO-4: Placement of Project-related facilities on expansive soil, creating substantial direct or indirect risks to life or property

Potential Impact: The PEIR disclosed that expansive soils occur in much of the APWRA, particularly in the Fontana-Diablo-Altamont soil association, which underlies the project site. Turbine foundations built on expansive soils would be subject to the shrink and swell of these soils, which could damage structures if the subsoil, drainage, and foundation are not properly engineered. However, soil sampling and treatment procedures are addressed by state and local building codes. Treatment of expansive soil may include removing the expansive soil and replacing it with non-expansive soil, incorporating additives, and installing specially designed foundations.

Mitigation Measure: The following mitigation measure, discussed in Section 3.7.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure PEIR GEO-1 will ensure that the impacts associated with being located on expansive soil, including risks to life and property, as a result of landsliding will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with being located on expansive soil will be less than significant.

Impact GEO-5: Direct or indirect destruction of a unique paleontological resource or site or unique geologic feature

Potential Impact: If fossils are present in the Project area, they could be damaged by during earth-disturbing activities during construction, such as excavation for foundations, placement of fills, trenching for power collection systems, and grading for roads and staging areas. The more extensive and deeper the earth-disturbing activity, the greater the potential for damage to paleontological resources. Because most geologic units in the project area are likely to be sensitive for paleontological resources, excavation in these units could damage paleontological resources, resulting in a significant impact.

Mitigation Measures: The following mitigation measures, discussed in Section 3.7.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure GEO-7a: Retain a qualified professional paleontologist to monitor significant ground-disturbing activities

The applicant will retain a qualified professional paleontologist as defined by the SVP's *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*

(2010) to monitor activities with the potential to disturb sensitive paleontological resources. Data gathered during detailed Project design will be used to determine the activities that will require the presence of a monitor. In general, these activities include any ground-disturbing activities involving excavation deeper than 3 feet in areas with high potential to contain sensitive paleontological resources. Recovered fossils will be prepared so that they can be properly documented. Recovered fossils will then be curated at a facility that will properly house and label them, maintain the association between the fossils and field data about the fossils' provenance, and make the information available to the scientific community.

PEIR Mitigation Measure GEO-7b: Educate construction personnel in recognizing fossil material

The applicant will ensure that all construction personnel receive training provided by a qualified professional paleontologist experienced in teaching non-specialists to ensure that they can recognize fossil materials in the event any are discovered during construction.

PEIR Mitigation Measure GEO-7c: Stop work if substantial fossil remains are encountered during construction

If substantial fossil remains (particularly vertebrate remains) are discovered during earth disturbing activities, activities within 100 feet of the find will stop immediately until a state-registered professional geologist or qualified professional paleontologist can assess the nature and importance of the find and a qualified professional paleontologist can recommend appropriate treatment. Treatment may include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The applicant will be responsible for ensuring that recommendations regarding treatment and reporting are implemented.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR GEO-7a, PEIR GEO-7b, and PEIR GEO-7c will ensure that the impacts associated with directly or indirectly destroying a unique paleontological resource or site or unique geologic feature will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with destruction of paleontological resources will be less than significant.

Greenhouse Gas Emissions

Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases

Potential Impact: The PEIR evaluated the repowering of the program area for consistency with several AB 32 Scoping Plan and Alameda County CCAP measures relevant to GHG emissions, concluding that except for Scoping Plan Measures E-3, repowering projects could potentially conflict with all measures. In concept, the proposed project is being pursued to promote sustainability and further alternative energy. Although the measures included in the AB 32 Scoping Plan, 2017 Climate Change Scoping Plan, and Alameda County CCAP are necessarily broad, the Project is generally consistent with the goals and desired outcomes of the plans. The additional wind energy generated

by the Project would directly support the decarbonization of the electric power sector, helping California to meet the GHG goals contained in SB 32, SB 100, and EO B-55-18. Nevertheless, and consistent with the conclusion of the PEIR, emissions generated by the project could potentially conflict with applicable measures in the AB 32 Scoping Plan, 2017 Climate Change Scoping Plan, and Alameda County CAP.

Mitigation Measures: The following mitigation measures, discussed in Section 3.8.2 of the SEIR, are hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure GHG-2a: Implement best available control technology for heavy-duty vehicles

The applicant will require existing trucks/trailers to be retrofitted with the best available technology and/or CARB-approved technology consistent with the CARB Truck and Bus Regulation (California Air Resources Board 2019). The CARB Truck and Bus Regulation applies to all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds.

Starting January 1, 2015, the applicant must replace lighter trucks (GVWR of 14,001 to 26,000 pounds) with engines that are 20 years or older with newer trucks. The Applicant has the option to install a PM filter retrofit on a lighter truck by 2014 to make the truck exempt from replacement until January 1, 2020, and any lighter truck equipped with a PM filter retrofit prior to July 2011 would receive credit toward the compliance requirements for a heavier truck or bus in the same fleet.

Starting January 1, 2012, the applicant is required to meet the engine model year schedule shown below for heavier trucks (GVWR greater than 26,000 pounds). To comply with the schedule, the applicant will install the best available PM filter on 1996 model year and newer engines and would replace the vehicle 8 years later. The Applicant will replace trucks with 1995 model year and older engines starting in 2015. Replacements with 2010 model year or newer engines meets the final requirements, but the applicant could also replace trucks with used trucks that would have a future compliance date on the schedule. For example, a replacement with a 2007 model year engine complies until 2023. By 2023 all trucks and buses must have 2010 model year engines with few exceptions.

Engine Model Year Schedule for Heavier Trucks	
Engine Model	Requirement from January 1
Pre-1994	No requirements until 2015, then 2010 engine
1994–1995	No requirements until 2016, then 2010 engine
1996–1999	PM filter from 2012 to 2020, then 2010 engine
2000–2004	PM filter from 2013 to 2021, then 2010 engine
2005–2006	PM filter from 2014 to 2022, then 2010 engine
2007–2009	No requirements until 2023, then 2010 engine
2010	Meets final requirements

In addition, the applicant could comply with a phase-in option that would allow the applicant to decide which vehicles to retrofit or replace, regardless of engine model year. The applicant must report information about all heavier trucks starting January 31, 2012, to use this option.

The Applicant could comply by demonstrating that trucks have met the percentage requirement each year as shown in the table below. For example, by 2012 the applicant's fleet would need to have PM filters on 30% of the heavier trucks in the fleet. This option counts 2007 model year and newer engines originally equipped with PM filters toward compliance and would reduce the overall number of retrofit PM filters needed. Any engine with a PM filter regardless of model year would be compliant until at least 2020. Beginning January 1, 2020, all heavier trucks would need to meet the requirements specified in the Compliance Schedule for Heavier Trucks.

Phase-In Option for Heavier Trucks	
Compliance Date	Vehicles with PM Filters
1-Jan-12	30%
1-Jan-13	60%
1-Jan-14	90%
1-Jan-15	90%
1-Jan-16	100%

PEIR Mitigation Measure GHG-2b: Install low SF₆ leak rate circuit breakers and monitoring

The applicant will ensure that any new circuit breaker installed at a substation has a guaranteed SF₆ leak rate of 0.5% by volume or less. The applicant will provide Alameda County with documentation of compliance, such as specification sheets, prior to installation of the circuit breaker. In addition, the applicant will monitor the SF₆-containing circuit breakers at the substation consistent with Scoping Plan Measure H-6 for the detection and repair of leaks.

PEIR Mitigation Measure GHG-2c: Require new construction to use building materials containing recycled content

The applicant will require the construction of all new substation and other permanent buildings to incorporate materials for which the sum of post-consumer recycled content plus one-half of the post-industrial content constitutes at least 10% of the total value of the materials in the Project.

PEIR Mitigation Measure GHG-2d: Comply with construction and demolition debris management ordinance

The applicant will comply with the County's revised Green Building Ordinance regarding construction and demolition debris as follows: (1) 100% of inert waste and 50% wood/vegetative/scrap metal not including Alternative Daily Cover (ADC) and unsalvageable material will be put to other beneficial uses at landfills, and (2) 100% of inert materials (concrete and asphalt) will be recycled or put to beneficial reuse.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measures PEIR GHG-2a, PEIR GHG-2b, PEIR GHG-2c, and PEIR GHG-2d will ensure that the impacts associated with a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases will be mitigated to a less-than-significant level.

Hazards and Hazardous Materials

Impact HAZ-4: Placement of Project-related facilities on a site that is included on a list of hazardous materials sites, and resulting creation of a significant hazard to the public or the environment

Potential Impact: As outlined in the PEIR, a Phase I ESA (and remediation, if necessary) is required for all projects requiring a Conditional Use Permit (CUP) prior to construction activities as a standard condition of approval for the CUP. Based on data collection the Phase I ESA identified the following existing environmental conditions that could potentially represent environmental hazards at the project site: a Union Pacific Railroad railway that transects the northern portion of the project site; a DTSC cleanup site (Site 300) located southeast of the project site; a reported release of oil on the project site; and a PG&E Tesla Substation located adjacent to the project site. The Phase I ESA concluded that while the identified conditions could potentially represent environmental hazards at the project site, a Phase II investigation would not be warranted, and that overall, the identified environmental conditions are classified as either typical conditions that would be addressed through standard construction BMPs and compliance with regulations, or as potential soil contamination that could be addressed by property notification, handling, and disposal.

Mitigation Measure: The following mitigation measure, discussed in Section 3.9.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure HAZ-4: Perform a Phase I Environmental Site Assessment prior to construction activities and remediate if necessary (only including the portion of the mitigation measure relevant to the proposed project)

If contamination is uncovered as part of Phase I or II environmental site assessments, remediation will be required. If materials such as asbestos-containing materials, lead-based paint, or PCB-containing equipment are identified, these materials will be properly managed and disposed of prior to or during the demolition process.

Any contaminated soil identified on a project site must be properly disposed of in accordance with DTSC regulations in effect at the time. Hazardous wastes generated by the proposed project will be managed in accordance with the California Hazardous Waste Control Law (HSC, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulation (Title 22, CCR, Division 4.5).

If, during construction/demolition of structures, soil or groundwater contamination is suspected, the construction/demolition activities will cease and appropriate health and safety procedures will be implemented, including the use of appropriate personal protective equipment (e.g., respiratory protection, protective clothing, helmets, goggles).

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure PEIR HAZ-4 will ensure that the impacts associated with locating on a hazardous materials site creating a significant hazard to the public or the environment will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with location on a hazardous materials site creating a significant hazard to the public or the environment will be less than significant.

Impact HAZ-6: Impairment of implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

Potential Impact: Vehicular traffic associated with project operation and maintenance (O&M) would be limited to six to eight O&M staff (turbine technicians, operations personnel, administrative personnel, and management staff). O&M staff would monitor turbine and system operation, perform routine maintenance, shut down and restart turbines when necessary, and provide security. Accordingly, operation of the project would have minimal vehicular traffic and generate a less than significant impact on an adopted emergency response plan or emergency evacuation plan.

During construction, there would be an increase in vehicular traffic transporting work crews, equipment, and materials. Construction traffic routing would be established in a Construction Traffic Control Plan as described in Section 3.16 *Transportation* and would include a traffic safety and signing plan prepared by the project engineers in coordination with Alameda County and other related agencies. The plan would define hours, routes, and safety and management requirements. The project would therefore not conflict with any adopted emergency response plan or emergency evacuation plan.

Mitigation Measures: The following mitigation measure, discussed in Section 3.9.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan

Prior to starting construction-related activities, the Applicant shall prepare and implement a Traffic Control Plan (TCP) that will reduce or eliminate impacts associated with the proposed program. The TCP shall adhere to Alameda County and Caltrans requirements, and must be submitted for review and approval of the County Public Works Department prior to implementation. The TCP shall include the following elements. The County and Caltrans may require additional elements to be identified during their review and approval of the TCP.

- Schedule construction hours to minimize concentrations of construction workers commuting to/from the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.).
- Limit truck access to the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.).
- Require that written notification be provided to contractors regarding appropriate haul routes to and from the program area, as well as the weight and speed limits on local county roads used to access the program area.
- Provide access for emergency vehicles to and through the program area at all times.
- When lane/road closures occur during delivery of oversized loads, provide advance notice to local fire, police, and emergency service providers to ensure that alternative evacuation and emergency routes are designated to maintain service response times.
- Provide adequate onsite parking for construction trucks and worker vehicles.

- Require suitable public safety measures in the program area and at the entrance roads, including fences, barriers, lights, flagging, guards, and signs, to give adequate warning to the public of the construction and of any dangerous conditions that could be encountered as a result thereof.
- Complete road repairs on local public roads as needed during construction to prevent excessive deterioration. This work may include construction of temporary roadway shoulders to support any necessary detour lanes.
- Repair or restore the road right-of-way to its original condition or better upon completion of the work.
- Coordinate program-related construction activities, including schedule, truck traffic, haul routes, and the delivery of oversized or overweight materials, with Alameda County, Caltrans, and affected cities to identify and minimize overlap with other area construction projects.

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure PEIR TRA-1 will ensure that any impacts that would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with interference with an adopted emergency response plan or emergency evacuation plan will be less than significant.

Hydrology and Water Quality

Impact WQ-1: Violation of any water quality standards or waste discharge requirements or other degradation of surface water or groundwater quality

Potential Impact: Construction-related earth-disturbing activities associated with the project would introduce the potential for increased erosion and sedimentation, with subsequent effects on drainage and water quality. During construction, trenching, site preparation, and other construction activities would create areas of bare soil that can be exposed to erosive forces. Bare soils are much more likely to erode than vegetated areas because of the lack of dispersion, infiltration, and retention properties created by covering vegetation. Construction activities involving soil disturbance, excavation, cutting/filling, stockpiling, and grading could result in increased erosion and sedimentation that can increase sediment discharge to surface waters, if proper BMPs are not used.

Existing activities in the Project area may already result in the release of sediment, and the extent of earth disturbance resulting from construction of the Project is anticipated to result in a new and intensified potential for the release of sediments from staging areas and turbine construction sites. If precautions are not taken to contain or capture sedimentation, earth-disturbing construction activities could result in substantial sedimentation in stormwater runoff and result in a significant impact on existing surface water quality.

Project operation is not anticipated to result in a substantial amount of additional runoff that would degrade surface or groundwater quality.

Mitigation Measure: The following mitigation measure, discussed in Section 3.10.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Project contractors will obtain coverage under the Construction General Permit before the onset of any construction activities, because the Project would disturb 1 acre or more. A SWPPP will be developed by a qualified engineer or erosion control specialist in accordance with the appropriate Water Board's requirements for NPDES compliance and implemented prior to the issuance of any grading permit. The SWPPP will be kept onsite during construction activities and will be made available upon request to representatives of the Regional Water Boards.

Compliance and coverage with the local stormwater management programs and Construction General Permit will require controls of pollutant discharges that utilize BMPs and technology to reduce erosion and sediments to meet water quality standards. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other nonpoint-source runoff. Measures range from source control, such as reduced surface disturbance, to the treatment of polluted runoff, such as detention basins.

BMPs to be implemented as part of the *Storm Water Management Program* and Construction General Permit (and SWPPP) may include the following practices.

- Temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) will be employed to control erosion from disturbed areas.
- Use a dry detention basin (which is typically dry except after a major rainstorm, when it will temporarily fill with stormwater), designed to decrease runoff during storm events, prevent flooding, and allow for off-peak discharge. Basin features will include maintenance schedules for the periodic removal of sediments, excessive vegetation, and debris that may clog basin inlets and outlets.
- Cover or apply nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more) that could contribute sediment to waterways.
- Enclose and cover exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways.
- Ensure that no earth or organic material will be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water.
- Prohibit the following types of materials from being rinsed or washed into the streets, shoulder areas, or gutters: concrete, solvents and adhesives, thinners, paints, fuels, sawdust, dirt, gasoline, asphalt and concrete saw slurry, and heavily chlorinated water.
- Ensure that grass or other vegetative cover will be established on the construction site as soon as possible after disturbance.

The contractor will select a combination of BMPs (consistent with the Construction General Permit) that is expected to minimize runoff and remove contaminants from stormwater

discharges. The final selection of BMPs will be subject to approval by the San Francisco Bay Regional Water Board and the Central Valley Water Board.

The contractor will verify that a notice of intent has been filed with the State Water Board and that a SWPPP has been developed before allowing construction to begin. The contractor will perform inspections of the construction area, to verify that the BMPs specified in the SWPPP are properly implemented and maintained. The contractor will notify the appropriate Regional Water Board immediately if there is a noncompliance issue and will require compliance. If necessary, the contractor or their agent will require that additional BMPs be designed and implemented if those originally constructed do not achieve the identified performance standard.

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure PEIR WQ-1 will ensure that any impacts that would violate water quality standards or waste discharge requirements or other degradation of surface water or groundwater quality will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with violation of any water quality standards or waste discharge requirements will be less than significant.

Impact WQ-3: Substantial alteration of existing drainage patterns in a manner that would result in substantial erosion or siltation onsite or offsite

Potential Impact: The project would not substantially alter the existing drainage pattern in the area, and measures would be implemented to minimize soil erosion, sedimentation of drainages downslope of the project site, and any other environmental impacts. In addition, the project would not construct any turbines within existing drainage areas and project facilities would be designed to not cause any downstream erosion during the storm season, and the proposed project would be required to adhere to the NPDES Construction General Permit.

Mitigation Measure: The following mitigation measure, discussed in Section 3.10.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure WQ-1 will ensure that any impacts that would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with substantially altering the existing drainage pattern of the site or area resulting in substantial erosion or siltation onsite or offsite will be less than significant.

Impact WQ-4: Substantial increase in the amount of surface runoff in a manner that would result in flooding onsite or offsite

Potential Impact: Changes in impervious cover associated with project construction would not cause a substantial increase in the amount of surface runoff that would result in flooding. Up to 36 new wind turbine foundations would be added to the project site as well as meteorological tower foundations. Small concrete pads within the substation footprint would also be added. New and expanded roads would be constructed to accommodate the new, larger turbines. However, new and expanded roads would be gravel, and would not introduce new impervious surfaces. Although this would result in an increase in the extent of graveled surfaces (which can result in increased runoff), it would not introduce new impervious surfaces, and the soils underlying the project area are predominantly high runoff soils (i.e., Hydrologic Soil Group D). Compacted gravel roads have runoff potential similar to that of Hydrologic Soil Group D soils. Consequently, the additional graveled roads would not result in a net increase in runoff potential compared with existing native soils where the new gravel would be placed. Because runoff would not increase as a result of additional gravel and concrete surfaces, there would not be an increase in flooding onsite or offsite. In addition, project construction would be required to comply with the NPDES stormwater Construction General Permit.

Mitigation Measure: The following mitigation measure, discussed in Section 3.10.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR WQ-1 will ensure that any impacts that would substantially increase surface runoff resulting in flooding onsite or offsite will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact associated with a substantial increase in surface runoff resulting in flooding onsite or offsite will be less than significant.

Impact WQ-5: Creation of or contribution to runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff

Potential Impact: The project site does not have any existing stormwater drainage facilities, and none are planned. Construction of the project would not increase the rate of polluted runoff. However, construction could generate polluted runoff because soil would be stripped, bare areas exposed, and sedimentation from stormwater could result.

Mitigation Measure: The following mitigation measure, discussed in Section 3.10.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR WQ-1 will ensure that any impacts that would create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff will be less than significant.

Impact WQ-7: In flood hazard, tsunami, or seiche zones, risk of release of pollutants as a result of Project inundation

Potential Impact: The project is not near a large body of water capable of producing a seiche event, and is approximately 45 miles east of the Pacific Ocean and not subject to a tsunami event. If the Bethany Reservoir Dam were to fail, the likelihood of significant flood risk is considered minimal. Potential release of pollutants as a result of Project inundation could occur during construction involving sediment- or contaminated runoff from disturbed work areas or potential spills that could result in temporary impacts on water resources. However, BMPs such as runoff control measures, including stabilizing construction areas, and sediment controls and filtration, would be implemented to minimize impacts on water resources. Furthermore, the SWPPP, which includes provisions to reduce and control discharges other than stormwater, would be implemented.

Due to the minimal change in impervious area, there would be no substantial reduction of water infiltration into the ground, and risk of release of pollutants as a result of project inundation would be minimal during project operation.

Mitigation Measure: The following mitigation measure, discussed in Section 3.10.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR WQ-1 will ensure that any impacts that would risk the release of pollutants via inundation by seiche, tsunami, or mudflow will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would risk release of pollutants via inundation by seiche, tsunami, or mudflow will be less than significant.

Impact WQ-8: Conflict with or obstruction of implementation of a water quality control plan or sustainable groundwater management plan

Potential Impact: The project area is within the jurisdiction of the Central Valley Water Board, and subject to the boards' basin plan. The project would include stormwater BMPs, as required by PEIR Mitigation Measure WQ-1, to protect water quality and beneficial uses, as defined in the basin plan. Implementation of the project SWPPP would also regulate discharges to ensure compliance with the basin plan's water quality standards, and would not conflict with or obstruct implementation of a water quality control plan. Adequate water supply is available to meet the needs of the project for both construction and operation activities, and would not decrease groundwater supplies. The

project would only minimally affect groundwater resources because excavation would be temporary and short-term during the construction period. Due to the existing soils impervious nature, the increase of gravel and concrete to the project site would not substantially reduce or interfere with water infiltration into the ground and associated groundwater recharge or depletion of groundwater supplies that would conflict with implementation of sustainable groundwater management would not occur.

Mitigation Measure: The following mitigation measure, discussed in Section 3.10.2 of the SEIR, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR WQ-1 will ensure that any impacts that would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan will be less than significant.

Transportation/Traffic

Impact TRA-1: Conflict with a program, plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities

Potential Impact: The PEIR concluded that while construction activities could cause a substantial traffic increase on local county roads that provide direct access to project construction sites, these increases, would be of temporary duration. In addition, the PEIR concluded that no public transit services, or pedestrian or bicycle facilities are present on the project access routes in the program area. Consistent with the analysis in the PEIR, the project would cause temporary increases in traffic on local roads, and would not affect public transit services or bicycle or pedestrian facilities. However, oversized construction vehicles could potentially disrupt the movement of bicycles traveling on the shoulders of some local access roads (e.g., Altamont Pass Road, West Grant Line Road, Mountain House Road), and lane or road closures associated with material deliveries could temporarily disrupt bicycle access.

Mitigation Measure: The following mitigation measure, discussed in the SEIR in Section 3.16.2, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan

Prior to starting construction-related activities, the Applicant shall prepare and implement a Traffic Control Plan (TCP) that will reduce or eliminate impacts associated with the proposed Project. The TCP shall adhere to Alameda County, San Joaquin County, and Caltrans

requirements, and must be submitted for review and approval of the County Public Works Department prior to implementation. The TCP shall include the following elements. The County and Caltrans may require additional elements to be identified during their review and approval of the TCP.

- Schedule construction hours to minimize concentrations of construction workers commuting to/from the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.).
- Limit truck access to the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.).
- Require that written notification be provided to contractors regarding appropriate haul routes to and from the Project area, as well as the weight and speed limits on local county roads used to access the Project area.
- Provide access for emergency vehicles to and through the Project area at all times.
- When lane/road closures occur during delivery of oversized loads, provide advance notice to local fire, police, and emergency service providers to ensure that alternative evacuation and emergency routes are designated to maintain service response times.
- Provide adequate onsite parking for construction trucks and worker vehicles.
- Require suitable public safety measures in the Project area and at the entrance roads, including fences, barriers, lights, flagging, guards, and signs, to give adequate warning to the public of the construction and of any dangerous conditions that could be encountered as a result thereof.
- Complete road repairs on local public roads as needed during construction to prevent excessive deterioration. This work may include construction of temporary roadway shoulders to support any necessary detour lanes.
- Repair or restore the road right-of-way to its original condition or better upon completion of the work.
- Coordinate Project-related construction activities, including schedule, truck traffic, haul routes, and the delivery of oversized or overweight materials, with Alameda County, Caltrans, and affected cities and counties to identify and minimize overlap with other area construction projects.

Findings: Based on the PEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR TRA-1 will ensure that any impacts that would conflict with a program, plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would conflict with a program, plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities will be less than significant.

Impact TRA-4: Substantial increase in hazards because of a geometric design feature (e.g., sharp curves, dangerous intersections) or incompatible uses (e.g., farm equipment)

Potential Impact: The PEIR concluded that the presence of large, slow-moving construction and delivery vehicles could increase traffic safety hazards. Additionally, some of these vehicles could exceed roadway load and size limits. Permits from Caltrans District 4 and other relevant jurisdictions would be required for such vehicles.

Mitigation Measure: The following mitigation measure, discussed in the SEIR in Section 3.16.2, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigations recommended by Mitigation Measure PEIR TRA-1 will ensure that any impacts that would substantially increase hazards because of a design feature or incompatible uses due to construction-generated traffic will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would substantially increase hazards because of a design feature or incompatible uses due to construction-generated traffic will be less than significant.

Impact TRA-5: Potential to cause inadequate emergency access

Potential Impact: Large, slow-moving construction and delivery vehicles and temporary road and lane closures could delay or obstruct the movement of emergency vehicles, as disclosed in the PEIR. Therefore, construction would have the potential to significantly affect emergency vehicle access.

Mitigation Measure: The following mitigation measure, discussed in the SEIR in Section 3.16.2, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR TRA-1 will ensure that any impacts that would result in inadequate emergency access due to construction-generated traffic will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would result in inadequate emergency access due to construction-generated traffic will be less than significant.

Wildfire

Impact WF-1: Substantial impairment of an adopted emergency response plan or emergency evacuation plan

Potential Impact:

The project would reintroduce windpower uses to the project site, which would require operations and maintenance (O&M) staff to access the project site for routine and non-routine maintenance such as repair or replacement of rotors or other major components when necessary. Operations of the project would therefore result in a small routine increase of traffic associated with O&M, which would not interfere with an adopted emergency response plan or emergency evacuation plan.

Accordingly, operation of the Project would have no impact.

Large, slow-moving construction and delivery vehicles and temporary road and lane closures could delay or obstruct roadways used for emergency evacuation and emergency response vehicles, resulting in a potentially significant impact. Construction traffic routing would be established in a Construction Traffic Plan, which would include a traffic safety and signing plan prepared by the Project engineers in coordination with Alameda County and other related agencies to ensure adequate emergency route access at all times. All required permits from the County and/or Caltrans would be acquired before the construction of the Project.

Mitigation Measure: The following mitigation measure, discussed in the SEIR in Section 3.19.2, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR TRA-1 will ensure that any impacts that would substantially impair an adopted emergency response plan or emergency evacuation plan will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would substantially impair an adopted emergency response plan or emergency evacuation plan will be less than significant.

Impact WF-4: Exposure of people or structures to significant risks such as downslope or downstream flooding or landslide as a result of runoff, post-fire slope instability, or drainage changes

The PEIR concluded that impacts related to flooding, landslides, runoff, and drainage changes would be less-than-significant with implementation of WQ-1: Comply with NPDES requirements. As discussed in more detail in Section 3.7, *Geology, Soils, and Paleontological Resources*, and Section 3.10, *Hydrology and Water Quality*, design requirements to minimize risk of exposure to geologic and hydrologic hazards, including flooding, landslides, runoff, and drainage changes would be required.

While the project site is not located in an earthquake-induced landslide hazard zone, the presence of the Neroly Sandstone makes slope instability a concern at the project site. If a wildfire were to take place on these slopes, there could be an increase in risk of landslide or flooding due to post-fire

slope instability, which occurs when a wildfire removes the vegetation that holds soils in place, making it more likely for soil to move downslope, especially in tandem with precipitation.

However, as discussed under Impact WF-2, the new generation turbines have improved upon older models in terms of fire ignition risk and are equipped with internal protective control mechanisms which would safely shut them down during a high-voltage grid outage or fire-related turbine failure, greatly reducing the wildfire which could lead to post-fire slope instability. In addition, the risk of wildfire within the project site would be minimized through compliance with all pertinent local, state, and federal policies and codes and project BMPs, and post-wildfire risk also would be reduced with implementation of applicable policies and regulatory requirements.

Mitigation Measure: The following mitigation measure, discussed in the SEIR in Section 3.19.2, is hereby adopted and will be implemented as provided in the Mitigation Monitoring and Reporting Program.

PEIR Mitigation Measure WQ-1: Comply with NPDES requirements

Findings: Based on the SEIR and the entire record before the County, the County finds the following.

Effects of Mitigation: Implementation of the mitigation recommended by Mitigation Measure PEIR WQ-1 will ensure that any impacts related to the exposure of people or structures to significant risks such as downslope or downstream flooding or landslide as a result of runoff, post-fire slope instability, or drainage changes will be mitigated to a less-than-significant level.

Remaining Impacts: Any remaining impact that would expose people or structures to significant risks such as downslope or downstream flooding or landslide as a result of runoff, post-fire slope instability, or drainage changes will be less than significant.

Findings and Recommendations Regarding Impacts that are Less Than Significant

Aesthetics

Impact AES-4: Creation of a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area

The PEIR concluded that lighting required by the Federal Aviation Administration (FAA) in the project area and vicinity and lighting associated with the substations would be shielded and directed downward to reduce glare, and that the color of new towers and rotors would be neutral and non-reflective. Since the preparation of the PEIR, the County has noted that lighting associated with the turbines may have effects beyond those described in the PEIR. Given the height of first and second generation turbines, almost no FAA lighting was required; while, for taller, fourth generation turbines, FAA-required lighting would be highly noticeable. However, because the County does not have the ability to limit the placement of required FAA lighting, and the PEIR established that such lighting at a program level would have a less-than-significant impact, and that conclusion is not subject to change because information about FAA lighting could have been known with reasonable diligence prior to certification of the PEIR, the impacts of FAA lighting requirements at a program level have already been considered and were not further analyzed in this SEIR.

Regarding shadow flicker, the PEIR concluded that shadow flicker caused by blade rotation could create a disruptive visual intrusion to residents who are within 500 meters (1,640 feet) of a turbine and have the potential to be exposed to shadow flicker for extended periods (i.e., more than 30 minutes in a given day or 30 hours in a given year). There are no residences within 500 meters (1,640 feet) of any turbines associated with the proposed project. Therefore, impacts related to shadow flicker would be less than significant.

Air Quality

Impact AQ-1: Conflict with or obstruction of implementation of the applicable air quality plan

Consistent with the PEIR's conclusions regarding the Altamont Pass Wind Resource Area repowering projects, the proposed project would not conflict with the goals of BAAQMD's air quality attainment plans. Implementation of the proposed project would result in no new permanent employees or increase population projections, and therefore would not induce population or employment growth or result in a net increase in vehicle miles traveled in the San Francisco Bay Area Air Basin (SFBAAB).

While minor amounts of emissions would be generated during construction, modeling demonstrates that short-term mitigated emissions resulting from proposed project construction would not exceed the BAAQMD significance thresholds (see Impact AQ-2). Ultimately, the project would result in long-term benefits from new renewable wind-generated energy, including reduction of criteria pollutants and GHG emissions relative to the production of comparable energy from fossil fuel sources. Accordingly, the project supports the primary goals of the *2017 Clean Air Plan*.

There are no public transit services, or pedestrian or bicycle facilities, present on the project access routes in the program area. However, the project would not preclude extension of a public transit line or bike lane, or otherwise create an impediment or disruption to implementation of any *2017 Clean Air Plan* control measures.

This potential impact is determined to be less than significant.

Impact AQ-4: Generation of objectionable odors adversely affecting a substantial number of people

The PEIR concluded that neither construction nor operation of the repowering projects would result in significant odor impacts. Consistent with the PEIR, odor emissions of the proposed project would primarily be limited to the construction period. Sources of odors during construction would be diesel-powered trucks and vehicles. Potential odors from these sources would be temporary (7 months) and spatially dispersed over the project area. Accordingly, the proposed project is not anticipated to create objectionable odors that would violate air district nuisance rules.

This potential impact is determined to be less than significant.

Biological Resources

Impact BIO-17: Potential for ground-disturbing activities to result in direct adverse effects on common habitats

Ground-disturbing activities would result in the permanent loss of common habitats as a result of constructing new permanent facilities and the temporary loss of common habitats as a result of constructing temporary facilities and landscape reclamation. These activities would create minor changes in total acreage of common habitats in the program area, primarily in the annual grassland plant community.

All lands disturbed by infrastructure installation or removal would be returned to preproject conditions. At each reclamation site, the topography would be contour graded (if necessary and if environmentally beneficial), stabilized, and reseeded with an appropriate seed mixture to maintain slope stability. Reclamation activities would be guided by a reclamation plan developed in coordination with the County and other applicable agencies. This potential impact is determined to be less than significant.

Impact BIO-23: Potential disturbance or mortality of monarch butterfly

Potential effects on monarch butterfly were not addressed in the PEIR because the species was not a candidate for federal listing at the time that the PEIR was prepared.

The project site supports grassland and vegetated aquatic land cover types that represent potential foraging and breeding habitat for Monarch butterflies. Overall, the project would permanently remove approximately 26 acres of annual grassland, which is less than 1% of the available grassland on the project site. The loss of less than 1% of available foraging habitat at the project site is not expected to substantially reduce the availability of foraging habitat in the project region for Monarch butterfly. Up to 264 acres of annual grassland would be temporarily disturbed during project construction (accounting for approximately 6 % of the total available habitat); however, all lands temporarily disturbed by infrastructure installation would be returned to preproject conditions.

Permanent and temporary disturbances within annual grassland could also result in the removal of milkweed plants (potential host plant for Monarch butterflies) if they are present within the construction footprint. Because the milkweed plant was only sporadically found throughout the project site, the removal of potential breeding habitat is expected to be negligible. Overall, the small amount of permanent loss and temporary disturbances of potential foraging and breeding habitat for Monarch butterfly is not anticipated to result in substantial adverse effects on migrating and breeding Monarch butterflies. This potential impact is determined to be less than significant.

Energy

Impact EN-1: Wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation

Project construction would require use a variety of construction equipment, including heavy equipment, excavator, trucks, graders, and a crane. The project encompasses up to six phases. Most of the energy would be consumed during road construction, foundation and electrical work, turbine delivery and installation, and electrical trenching and substation construction. Although substantial amounts of energy would be used in construction of the project, the expenditure of this energy

would be temporary in duration and would be outweighed by the energy produced by operation of the proposed wind energy facility. During operations, the project would produce electricity via wind power which would help to meet California's energy demands with renewable sources of energy, and ultimately, would help to decrease the State's reliance on carbon-based, or nonrenewable, energy resources. Therefore, potential energy impacts of project operation would be less than significant

Geology, Soils, Mineral Resources, and Paleontological Resources

Impact GEO-2: Result in substantial soil erosion or the loss of topsoil

As disclosed in the PEIR, decommissioning and project construction could cause surface disturbance and vegetation removal resulting in the potential for soil erosion or loss of topsoil. However, because the project would disturb more than 1 acre, compliance with federal and local erosion-related regulations (e.g., the SWPPP developed for the Project, requirements of the county's Stormwater Management Plan) would be required. Compliance with these requirements would ensure that ground-disturbing activities do not result in significant erosion. Typical erosion-prevention measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover would be used. Moreover, the PEIR requires a reclamation plan with specific measures taken to ensure that repowering sites are regraded and seeded to pre-project conditions. These requirements would ensure that potential impacts of soil erosion would be minimized. This potential impact is determined to be less than significant.

Greenhouse Gas Emissions

Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

The PEIR concluded that while repowering the Altamont Pass Wind Resource Area (an aggregate of all the anticipated repowering projects proposed within the program area) would result in short-term emissions of GHGs, primarily associated with construction activities, and the potential operational emission of SF₆, the repowering projects collectively would result in an annual net reduction of more than 100,000 tons of CO₂e. Consistent with the PEIR, wind energy generated by the project would reduce GHG emissions and would more than offset emissions generated by project construction and operation. This beneficial impact would be less than significant.

Hazards and Hazardous Materials

Impact HAZ-1: Creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

Construction of the project would involve small quantities of commonly used materials, such as fuels and oils, to operate construction equipment. Because standard construction BMPs would be implemented to reduce pollutant emissions during construction, this impact is considered less than significant.

The majority of hazardous materials to be used during operations, decommissioning, and removal and reclamation activities—fuels, oils, and lubricants—are of low toxicity. As these materials are

required for operation of construction vehicles and equipment, BMPs would be implemented to reduce the potential for or exposure to accidental spills involving the use of hazardous materials. In addition, a Hazardous Materials Business Plan (HMBP) would be developed for the proposed Project.

Lubricants used in the turbine gearbox are potentially hazardous. The gearbox would be sealed to prevent lubricant leakage and would be periodically tested. When the lubricants have degraded to the point where they are no longer adequate, the gearbox would be drained, new lubricant added, and the used lubricants disposed of at an appropriate facility in accordance with all applicable laws and regulations. Dielectric fluid to be used in transformers is biodegradable, contains no PCBs, and is not considered a hazardous material. This potential impact is determined to be less than significant.

Impact HAZ-2: Creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

Site workers, the public, and the environment could be inadvertently exposed to preexisting onsite contaminants during project construction. Small quantities of potentially toxic substances (such as petroleum and other chemicals used to operate and maintain construction equipment) would be used in the program area and transported to and from the area during construction. During operation, larger quantities (more than 55 gallons of liquid, 500 pounds of solids, or 200 cubic feet of compressed gases) of fuel could be stored in individual project areas. In addition, fuel and other petroleum products could be stored onsite.

However, as previously discussed, an HMBP would be developed for the project. The HMBP would contain specific information regarding the types and quantities of hazardous materials, as well as production, use, storage, spill response, transport, and disposal of such materials. The handling and disposal of these materials would be governed according to regulations enforced by CUPA, Cal/OSHA, and DTSC, as previously discussed. In addition, regulations under the federal Clean Water Act require contractors to avoid allowing the release of materials into surface waters as part of their SWPPP and National Pollutant Discharge Elimination System permit requirements (see Section 3.10, *Hydrology and Water Quality*, for a discussion of the Clean Water Act and SWPPPs). This regulatory scheme would ensure that safety measures and precautions are taken, thereby reducing any potential impacts associated with the accidental upset or release of hazardous materials.

Persons, structures, and facilities within the blade throw hazard zone could be at risk of damage, injury, or death if struck by a falling blade. People potentially within the hazard zone include motorists travelling along Patterson Pass Road and county roads and those occupying residences. The important infrastructure in and adjacent to the project site potentially susceptible to damage from blade throw includes PG&E transmission lines and windfarm substations. Overall, the strict control of public access would reduce the risk of potential blade strike in the project site. The closest recreational area (Carnegie State Vehicular Recreation) to a proposed turbine is approximately 2,200 meters in distance, and the closest proposed turbine to a public road is approximately 390 meters (from Patterson Pass Road). These distances are considered an adequate setback distance to avoid impacts associated with potential blade throw. This potential impact is determined to be less than significant.

Impact HAZ-5: Placement of Project-related facilities within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, resulting in a safety hazard or excessive noise for people residing or working in the Project area

The project site is not within 2 miles of a public airport or a private airstrip. Therefore, implementation of the project would not normally result in a safety hazard for people residing or working in the project site.

However, according to the PEIR, projects with facilities in the influence area zones of local airports are required to submit a Notice of Proposed Construction or Alteration form to the FAA for review and to implement all FAA requirements to reduce potential aviation impacts. A review of the Tracy Municipal Airport (located approximately 6 miles from the project site) compatibility zones indicates that the project site is outside all compatibility and influence area zones (San Joaquin County Aviation System 2009). Also, wind turbines would require FAA lighting as most would be more than 200 feet tall and must be individually lit with obstruction lighting. Through its Notice of Proposed Construction or Alteration (Form 7460.1), the FAA would review the proposed Project prior to construction (14 CFR Part 77). The FAA analysis would include a review of proposed marking (paint scheme) and nighttime lighting to ensure that aircraft could readily identify and avoid the wind turbines. This potential impact is determined to be less than significant.

Impact HAZ-7: Exposure of people or structures, either directly or indirectly, to a significant risk involving wildland fires

As discussed in Section 3.19 *Wildfire*, the most likely source of an ignition from the project site is in a moderate to high fire hazard severity zone. The most likely source of an ignition would be hardware or conductor failures of power collection lines, dropping of collection lines, turbine malfunction or mechanical failure, and avian-related incidents. In addition, during construction, additional work crews would be required, temporarily increasing the number of vehicles in the Project area. Climate conditions together with the potential for vehicle-related ignitions increase the potential for ignition, especially during the summer months.

Construction on project site would be a temporary activity, and onsite water tanks would be made available for fire suppression needs during construction. OSHA requirements would be followed regarding the safe control and storage of combustible materials. Therefore, construction of the project would not result in significant impacts to exposure of people or structures directly or indirectly of wildland fires.

Operation of the project would potentially increase the risk of wildfires ignited by wind generators. However, the site is currently served by CalFire and the Alameda County Fire Department and wind turbines were formerly located on the site, thus the fire protection facilities and infrastructure required to protect the existing facilities are in place. In addition, as discussed previously, new generation wind turbines have improved upon older models in terms of fire ignition risk and are anticipated to result in a reduction of potential fire ignitions. Under Operational Safety and Environmental Compliance Programs, the proposed turbines would be equipped with internal protective control mechanisms which would safely shut them down during a high-voltage grid outage or fire-related turbine failure. Collector substations would also be fenced and locked and would include visible safety signage. In addition, the project would be subject to County requirements for fire prevention as outlined in the County's *Altamont Pass Wind Farm Fire Requirements*. The project would be required to maintain firebreaks and clearances around

electrical lines, as well as year-round water supplies to be provided for firefighting. Therefore, consistent with the PEIR, operation of the project would not result in significant impacts to exposure of people or structures directly or indirectly of wildland fires.

This potential impact is determined to be less than significant.

Hydrology and Water Quality

Impact WQ-2: Substantial decrease of groundwater supplies or substantial interference with groundwater recharge such that the Project may impede sustainable groundwater management of the basin

Project construction would involve relatively small footprints, compared with the size of the entire groundwater basin, and, therefore, would not result in blocking groundwater infiltration or interfere with groundwater recharge. The project would require water on a temporary basis during construction, and a minimal amount of water during project operation.

Water for construction activities would be provided through an agreement with municipal or private suppliers. Temporary onsite water tanks and water trucks would be made available for fire water support, dust suppression, and construction needs. Operation of wind power facilities require very little water; operation of the project could use up to 1.7 acre-feet of water per year, which represents approximately 0.5 percent of the water the Alameda County Water District estimates for industrial uses. This water demand is anticipated to be accommodated within the County's water management plan without the need for additional water supplies. As such, the project would not be a source of groundwater extraction. Therefore, the project would not result in a substantial decrease of groundwater supplies or substantially interfere with groundwater recharge such that the project would impede sustainable groundwater management of the basin, and this potential impact is determined to be less than significant.

Noise

Impact NOI-1: Generation of increased ambient noise levels in the Project vicinity in excess of applicable standards

Construction activities may potentially result in noise levels that exceed Alameda County noise ordinance standards during nonexempt hours. However, construction would be done during hours of day allowed by the county (7:00 a.m. to 7:00 p.m. Monday to Friday, and 8:00 a.m. to 5:00 p.m. on Saturday), and no evening or nighttime construction is anticipated. Therefore, the exposure of residences to equipment noise during construction is considered to be a less-than-significant impact.

Operation of wind turbines added by the project would result in increased ambient noise levels in the project area. The nearest residence, the on-site Mulqueeney Ranch located south of the PG&E Tesla substation, is approximately 3,200 feet away from the nearest turbine that would be constructed. This is outside of the maximum setback distance of 2,000 feet that would require an operational noise analysis under PEIR Mitigation Measure NOI-1, *Perform project-specific noise studies and implement measures to comply with County noise standards*. Therefore, sound levels from operation of wind turbines are not expected to exceed performance standards specified in the conditional use permit. This potential impact is considered to be less than significant.

Impact NOI-2: Generation of excessive groundborne vibration or groundborne noise levels

Construction of access roads, turbines, and associated facilities would involve the use of heavy equipment that may produce vibration that would be perceptible up to a distance of 50 feet away from the vibration source. No impact equipment such as pile drivers is expected to be used during construction. Rubber-tired vehicles such as heavy trucks are not a significant source of vibration. Consequently, proposed construction activities are not expected to result in perceptible levels of vibration in sensitive buildings. This potential impact is determined to be less than significant.

Transportation

Impact TRA-2: Conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision

Section 15064.3 subdivision (b) concerns analysis of project impacts based on potential increases in vehicle miles traveled (VMT). The Governor's Office of Planning and Research released a technical advisory on Section 10564.3 subdivision (b), which indicates that without "projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than significant transportation impact" (Office of Planning and Research 2018). Construction-related trips would generate a temporary increase in VMT associated with the project. Once operational, the estimated daily VMT associated with the project's routine operations and maintenance would be 213 VMT for two people commuting daily up to 100 miles round trip, far fewer than 110 trips per day (Brookfield Renewables 2020). Based on OPR's guidance and the nature of the project, VMT impacts would be less than significant.

Impact TRA-3: Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks

There are four airports in the vicinity of the project site: Meadowlark Field (a private landing strip); Tracy Municipal Airport; Byron Airport; and Livermore Municipal Airport. The project would not affect existing air traffic patterns at any of the region's airports and therefore would not result in substantial safety risks. The impact would be less than significant.

Tribal Cultural Resources

Impact TCR-1: Potential to cause a substantial adverse change in the significance of a tribal cultural resource with cultural value to a California Native American tribe and that is listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)

The results from the search of the NAHC's Sacred Lands Files, and outreach efforts by the County pursuant to AB 52, as discussed in the *Methods for Analysis* section, did not identify any tribal cultural resources in or near the project area. This potential impact is determined to be less than significant.

Impact TCR-2: Potential to cause a substantial adverse change in the significance of a tribal cultural resource with cultural value to a California Native American tribe and that is a resource determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

The results from the search of the NAHC's Sacred Lands Files, and outreach efforts by the County pursuant to AB 52, as discussed in the *Methods for Analysis* section, did not identify any tribal cultural resources in or near the project area. This potential impact is determined to be less than significant.

Utilities and Service Systems

Impact UT-1: Relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects

The construction and operation of the project would not substantially modify the existing stormwater drainage patterns at the project site, and would include only a small increase in impervious surfaces tower, turbine, and substation foundations. As the project would disturb more than 1 acre, it would require coverage under the state's Construction General Permit. Coverage under this permit requires developing and complying with a SWPPP, which would include BMPs and recommendations which would prevent environmental effects related to stormwater drainage. Consequently, impacts related to construction of new stormwater drainage facilities or expansion of existing facilities would be less than significant.

Neither construction nor operation of the project would not generate a significant amount of wastewater. Water for construction activities would be provided through an agreement with municipal or private suppliers, and would be trucked onto the project site to provide water for fire support, dust suppression, and other construction needs. Operation of the project would not generate a significant amount of wastewater. Windpower turbines do not consume water or produce wastewater during operations and no additional permanent wastewater-producing structures such as restrooms are included in the project. As the project would not require the relocation, construction, or expansion of water, wastewater treatment, or stormwater drainage facilities, and no natural gas or telecommunication facilities are required, this potential impact is determined to be less than significant.

Impact UT-2: Have sufficient water supply to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years

Water quantities used for the project are expected to be minimal. The majority of water use would take place during construction. Temporary onsite water tanks and water trucks would be made available for fire water support, dust suppression, and other construction needs. A minimal amount of water would be required for construction worker needs (e.g., drinking water, sanitation facilities). In general, wind power uses very little water and water consumption savings in California from wind power projects amount to more than 3.4 billion gallons per year (CalWEA 2020). The project could use up to 1.7 acre-feet of water per year, the yearly water use equivalent of approximately 8 single-family homes. Based on the project's minimal estimated water demand compared with the supplies available, it is not anticipated that the project would require new or expanded entitlements

during normal, dry, or multiple dry years. This potential impact is determined to be less than significant.

Impact UT-4: Project-related exceedance of state or local solid waste standards or of the capacity of local infrastructure, or other impediments to attaining solid waste reduction goals

The majority of solid waste generated would be during construction and during the decommissioning of turbines. The project is not anticipated to generate a substantial amount of solid waste because turbines and components would be sold or recycled, which would reduce the amount of solid waste taken to landfills. As the project would recycle solid waste onsite and conform to the County's Green Building Ordinance, it is not anticipated that the project would generate enough solid waste to affect the capacity of any landfill. This potential impact is determined to be less than significant.

Wildfire

Impact WF-2: Exacerbation of wildfire risks associated with pollutant concentrations or uncontrolled spread of wildfire

The project site is located in an SRA and encompasses an area which includes moderate to high fire hazard severity zones (California State Geoportal 2020). Construction on the project site would be a temporary activity; an active working crew would control any potential combustible materials though standard OSHA worker protection requirements. Temporary onsite water tanks and water trucks would be made available for fire support. Therefore, construction of the project would not exacerbate wildfire risks associated with pollutant concentration or uncontrolled spread of wildfire and impacts would be less than significant.

As discussed above, wind energy facilities are prone to fire ignition from different sources. However, as described above in Chapter 2, *Project Description*, standard O&M procedures would be employed in the event of downed power lines. The turbines would be equipped with internal protective control mechanisms to safely shut them down in the event of a high-voltage grid outage or a turbine failure related to fire or mechanical problems. Collector substations would also be fenced and locked and would include visible safety signage. In addition, the project would be subject to County requirements for fire prevention as outlined in the County's *Altamont Pass Wind Farm Fire Requirements* to maintain firebreaks and clearances around electrical lines and provide water supplies for firefighting.

The PEIR concluded that the fire-related impact of individual repowering projects would be less than significant, and no mitigation is required. As noted above, the proposed project would comply with the Altamont Pass Wind Farms Fire Requirements as described in Exhibit C of the 2005 Conditional Use Permits. This potential impact is determined to be less than significant.

Impact WF-3: Project-related installation or maintenance of associated infrastructure that may exacerbate fire risk or result in temporary or ongoing environmental impacts

As discussed above Impact WF-2, implementation of the project would carry with it a potential for fire ignition risks (e.g., turbine overload, bearing overheating, pendant cable failure; avian-related incidents). However, employing standard measures to reduce fire risks during construction and

standard O&M procedures as described above during operation and maintenance, fire risks would be reduced.

The PEIR concluded that the fire-related impact of individual repowering projects would be less than significant, and no mitigation is required. The proposed Project would comply with the Altamont Pass Wind Farms Fire Requirements as described in Exhibit C of the 2005 Conditional Use Permits. This potential impact is determined to be less than significant.

Findings for Cumulative Impacts

State CEQA Guidelines Section 15130 requires the consideration of cumulative impacts in an EIR when a project's incremental effects are cumulatively considerable. Cumulatively considerable "means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects the effects of other current projects and the effects of probable future projects." (CEQA Guidelines Section 15065(a)(3).) In identifying projects that may contribute to cumulative impacts, the State CEQA Guidelines allow the use of a list of past, present, and reasonably anticipated future projects, producing related or cumulative impacts, including those that are outside of the control of the lead agency. The proposed Project's cumulative contribution to various impacts was considered in conjunction with other proposed and approved projects, as set forth in Chapter 5 of the SEIR.

Based on analysis in the SEIR and the entire record before the County, the County makes the following findings with respect to the project's cumulatively considerable potential cumulative impacts of the proposed project.

Cumulatively Considerable Contributions to Potentially Significant Impacts that Cannot Mitigated to a Less-Than-Significant Level

Air Quality

Construction of the Project would generate reactive organic gases (ROG), nitrogen oxides (NO_x), and localized particulate (PM_{2.5} and PM₁₀) and diesel particulate matter. The PEIR identified no cumulative impact related to localized particulate and diesel particulate matter. Therefore, the project's mitigated construction impact to a less-than-significant level would not result in or contribute to a cumulatively considerable impact. With respect to NO_x and ROG emissions, the PEIR found that the cumulative program emissions would be greater than the BAAQMD thresholds after the implementation of PEIR Mitigation Measures AQ-2a and AQ-2b, and therefore cumulative construction impacts would be significant and unavoidable. Although the project would generate ROG and NO_x below the BAAQMD threshold (see Impact AQ-2, PEIR Mitigation Measures AQ-2a and AQ-2b, and 2020 NEW Mitigation Measure AQ-2c), the project generated ROG and NO_x emissions would contribute to the cumulative impact identified in the PEIR. Therefore, because the amounts of project-generated ROG and NO_x would be substantial, the contribution to the cumulative air quality impact would be cumulatively considerable during construction. There are no other feasible mitigation measures that can reduce these impacts to a less-than-significant level. As more fully explained in the Statement of Overriding Considerations contained in Exhibit C to the Resolution to which these CEQA Findings are attached, the County finds that there are environmental, economic, or other benefits of the project that override these cumulatively considerable impacts.

Biological Resources

As determined in *PEIR Analysis: Avian and Bat Mortality*, cumulative impacts would affect the burrowing owl, golden eagle, and hoary bat. Avian and bat mortality associated with turbine collisions has been identified as a significant and unavoidable impact. By definition, and considered with other sources of avian mortality [e.g., the Contra Costa County portion of the APWRA and the neighboring Montezuma Hills Wind WRA (MHWRA)], this would constitute a considerable contribution to a significant cumulative impact. Since certification of the PEIR, changed understanding about the population status of avian and bat resources now enables a more precise definition of the geographic scope for the analysis. For golden eagles, the Local Area Population (LAP), which includes all golden eagles within a 109-mile radius from the project site, was considered. For birds other than golden eagles, USFWS evaluates population status and trends with regard to Bird Conservation Region (BCR) 32, which is one of 66 such regions established by the U.S. North American Bird Conservation Initiative (NABCI) Committee to monitor bird conservation efforts in North America. For the hoary bat, the geographic scope for hoary bat is western North America, based on information that indicates hoary bats in the APWRA are nearly all migratory, derived from this very large region.

The project would cause an estimated 31 burrowing owl fatalities per year (on an RSA basis; Table 5-1). Given that APWRA and MHWRA wind power operations are likely causing annual loss of approximately 5.3% of the BCR 32 population, and that since these fatalities are contributing to further declines in a species that is already uncommon in BCR 32 and is showing a long-term declining population trend, there is a cumulative impact on this species. The portion of the population change attributable to the proposed project is approximately 0.25% of the BCR 32 population (annually), which is an immeasurably small fraction. Thus the proposed project would not make a cumulatively considerable contribution to the cumulative impact.

The golden eagle within the APWRA has been the subject of extensive field studies and modeling to ascertain its population status and its likely long-term responses to fatalities caused by wind energy developments. This work was synthesized by Hunt et al. (2017), who estimated that an annual reproductive output of 216–255 breeding pairs would have been necessary to support published estimates of 55–65 turbine-caused fatalities per year in the APWRA, concluding that the area has “a stable breeding population, but one for which any further decrease in vital rates would require immigrant floaters [subadults and nonbreeding adults] to fill territory vacancies.” This estimate would indicate that the 280 territorial pairs present in the Diablo Range (Wiens et al. 2015) would likely be adequate to maintain the region’s golden eagle population, but with a long-term population reduction possible if fatalities were to exceed 55–65 eagles per year.

For the 450 MW PEIR alternative, there would be an estimated 27 golden eagle fatalities per year, while for the combined APWRA and MHWRA, there would be about 44 fatalities per year. Also, the work of Hunt et al. (2017) assumes that the Diablo Range eagles are a discrete population, but they acknowledge that up to 17% of radio transmitter-tagged eagles used in their study left the Diablo Range area or may have originated outside the area and migrated in. These “travelers” are predominately juvenile, subadult, or nonbreeding adult eagles, a group that also comprises a disproportionate fraction of the golden eagle mortalities in the APWRA. Thus, the eagles in the APWRA make up an anomalously small fraction of the reproductive eagles in the Diablo Range, as well as an anomalously large fraction of those eagles most likely to have come from or be migrant to areas outside the Diablo Range.

The removal of 27 eagles per year under the 450 MW PEIR alternative represents an annual loss equivalent to as much as 0.5% of the breeding population, which in itself is possibly sufficient to drive long-term population declines and therefore the contribution of the 450 MW PEIR alternative to this cumulative impact is cumulatively considerable. However, this is also such a small fraction that it would be nearly impossible to measure the effect, except for the fact that this species is closely studied in the Diablo Range and there are thus estimates not only of replacement by fledging of chicks, but also of immigration and emigration between the Diablo Range and the larger LAP. Provided that the golden eagle population in the Diablo Range continues to be closely monitored, it is likely that fatalities associated with the proposed project will likewise make a considerable contribution to cumulative effects on the golden eagle. However, since those impacts would be within the scope of the 450 MW PEIR alternative, there would be no substantial increase in the magnitude of the cumulative impact, relative to the conclusions in the PEIR.

The primary bats affected by wind energy development in the APWRA are Mexican free-tailed and hoary bats, which together account for more than 90% of the bat fatalities observed in Vasco Winds and Golden Hills monitoring; the two species make up approximately equal fractions of the observed mortality. The Mexican free-tailed bat is not a species of conservation concern, as it is extremely widespread and in most of its range is non-migratory. The hoary bat, however, is highly migratory, with a summer range that includes much of North America, and seasonal migrations to overwinter in southern California and Mexico (Cryan 2003). The species was early identified as the single most common bat fatality at wind farms at locations throughout the United States (Ellison 2012), both because it is a “tree bat” that is known to be attracted to forage at wind turbines (Arnett et al. 2016), and because it is highly migratory. Migrations in this species are not well understood, but it is likely that many of the fatalities observed at APWRA are derived from a large migratory population that summers north of the area.

As discussed in the analysis of impact BIO-14, most fatality surveys have substantially underestimated bat fatality rates. Based on data from recent surveys, it is likely that both APWRA and MHWRA facilities are causing bat fatalities at a rate of no less than 11/MW per year, and potentially, significantly higher. Using this rate of 11/MW per year, for the 450 MW PEIR alternative, there would be an estimated 4,950 bat fatalities per year, and for the combined APWRA and MHWRA, there would be 17,400 per year. Based on the fatality estimates summarized Chapter 5, Table 5-2, of the SEIR those fatalities would include approximately 1,150 hoary bats per year under the 450 MW PEIR alternative and approximately 5,030 hoary bats per year in the combined APWRA and MHWRA. Based on the detailed occurrence information summarized in Impact BIO-14, those fatalities would primarily accrue to migratory bats and would chiefly occur in August and September.

The possibility of an APWRA and MHWRA combined mortality of 5,030 bats per year represents 0.16% of a population of 2.5 million bats. However, the affected population is almost certainly smaller than 2.5 million. Some fraction of those bats are from the eastern U.S. and Canada, for instance. Even a change of 0.16% per year is a substantial impact on an animal with a population growth rate of only 1.5% per year, and the impact is greater if the affected population is smaller than 2.5 million bats. These fatalities are contributing to declines in a species that is already declining in the Pacific Northwest and may be declining in California; therefore, there is a cumulative impact. The impacts are large enough to cause or contribute to a long-term declining population trend. Wind power generation at APWRA and MHWRA are large enough to cause or contribute to a long-term declining population trend. The same conclusion applies, with lower confidence, to the 450 MW

PEIR alternative; therefore, the contribution of this alternative to the cumulative impact is cumulatively considerable.

Overall, the project would result in a significant and unavoidable cumulative impact on avian and bat mortality associated with turbine operations. For the burrowing owl and the golden eagle, the project contribution is not cumulatively considerable, but for hoary bats, it is cumulatively considerable because the impact is larger than estimated in the PEIR. There is limited confidence in this conclusion, however, due to the high level of uncertainty regarding hoary bat population status. There are no other feasible mitigation measures that can reduce these impacts to a less-than-significant level. As more fully explained in the Statement of Overriding Considerations contained in Exhibit C to the Resolution to which these CEQA Findings are attached, the County finds that there are environmental, economic, or other benefits of the project that override these cumulatively considerable impacts.

There are no other feasible mitigation measures that can reduce these impacts to a less-than-significant level. As more fully explained in the Statement of Overriding Considerations contained in Exhibit C to the Resolution to which these CEQA Findings are attached, the County finds that there are environmental, economic, or other benefits of the project that override these cumulatively considerable impacts.

Contributions to Cumulative Impacts that Can be Mitigated to a Less-Than-Significant Level

Aesthetics

The geographic scope considered for potential cumulative impacts on visual/aesthetic resources in the PEIR was the viewshed of the public and recreational users common to the program area. The PEIR concluded that the program would not result in a cumulative impact because the combined impacts of the projects would not create a new source of light, glare, or shadow flicker experienced by residents and businesses of sufficient magnitude that day or nighttime views in the area would be substantially degraded.

The characteristics of the proposed project with respect to construction activities and views during operation would be consistent with the evaluation of the project site in the PEIR. Existing Alameda and Contra Costa County policies would prevent the program from contributing to a cumulatively significant impact. Alameda County Policy ECAP 105, together with Mitigation Measures AES-2a, AES-2b, AES-c, AES-3, and AES-5, would prevent the proposed program from contributing to a cumulatively considerable impact.

Agricultural and Forestry Resources

The program area contains 24.21 acres of Prime Farmland and 0.36 acre of Farmland of Statewide Importance. PEIR Mitigation Measure AG-1 would ensure that no Prime Farmland or Farmland of Statewide Importance is converted to nonagricultural use. The characteristics of the proposed project with respect to construction activities and views during operation would be consistent with the evaluation of the project site in the PEIR, and PEIR Mitigation Measure Ag-1 would apply to the proposed project. Therefore, as described in the preceding section, no cumulative impact on farmland or forestry resources would occur.

Cultural Resources

Simultaneous construction of multiple repowering projects in the program area and other development and infrastructure projects in the vicinity of the program area could potentially result in significant impacts on historic resources, archaeological resources, and human remains, should they be present within the program area or the vicinity of the program area. However, the PEIR found that implementation of mitigation measures identified in the PEIR will ensure that impacts would not be such that they would result in or contribute to a cumulative impact. The characteristics of the proposed project with respect to construction activities and views during operation would be consistent with the evaluation of the project site in the PEIR. Therefore, as described in the preceding section, no cumulative impact on cultural resources would occur.

Energy

This topic was not addressed in the PEIR. Section 3.6, *Energy*, of this SEIR determined the project would generate no impact related to conflicting with or obstructing a state or local plan for renewable energy or energy efficiency. Project construction, which would be a short-term impact, would be reduced to less than significant by PEIR Mitigation Measure AQ-2a and AQ-2b. The residual impact related to energy use by construction equipment would be small, and would be far outweighed by the energy production of the repowered facilities described in the PEIR. No cumulative impact associated with the program or the project would occur.

Geology, Soils, and Paleontological Resources

The PEIR concluded that while the program could result in risks to life or property related to development on a site with active geologic and soil conditions there, implementation of PEIR Mitigation Measure GEO-1, which requires a site-specific geotechnical investigation and implementation of design recommendations from subsequent geotechnical report impacts related to geology and soils would be minimized and/or avoided. Therefore, the PEIR determined that the program's incremental, less-than-significant impacts related to geology and soils would not result in a cumulative impact. Simultaneous construction of multiple repowering projects in the program area and other development and infrastructure projects in the vicinity of the program area could potentially result in significant impacts on paleontological resources, should they be present within the program area or the vicinity of the program area. However, implementation of the mitigation measures to protect paleontological resources identified in the PEIR would ensure that project impacts would not be such that they would result in or contribute to a cumulative impact.

The characteristics of the proposed project with respect to construction activities and operation would be consistent with the evaluation of the project site in the PEIR. Therefore, as described in the preceding section, no cumulative impact on geology, soils, and paleontological resources would occur.

Greenhouse Gas Emissions

GHG emissions are inherently a cumulative concern, in that the significance of GHG emissions is determined based on whether such emissions would have a cumulatively considerable impact on global climate change. Although the geographic scope of cumulative impacts related to GHG emissions is global, the PEIR analysis focused on the state, the region, and the program's direct and/or indirect generation or offset of GHG emissions. The PEIR found that the program, the Golden Hills Project, and the Patterson Pass Project would result in a long-term net reduction of

approximately 96,049 metric tons of CO₂e per year, 18,727 metric tons of CO₂e per year, and 6,204 metric tons of CO₂e per year, respectively, and would not conflict with the State's GHG reduction goals. Wind energy generated by the project would reduce GHG emissions by approximately 26,006 metric tons CO₂e during its first year of operation. However, because the both the program and the project would contribute to a long-term net reduction in CO₂e, and each would implement mitigation to reduce impacts on policy compliance to less than significant, the contribution of the project to cumulative impacts would not be cumulatively considerable.

Hazards and Hazardous Materials

The PEIR determined that there would be no cumulative impact related to hazards and hazardous materials associated with program implementation. The characteristics of the proposed project with respect to construction activities and operation would be consistent with the evaluation of the project area in the PEIR. The project would be required to adhere to regulations that govern hazardous materials storage and handling, water quality BMPs, FAA regulations related to airspace, and fire prevention and management. Together, these measures would ensure that impacts related to exposure to hazardous materials would be minimized and/or avoided. Therefore, as described in the preceding section, no cumulative impact would occur.

Hydrology and Water Quality

The PEIR found that Mitigation Measure WQ-1 would ensure that through compliance with the National Pollution Discharge Elimination System, all impacts related to hydrology and water quality would be reduced to less than significant. Furthermore, other projects in the same watersheds would also be required to comply with NPDES requirements. Therefore, a cumulative impact would not occur.

The characteristics of the proposed project with respect to construction activities and operation would be consistent with the evaluation of the project site in the PEIR. Therefore, as described in the preceding section, no cumulative impact on hydrology or water quality would occur.

Noise

Implementation of PEIR Mitigation Measure NOI-1 would ensure compliance with County noise standards and would avoid significant cumulative operational noise impacts. Construction of multiple repowering projects simultaneously in the program area could potentially result in a cumulative construction noise impact at residences located near the construction activities. However, as concluded in the PEIR, the impact would be temporary and localized and implementation of PEIR Mitigation Measure NOI-2 would reduce cumulative impacts to a less-than-significant level. The characteristics of the proposed project with respect to construction and operation related noise would be consistent with the evaluation of the project site in the PEIR, and would be required to implement PEIR Mitigation Measures NOI-1 and NOI-2. Therefore, as described in the preceding section, no cumulative impact would occur.

Transportation/Traffic

The PEIR cumulative transportation analysis considered other projects in the program area vicinity that would involve concurrent construction activities and that could use the same access roadways to project sites and found potentially significant cumulative impacts on transportation. Similar to the PEIR, the project cumulative transportation analysis considers other projects in the program

area vicinity that would involve construction activities concurrent with those of the proposed project and that could use the same access roadways to project site. The project transportation analysis concludes that with implementation of PEIR Mitigation Measure TRA-1, all transportation impacts would be reduced to a less-than-significant level. Based on the relatively general information that was known at the time that the PEIR was prepared, the PEIR concluded that any repowering project with construction activities occurring concurrent with that of the Sand Hill Repowering Project site would result in a cumulatively considerable contribution to a cumulative traffic impact. Construction of the proposed project could occur concurrently with the Sand Hill Repowering Project; however, the Sand Hill Repowering Project as currently defined is smaller in scale and capacity than it was described in the PEIR. Furthermore, construction traffic associated with the proposed project would not share local roads with construction equipment that would be required for the Sand Hill Repowering Project, and any construction-related freeway traffic would use different off- and on-ramps. Therefore, the project would not make a cumulatively considerable contribution to the cumulative traffic impact previously identified in the PEIR.

Wildfire

Wildfire was addressed in the PEIR as a part of the assessment of PEIR Section 3.9 *Hazards and Hazardous Materials* impacts, and the cumulative impacts analysis for this topic was determined to be less than significant (described above). Although the program and project site are located in areas designated between moderate and very high fire hazard severity zones, the program area includes a network of maintenance and fire roads that can be utilized by the California Department of Forestry and Fire Prevention and the Alameda County Fire Department to rapidly access and suppress any fires that may arise in the program area. Furthermore, repowered wind turbines associated with the program have improved upon older models in terms of fire ignition risk and are anticipated to result in a reduction of potential fire ignitions compared to non-repowered conditions. Lastly, repowering projects must comply with the *Altamont Pass Wind Farms Fire Requirements* as described in Exhibit C of the 2005 Conditional Use Permits, which would also reduce fire risk, and construction activities associated with repowering projects must follow Occupational Safety and Health Administration requirements regarding the safe control and storage of combustible materials. Therefore, a cumulative impact associated with wildfire risk would not occur.

No Contribution to a Cumulative Impact

Based on the discussion in Chapter 5 of the SEIR and the entire record before the County, the County finds that the proposed project will not have a cumulatively considerable contribution to the following impact areas because the program and project, respectively, would generate no impact in these areas.

- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation

- Utilities and Service Systems

Findings for Alternatives Considered in the PEIR

Section 15091(a)(3) of the State CEQA Guidelines requires findings about the feasibility of project alternatives whenever a project within the responsibility and jurisdiction of the lead agency will have a significant environmental effect that has not been mitigated to a less-than-significant level.

Identification of Project Objectives

The State CEQA Guidelines state that the “range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant effects” of the project (CEQA Guidelines Section 15126[d][2]). Thus, an evaluation of the project objectives is key to determining which alternatives should be assessed in the SEIR.

As explained in Section 4.1.2 of the SEIR,

underlying purpose of the Mulqueeney Ranch Wind Repowering Project (project) is to repower a segment of the Program EIR (PEIR) program area with a commercially viable wind energy facility that would help meet the state’s Renewables Portfolio Standard (RPS), greenhouse gas (GHG) reduction, and carbon neutrality goals.

The fundamental objective of the proposed project is as follows:

- To site up to 36 new wind turbines that will produce and deliver 80 megawatts (MW) of commercially viable wind energy to the electrical grid through a long-term power purchase agreement with a local community choice aggregator.

The secondary objectives of the proposed project are as follows:

- To achieve the above fundamental objectives while avoiding and minimizing environmental impacts by:
 - Constructing the turbines and necessary infrastructure with the appropriate use of scientific observation to site turbines to avoid and minimize adverse effects and mortality of native plants, terrestrial species, bats and birds;
 - Applying an avian fatality monitoring protocol that is based on the latest science and monitoring results to determine whether applicable thresholds are exceeded, and, if needed, implementing adaptive management to reduce fatalities to the extent feasible; and
 - Contributing financial and scientific resources to the conservation and enhancement of protected bird and bat species in the Altamont Pass Wind Resource Area (APWRA) region, consistent with mitigation measures identified in the PEIR for repowering the APWRA.
- To increase local short-term and long-term employment opportunities.
- To contribute to repowering of the APWRA and provide economic benefits to Alameda County.

Alternatives Analyzed in the SEIR

The State CEQA Guidelines state that the “range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant effects” of the project. In addition, the SEIR must examine the No Project alternative. The County evaluated the alternatives listed below.

- No Project – No Repowering Alternative
- Micro-Sited Alternative
- Reduced Project Alternative

No Project—No Repowering Alternative

Under the No Project – No Repowering Alternative, no repowering would occur, and the project site would remain in its existing condition.

Finding: Based on the SEIR and the entire record before the County, the County rejects the No Project—No Repowering alternative as infeasible because it would not meet most of the objectives of the project.

Explanation: The No Project—No Repowering alternative would fail to meet most of the following project objectives and is therefore rejected as infeasible.

- *Fundamental objective:*

To site up to 36 new wind turbines that will produce and deliver 80 megawatts (MW) of commercially viable wind energy to the electrical grid through a long-term power purchase agreement with a local community choice aggregator.

Because no new turbines would be sited on the project site under this alternative, it will not produce and deliver wind energy.

- *Secondary objective:* to minimize environmental impacts by:
 - Constructing the turbines and necessary infrastructure with the appropriate use of scientific observation to site turbines to avoid and minimize adverse effects and mortality of native plants, terrestrial species, bats and birds

Because now new turbines would be sited under this alternative, there would no use of scientific observation to site turbines to avoid and minimize adverse effects and mortality of native plants, terrestrial species, bats and birds.

- *Secondary objective:* to minimize environmental impacts by:
 - Applying an avian fatality monitoring protocol that is based on the latest science and monitoring results to determine whether applicable thresholds are exceeded, and, if needed, implementing adaptive management to reduce fatalities to the extent feasible.

Without installation of new turbines, there would be no application of avian fatality monitoring based on the latest science, monitoring results, and adaptive management techniques, and there would be fewer opportunities for research on bird and bat mortality.

- *Secondary objective:* to minimize environmental impacts by:
 - Contributing financial and scientific resources to the conservation and enhancement of protected bird and bat species in the Altamont Pass Wind Resource Area (APWRA) region, consistent with mitigation measures identified in the PEIR for repowering the APWRA

Under this alternative, the County would not receive payments/fees from the project and would not contribute to the evolution of science around the conservation and enhancement of protected bird and bat species in the APWRA region.

- *Secondary objective:* to increase local short-term and long-term employment opportunities.

Without installation of new turbines, there would be no increase in employment opportunities associated with the construction and operation of wind facilities.

- *Secondary objective:* to contribute to repowering of the APWRA and provide economic benefits to Alameda County

Without installation of new turbines, there would be no contribution to repowering the APWRA or associated economic benefits to Alameda County.

Reduced Project Alternative

The Reduced Project Alternative would: (1) reduce the size of the project in terms of both RSA and the number of turbines; (2) increase turbine distance from eagle nests and eagle activity centers; (3) place turbines in consideration of the results of the micro-siting study (Appendix F) and supplemental micro-siting study (Appendix G); and (4) implement seasonal cut-in speed changes to attempt to reduce impacts on golden eagles and bats.

In total, the Reduced Project Alternative would eliminate one-third (12) of the project's 36 turbine sites while retaining an operational capacity of 80 MW,³ and would reduce the RSA from 40.7 to 32.8 total hectares, a 19% reduction compared to the project. This alternative would also place all turbines at least 0.5 mile from golden eagle nests and eagle activity centers. The number of turbines placed within 1 mile of eagle nests and eagle activity centers would be reduced to 7, compared to 13 turbines for the proposed project. In total, the Reduced Project Alternative would reduce the number of high-risk turbines as defined in the micro-siting studies to 2, compared to 11 under the proposed project. Furthermore, the cut-in speed during daylight hours year-round would increase to 5 meters/second (m/s) to reduce golden eagle fatality risk. During the fall migration for bats the cut-in speed would also increase to 5 meters/second (m/s). This would occur for an eight-week period from August 1 to September 30, from sunset to sunrise.

Finding: Based on the SEIR and the entire record before the County, the County finds that the Reduced Project Alternative would reduce some of the identified significant impacts and would meet most of the project's objectives.

Explanation: The Reduced Project Layout alternative would most of the following project objectives.

- *Fundamental objective:*

³ Although the nominal capacity (sum of turbine capacities) would be 83.16 MW under this alternative, operation of the turbines would be electronically limited to a maximum project nameplate capacity of 80 MW.

To site up to 36 new wind turbines that will produce and deliver 80 megawatts (MW) of commercially viable wind energy to the electrical grid through a long-term power purchase agreement with a local community choice aggregator.

The alternative would partially meet this objective; it would not develop 36 new wind turbines, but would retain the project's operational capacity.

- *Secondary objective:* to minimize environmental impacts by:
 - Constructing the turbines and necessary infrastructure with the appropriate use of scientific observation to site turbines to avoid and minimize adverse effects and mortality of native plants, terrestrial species, bats and birds

This alternative would generally meet this project objective; however, because the project would be reduced, there would be fewer opportunities to use of scientific observation to site turbines to avoid and minimize adverse effects and mortality of native plants, terrestrial species, bats and birds.

- *Secondary objective:* to minimize environmental impacts by:
 - Applying an avian fatality monitoring protocol that is based on the latest science and monitoring results to determine whether applicable thresholds are exceeded, and, if needed, implementing adaptive management to reduce fatalities to the extent feasible.

This alternative would meet this objective, because it would allow for application of science-based monitoring protocol.

- *Secondary objective:* to minimize environmental impacts by:
 - Contributing financial and scientific resources to the conservation and enhancement of protected bird and bat species in the Altamont Pass Wind Resource Area (APWRA) region, consistent with mitigation measures identified in the PEIR for repowering the APWRA

Under this alternative, the County would receive payments/fees from the project and the project would contribute to the evolution of science around the conservation and enhancement of protected bird and bat species in the APWRA region.

- *Secondary objective:* to increase local short-term and long-term employment opportunities.

This alternative would meet this objective, as it would still increase in employment opportunities associated with the construction and operation of wind facilities, although to a lesser extent than the proposed project.

- *Secondary objective:* to contribute to repowering of the APWRA and provide economic benefits to Alameda County

This alternative would meet this objective as it would contribute to repowering the APWRA or associated economic benefits to Alameda County.

Micro-Sited Alternative

Under the Micro-Sited Alternative, the applicant would install the same number of turbines as the project, but they would be placed at locations determined through the completed micro-siting study (Appendix F) that was prepared for the project with the objective to reduce avian impacts. Based on this study, this alternative would locate 31 of the project's 36 turbines at different sites to reduce

individual turbine bird strike risks, would continue to limit operational capacity to 80 MW, and would maintain the same RSA as the project at 40.7 hectare.

Finding: Based on the SEIR and the entire record before the County, the County finds that the Micro-Sited Alternative would result in similar impacts to the proposed project and would meet most of the project's objectives.

Explanation: The Micro-Sited Alternative would meet the following project objectives.

- *Fundamental objective:*

- To site up to 36 new wind turbines that will produce and deliver 80 megawatts (MW) of commercially viable wind energy to the electrical grid through a long-term power purchase agreement with a local community choice aggregator.

The alternative would meet this objective, as it would still develop 36 new wind turbines and retain the project's operational capacity.

- *Secondary objective:* to minimize environmental impacts by:

- Constructing the turbines and necessary infrastructure with the appropriate use of scientific observation to site turbines to avoid and minimize adverse effects and mortality of native plants, terrestrial species, bats and birds

This alternative would meet this project objective, as it would construct the turbines and associated infrastructure with the use of scientific observation to avoid and minimize effects on native plants, terrestrial species, bats, and birds.

- *Secondary objective:* to minimize environmental impacts by:

- Applying an avian fatality monitoring protocol that is based on the latest science and monitoring results to determine whether applicable thresholds are exceeded, and, if needed, implementing adaptive management to reduce fatalities to the extent feasible.

This alternative would meet this objective, because it would allow for application of science-based monitoring protocol.

- *Secondary objective:* to minimize environmental impacts by:

- Contributing financial and scientific resources to the conservation and enhancement of protected bird and bat species in the Altamont Pass Wind Resource Area (APWRA) region, consistent with mitigation measures identified in the PEIR for repowering the APWRA

Under this alternative, the County would receive payments/fees from the project and the project would contribute to the evolution of science around the conservation and enhancement of protected bird and bat species in the APWRA region.

- *Secondary objective:* to increase local short-term and long-term employment opportunities.

This alternative would meet this objective, as it would still increase in employment opportunities associated with the construction and operation of wind facilities.

- *Secondary objective:* to contribute to repowering of the APWRA and provide economic benefits to Alameda County

This alternative would meet this objective as it would contribute to repowering the APWRA or associated economic benefits to Alameda County.

Findings and Recommendations Regarding Significant Irreversible Changes

CEQA Section 21100(b)(2)(B) requires that an EIR identify any significant effect on the environment that would be irreversible if the project were implemented. Section 15126.2(c) of the State CEQA Guidelines characterizes irreversible environmental changes as those involving a large commitment of nonrenewable resources or irreversible damage resulting from environmental accidents. The State CEQA Guidelines describe three distinct categories of significant irreversible changes: changes in land use that would commit future generations to specific uses, irreversible changes from environmental actions, and consumption of nonrenewable resources. The project's significant and irreversible changes are discussed in Section 5.5 of the SEIR.

Findings: Based on the SEIR and the entire record before the County, the County finds that the Project would not result in any significant irreversible effect on the environment.

Explanation: The project area is currently developed as a windfarm, with coexisting grazing activities that would continue. The *East County Area Plan* (ECAP) designates the entire program area as Large Parcel Agriculture, which carries a zoning designation of Agriculture. According to the ECAP, a wind farm is a permitted use with a Conditional Use Permit. The program and the project would not commit future generations to or introduce changes in land use that would vary from the existing conditions.

The PEIR found that the program involved the construction and repowering of existing wind farms on approximately 50,000 acres in unincorporated eastern Alameda County, and that the commitment of nonrenewable resources, such as sand, gravel and other components of cement, metals and fossil fuels, necessary for construction and operation of the repowered wind farms would be irreversible. The project would similarly commit such materials for construction and operation of the repowered wind farm, although on much a smaller scale, but which would also constitute an irreversible commitment of nonrenewable resources.

The PEIR found that construction of repowered wind farms would require the consumption of nonrenewable resources, such as fuel for construction vehicles and equipment. However, such use would be limited to the short-term construction period. Operation and maintenance of the project would not increase the use of nonrenewable resources relative to existing conditions. The temporary, construction-related increase would not result in significant use of nonrenewable resources and would not commit future generations to similar uses. Moreover, the primary objective of the project is to provide an economically viable source of clean, renewable electricity generation that meets California's growing demand for power and fulfills numerous state and national renewable energy policies. The intent is to specifically reduce consumption of non-renewable sources of energy such as coal, natural gas, and other hydrocarbon-based fuels.

Findings and Recommendations Regarding Growth-Inducing Impacts

Section 21100(b)(5) of CEQA requires an EIR to discuss how a project, if implemented, may induce growth and the impacts of that induced growth (see also CEQA Guidelines Section 15126). CEQA requires the EIR to discuss specifically "the ways in which the project could foster economic or

population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment” (CEQA Guidelines Section 15126.2[d]). The CEQA Guidelines do not provide specific criteria for evaluating growth inducement and state that growth in any area is “necessarily beneficial, detrimental, or of little significance to the environment.” CEQA does not require separate mitigation for growth inducement as it is assumed that these impacts are already captured in the analysis of environmental impacts (see Chapter 3, *Impact Analysis*). Furthermore, the CEQA Guidelines require that an EIR “discuss the ways” a project could be growth inducing and to “discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment.”

Growth can be induced in a number of ways, such as elimination of obstacles to growth, stimulation of economic activity within the region, and precedent-setting action such as the provision of new access to an area or a change in a restrictive zoning or general plan land use designation. In general, a project could be considered growth-inducing if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way. However, the State CEQA Guidelines do not require a prediction or speculation of where, when, and in what form such growth would occur (State CEQA Guidelines, Section 15145). The project’s growth-inducing impacts are discussed in Section 5.3 of the SEIR.

Findings: Based on the SEIR and the entire record before the County, the County finds that the proposed project would not induce growth for the following reasons.

In general, a project could be considered growth-inducing if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way. However, the CEQA Guidelines do not require a prediction or speculation of where, when, and in what form such growth would occur (CEQA Guidelines Section 15145).

PEIR Section 5.2 provided a detailed description of the potential growth-inducing impacts of the program. The conclusion of the PEIR was that the program would not be expected to indirectly induce population growth through the construction of new service roads or electrical infrastructure and that the employment opportunities provided by program construction are not anticipated to induce indirect growth in the region. The analysis in Section 5.2 of the PEIR is incorporated here by reference. Similar to the findings of the PEIR regarding the two projects analyzed in that document, the Mulqueeney Ranch Repowering Project’s potential for growth inducement would be similar to the program but of a smaller scale. Therefore, the project would not be expected to indirectly induce population growth through the construction of new service roads or electrical infrastructure and the employment opportunities provided by project construction are not anticipated to induce indirect growth in the region.

Exhibit B

Mulqueeney Ranch Repowering Project Mitigation Monitoring and Reporting Program

Purpose of and Need for Monitoring

In compliance with CEQA, a Subsequent EIR (SEIR) has been prepared for the Mulqueeney Ranch Wind Repowering Project (project or proposed project). The SEIR identified potentially significant impacts in the resource areas listed below, as well as mitigation measures to reduce these impacts to a less-than-significant level where possible.

CEQA requires that a lead agency adopt a Mitigation Monitoring and Reporting Program (MMRP) for the measures the agency has proposed to avoid or mitigate significant environmental effects (CEQA Guidelines Section 15097). The purpose of the MMRP is to ensure that the mitigation measures identified in the SEIR are implemented. Table MMRP-1, which follows this introductory section, identifies the mitigation measures for the proposed project, the parties responsible for implementing and monitoring the measures, the timing of each measure, and a summary of the actions necessary to implement and monitor each measure.

Mitigation Monitoring and Reporting Program

The MMRP has been prepared for the proposed project in accordance with Public Resources Code 21081.6, which specifies that when a public agency makes findings required by paragraph (1) of subdivision (a) of Section 21081, it “shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.” Public Resources Code 21081.6 further specifies that the MMRP will “ensure compliance during project implementation.”

This MMRP is intended to ensure the effective implementation of mitigation measures that are within the County’s authority to implement, including monitoring where identified, throughout all phases of development and operation of the proposed project.

Table MMRP-1. Mitigation Monitoring and Reporting Plan

Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
Aesthetics				
<p>PEIR Mitigation Measure AES-1: Limit construction to daylight hours</p> <p>Major construction activities will not be undertaken between sunset and sunrise or on weekends. Construction activity is specifically prohibited from using high-wattage lighting sources to illuminate work sites after sunset and before sunrise, with the exception of nighttime deliveries under the approved transportation control plan or other construction activities that require nighttime work for safety considerations.</p>	During construction	County—adopt a Condition of Approval; Operator—ensure construction hours are maintained	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure AES-2b: Maintain site free of debris and restore abandoned roadways</p> <p>Project sites will be cleaned of all derelict equipment, wind turbine components not required for the project, and litter and debris from old turbines and past turbine operations. Such litter and debris may include derelict turbines, obsolete anemometers, unused electrical poles, and broken turbine blades. In addition, abandoned roads that are no longer in use on such parcels will be restored and hydroseeded to reclaim the sites and remove their visual traces from the viewscape, except in cases where the resource agencies (U.S. Fish and Wildlife Service and California Department of Fish and Wildlife) recommend that the features be left in place for resource protection. All parcels with new turbines will be maintained in such a manner through the life of project operations and until the parcels are reclaimed in accordance with the approved reclamation plan.</p>	During construction and operation	County—adopt a Condition of Approval; Operator—ensure that site conditions are maintained as required	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure AES-2c: Screen surplus parts and materials</p> <p>Surplus parts and materials that are kept onsite will be maintained in a neat and orderly fashion and screened from view. This can be accomplished by using a weatherproof camouflage material that can be draped over surplus parts and materials stockpiles. Draping materials will be changed out to accommodate for seasonal variations so that surplus materials are camouflaged in an effective manner when grasses are both green and brown.</p>	During construction and operation	County—adopt a Condition of Approval; Operator—ensure that site conditions are maintained as required	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
Air Quality				
<p>PEIR Mitigation Measure AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures</p> <p>The project proponents will require all contractors to comply with the following requirements for all areas with active construction activities.</p> <ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered as needed to maintain dust control onsite-approximately two times per day. • All haul trucks transporting soil, sand, or other loose material offsite will be covered. • All visible mud or dirt track-out onto adjacent public roads will be removed 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 will be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used. • Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points. • All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified visible emissions evaluator. • Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person will respond and take corrective action within 48 hours. The air district's phone number will also be visible to ensure compliance with applicable regulations. 	During construction	County—adopt a Condition of Approval; Operator—ensure compliance	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>PEIR Mitigation Measure AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures</p> <p>The project proponents will require all contractors to comply with the following requirements for all areas with active construction activities.</p> <ul style="list-style-type: none"> • During construction activities, all exposed surfaces will be watered at a frequency adequate to meet and maintain fugitive dust control requirements of all relevant air quality management entities. • All excavation, grading, and/or demolition activities will be suspended when average wind speeds exceed 20 mph, as measured at the Livermore Municipal Airport. • Wind breaks (e.g., trees, fences) will be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50% air porosity. • Vegetative ground cover (e.g., fast-germinating native grass seed) will be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. • If feasible and practicable, the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time will be limited. • Construction vehicles and machinery, including their tires, will be cleaned prior to leaving the construction area to remove vegetation and soil. Cleaning stations will be established at the perimeter of the construction area. • Site accesses to a distance of 100 feet from the paved road will be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel. • Sandbags or other erosion control measures will be installed to prevent silt runoff to public roadways from sites with a slope greater than 1%. • The idling time of diesel powered construction equipment will be minimized to 2 minutes. • The project will develop a plan demonstrating that the offroad equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20% NOX reduction and 45% PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions 	During construction	County—adopt a Condition of Approval; Operator—ensure compliance	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.</p> <ul style="list-style-type: none"> • Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings). • All construction equipment, diesel trucks, and generators will be equipped with BACT for emission reductions of NOX and PM. • All contractors will use equipment that meets ARB's most recent certification standard for offroad heavy duty diesel engines. 				
<p>2020 NEW Mitigation Measure AQ-2c: Reduce construction-related air pollutant emissions to below BAAQMD NOx thresholds</p> <p>The project proponents will ensure construction-related emissions do not exceed BAAQMD's construction NOX threshold of 54 pounds per day. In addition to implementing PEIR Mitigation Measures AQ-2a and AQ-2b, the project proponents will coordinate with BAAQMD (or the Clean Air Foundation) to purchase NOX credits to offset remaining NOX construction and operations emissions exceeding BAAQMD thresholds.</p> <p>The project proponents will track construction activity, estimate emissions, and enter into a construction mitigation contract with BAAQMD to offset NOX emissions that exceed BAAQMD NOX maximum daily threshold of 54 pounds per day.</p> <p>The maximum daily emissions will be calculated on a daily basis by determining total construction-related NOX emissions for each calendar day. BAAQMD will use the mitigation fees provided by the project proponents to implement emissions reduction efforts that offset project NOX emissions that exceed the BAAQMD threshold.</p> <p>This mitigation includes the following specific requirements:</p> <ul style="list-style-type: none"> • The project proponents will require construction contractors to provide daily construction activity monitoring data for all construction activities associated with the project to estimate actual construction emissions, including the effect of equipment emissions reduction measures. The project proponents will submit the daily construction activity monitoring data and an estimate of actual daily construction emissions to the lead agency and BAAQMD for review by the 15th day of each month for the 	During construction and until final mitigation fees are paid	County—track construction activity; BAAQMD/other governmental entity—ensure compliance with construction mitigation contract	County and BAAQMD/other government agency	Monitor compliance with Construction Mitigation Contract

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>prior construction month. The lead agency will examine the construction and operational activity monitoring to ensure it is representative, and BAAQMD will examine the emissions estimate to ensure it is calculated properly.</p> <ul style="list-style-type: none"> • After acceptance of the emissions estimates by BAAQMD for the prior month, the project proponents will submit mitigation fees to BAAQMD to fund offsets for the portion of daily emissions that exceed the maximum daily NOX threshold. The mitigation fees will be based on the mitigation contract with BAAQMD (see discussion below) but will not exceed the emissions-reduction project cost-effectiveness limit set for the Carl Moyer Program for the year in which mitigation fees are paid. The current Carl Moyer Program cost-effectiveness limit is \$30,000 per weighted ton of criteria pollutants (NOX + ROG + [20*PM]). An administrative fee of 5% will be paid by the project proponents to BAAQMD to implement the program. • The mitigation fees will be used by BAAQMD to fund projects that are eligible for funding under the Carl Moyer Program guidelines or other BAAQMD emissions-reduction incentive programs that meet the Carl Moyer Program cost-effectiveness threshold and are real, surplus, quantifiable, and enforceable. • The project proponents will enter into a mitigation contract with BAAQMD for the emissions-reduction incentive program. The mitigation contract will include the following: <ul style="list-style-type: none"> ○ Identification of appropriate offsite mitigation fees required for the project. ○ Timing for submission of mitigation fees. ○ Processing of mitigation fees paid by the project proponents. ○ Verification of emissions estimates submitted by the project proponents. ○ Verification that offsite fees are applied to appropriate mitigation programs within the SFBAAB. • The mitigation fees will be submitted within 4 weeks of BAAQMD acceptance of an emissions estimate provided by the project proponents showing that the maximum daily NOX threshold was exceeded (when measured on a daily basis). 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
Biological Resources				
<p>2020 Updated PEIR Mitigation Measure BIO-1a: Conduct surveys to determine the presence or absence of special-status plant species</p> <p>The project proponent will conduct surveys for the special-status plant species within and adjacent to all project sites. All surveys will be conducted by qualified biologists in accordance with the appropriate protocols.</p> <p>Special-status plant surveys will be conducted in accordance with <i>Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities</i> (California Department of Fish and Wildlife 2018) during the season that special-status plant species would be evident and identifiable—i.e., during their blooming season. No more than 3 years prior to ground-disturbing repowering activities and during the appropriate identification periods for special-status plants (Table 3.4-2), a qualified biologist (as determined by Alameda County) will conduct field surveys within proposed construction areas, and the immediately adjacent areas to determine the presence of habitat for special-status plant species. The project proponent will submit a report documenting the survey results to Alameda County for review and approval prior to conducting any repowering activities. The report will include the location and description of all proposed work areas, the location and description of all suitable habitat for special-status plant species, and the location and description of other sensitive habitats (e.g., vernal pools, wetlands, riparian areas). Additionally, the report will outline where additional species and/or habitat-specific mitigation measures are required. This report will provide the basis for any applicable permit applications where incidental take of listed species may occur.</p>	Within 3 years prior to site disturbance	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>2020 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species</p> <p>The project proponent will ensure that the following BMPs, in accordance with practices established in the EACCS, will be incorporated into the final project design and construction documents.</p> <ul style="list-style-type: none"> Employees and contractors performing ground-disturbing activities, including construction and maintenance activities will receive environmental sensitivity training. Training will include review of environmental laws, mitigation measures, permit conditions, and other requirements that must be followed by all personnel to reduce or avoid effects on special-status species and sensitive habitats during construction activities. 	Prior to and during all construction activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<ul style="list-style-type: none"> Environmental tailboard trainings will take place on an as-needed basis in the field. These trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during construction and maintenance activities. Directors, managers, superintendents, and the crew leaders will be responsible for ensuring that crewmembers comply with the guidelines. Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable. Off-road vehicle travel outside the project footprint will be avoided and minimized to the extent possible within the project footprint. Material will be stockpiled only in areas that do not support special-status species or sensitive habitats. Grading will be restricted to the minimum area necessary. Prior to ground-disturbing activities in sensitive habitats, project construction boundaries and access areas will be flagged and temporarily fenced during construction to reduce the potential for vehicles and equipment to stray into adjacent habitats. Vehicles or equipment will not be refueled within 100 feet of a wetland, stream, or other waterway unless a bermed and lined refueling area (i.e., a created berm made of sandbags or other removable material) is constructed. Erosion control measures will be implemented to reduce sedimentation in nearby aquatic habitat when activities are the source of potential erosion. Plastic monofilament netting (erosion control matting) or similar material containing netting will not be used at the project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds. Significant earth moving-activities will not be conducted in riparian areas within 24 hours of predicted storms or after major storms (defined as 1-inch of rain or more). The following will not be allowed at or near work sites for project activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations). 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>PEIR Mitigation Measure BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones</p> <p>Where surveys determine that a special-status plant species is present in or adjacent to a project site, direct and indirect impacts of the project on the species will be avoided through the establishment of activity exclusion zones, within which no ground-disturbing activities will take place, including construction of new facilities, construction staging, or other temporary work areas. Activity exclusion zones for special-status plant species will be established around each occupied habitat site, the boundaries of which will be clearly marked with standard orange plastic construction exclusion fencing or its equivalent. The establishment of activity exclusion zones will not be required if no construction-related disturbances will occur within 250 feet of the occupied habitat. The size of activity exclusion zones may be reduced through consultation with a qualified biologist and with concurrence from CDFW based on site-specific conditions.</p>	Prior to and during all site disturbance	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>2020 Updated PEIR Mitigation Measure BIO-1d: Compensate for impacts on special-status plant species</p> <p>The project proponent will avoid or minimize temporary and permanent impacts on special-status plants that occur on the project site and will compensate for impacts on special-status plant species. Although all impacts on large-flowered fiddleneck, diamond-petaled California poppy, and caper-fruited tropidocarpum will be avoided, impacts on other special-status plant species will be avoided to the extent feasible, and any unavoidable impacts will be addressed through compensatory mitigation.</p> <p>Where avoidance of impacts on a special-status plant species is infeasible, loss of individuals or occupied habitat of a special-status plant species occurrence will be compensated for through the acquisition, protection, and subsequent management in perpetuity of other existing occurrences at a minimum 2:1 ratio (occurrences preserved:occurrences impacted). For focal species identified in the EACCS (San Joaquin spearscale, big tarplant, Congdon's tarplant, palmate-bracted bird's-beak, Livermore Valley tarplant, and recurved larkspur), loss of individuals and occupied habitat will be compensated at 5:1, consistent with the EACCS. The project proponent will provide detailed information to the County and CDFW on the location of the preserved occurrences, quality of the preserved habitat, feasibility of protecting and managing the areas in-perpetuity, responsibility parties, and other pertinent information. The preserved habitat will be confirmed to support populations of the impacted species and will be preserved in perpetuity via deed restriction, establishment of a conservation easement, or similar preservation</p>	Prior to and during all site disturbance; provide compensation as required by permit term	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
mechanism. A qualified botanist or plant ecologist will prepare a preservation plan or long-term management plan for the site containing at a minimum: a monitoring plan and performance criteria for the preserved plant population; a description of remedial measures to be performed in the event that performance criteria are not met; a description of maintenance activities to be conducted on the site, including weed control, trash removal, irrigation, and control of herbivory by livestock and wildlife; and an adequate funding mechanism to ensure long-term management of the preserved habitat. If suitable occurrences of a special-status plant species are not available for preservation, then the project will be redesigned to remove features that would result in impacts on that species.				
<p>PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas</p> <p>The project proponents will retain a qualified biologist (as determined by Alameda County) to conduct periodic monitoring of decommissioning, repowering, and reclamation activities that occur adjacent to sensitive biological resources (e.g., special-status species, sensitive vegetation communities, wetlands). Monitoring will occur during initial ground disturbance where sensitive biological resources are present and weekly thereafter or as determined by the County in coordination with a qualified biologist. The biologist will assist the crew, as needed, to comply with all project implementation restrictions and guidelines. In addition, the biologist will be responsible for ensuring that the project proponent or its contractors maintain exclusion areas adjacent to sensitive biological resources, and for documenting compliance with all biological resource–related mitigation measures.</p>	During all site disturbance	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure BIO-2: Prevent introduction, spread, and establishment of invasive plant species</p> <p>To avoid and minimize the introduction and spread of invasive nonnative plant species, the project proponent will implement the following BMPs.</p> <ul style="list-style-type: none"> • Construction vehicles and machinery will be cleaned prior to entering the construction area. Cleaning stations will be established at the perimeter of the construction area along all construction routes or immediately offsite. • Vehicles will be washed only at approved areas. No washing of vehicles will occur at job sites. • To discourage the introduction and establishment of invasive plant species, seed mixtures and straw used within natural vegetation will be 	During all site disturbance	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>either rice straw or weed-free straw, as allowed by state and federal regulation of stormwater runoff.</p> <p>In addition, the project proponent will prepare and implement erosion and sediment control plans to control short-term and long-term erosion and sedimentation effects and to restore soils and vegetation in areas affected by construction activities (2020 Updated PEIR Mitigation Measure BIO-1b). Prior to initiating any construction activities that will result in temporary impacts on natural communities, a restoration and monitoring plan will be developed for temporarily affected habitats in each project area (PEIR Mitigation Measure BIO-5c). Restoration and monitoring plans will be submitted to the County and CDFW for approval. These plans will include methods for restoring soil conditions and revegetating disturbed areas, seed mixes, monitoring and maintenance schedules, adaptive management strategies, reporting requirements, and success criteria. Following completion of project construction, the project proponents will implement the revegetation plans to restore areas disturbed by project activities to a condition of equal or greater habitat function than occurred prior to the disturbance.</p>				
<p>PEIR Mitigation Measure BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species</p> <p>No more than 3 years prior to ground-disturbing repowering activities, a qualified biologist (as determined by Alameda County) will conduct field surveys within decommissioning, repowering, and restoration work areas and their immediate surroundings to determine the presence of habitat for special-status wildlife species. The project proponent will submit a report documenting the survey results to Alameda County for review prior to conducting any repowering activities. The report will include the location and description of all proposed work areas, the location and description of all suitable habitat for special-status wildlife species, and the location and description of other sensitive habitats (e.g., vernal pools, wetlands, riparian areas). Additionally, the report will outline where additional species- and/or habitat-specific mitigation measures are required. This report may provide the basis for any applicable permit applications where incidental take may occur.</p>	Prior to and during all site disturbance	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure BIO-3b: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-foot hygrotus diving beetle</p> <p>Where suitable habitat for listed vernal pool branchiopods and curved-foot</p>	During construction and operation	County—adopt a Condition of Approval; Operator—	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>hygrotus diving beetle are identified within 250 feet (or another distance as determined by a qualified biologist based on topography and other site conditions) of proposed work areas, the following measures will be implemented to ensure that the repowering projects do not have adverse impacts on listed vernal pool branchiopods or curved-foot hygrotus diving beetle. Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., ESA incidental take permit).</p> <ul style="list-style-type: none"> • Avoid all direct impacts on sandstone rock outcrop vernal pools. • Ground disturbance will be avoided from the first day of the first significant rain (1 inch or more) until June 1, or until pools remain dry for 72 hours and no significant rain is forecast on the day of such ground disturbance. • If vernal pools, clay flats, alkaline pools, ephemeral stock tanks (or ponds), sandstone pools, or roadside ditches are present within 250 feet of the work area (or another appropriate distance as determined by a qualified biologist on the basis of topography and other site conditions), the biologist will stake and flag an exclusion zone prior to construction activities. The width of the exclusion zone will be based on site conditions and will be the maximum practicable distance that ensures protection of the feature from direct and indirect effects of the project. Exclusion zones will be established around features whether they are wet or dry at the time. The exclusion zone will be fenced with orange construction zone and erosion control fencing (to be installed by construction crew). • No herbicide will be applied within 100 feet of exclusion zones, except when applied to cut stumps or frilled stems or injected into stems. No broadcast applications will be allowed. • Avoid modifying or changing the hydrology of aquatic habitats. • Minimize the work area for stream crossings and conduct work during the dry season (June 1 through the first significant rain of the fall/winter). • Install utility collection lines across perennial creeks by boring under the creek. <p>Where impacts cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the EACCS. In the event that an incidental take permit is required, compensatory mitigation will be undertaken in accordance with the terms of the permit in consultation with USFWS.</p>		implement		

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>PEIR Mitigation Measure BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle</p> <p>If it is determined through preconstruction surveys conducted pursuant to Mitigation Measure BIO-3a that elderberry shrubs are present within proposed work areas or within 100 feet of these areas, the following measures will be implemented to ensure that the proposed project does not have a significant impact on valley elderberry longhorn beetle.</p> <ul style="list-style-type: none"> • Avoid removal of elderberry shrubs. • Elderberry shrubs/clusters within 100 feet of the construction area that will not be removed will be protected during construction. A qualified biologist (i.e., with elderberry/species experience) will mark the elderberry shrubs and clusters that will be protected during construction. Orange construction barrier fencing will be placed at the edge of the buffer areas. The buffer area distances will be proposed by the biologist and approved by USFWS (if required by project permits). No construction activities will be permitted within the buffer zone other than those activities necessary to erect the fencing. Signs will be posted every 50 feet along the perimeter of the buffer area fencing. The signs will contain the following information: This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment. • Buffer area fences around elderberry shrubs will be inspected weekly by a qualified biological monitor during ground-disturbing activities and monthly after ground-disturbing activities until project construction is complete or until the fences are removed, as approved by the biological monitor and the resident engineer. The biological monitor will be responsible for ensuring that the contractor maintains the buffer area fences around elderberry shrubs throughout construction. Biological inspection reports will be provided to the project proponent and USFWS (if required by project permits). 	During all site disturbance	County—adopt a condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>2020 Updated PEIR Mitigation Measure BIO-4b: Compensate for direct and indirect effects on valley elderberry longhorn beetle</p> <p>If elderberry shrubs cannot be avoided and protected as outlined in PEIR Mitigation Measure BIO-4a, the project proponent will obtain an incidental take permit from USFWS and compensate for direct impacts on any elderberry shrubs</p>	According to terms through consultation with USFWS	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>(i.e., removed or trimmed). Surveys of elderberry shrubs to be transplanted will be conducted by a qualified biologist prior to transplantation or trimming. Surveys will be conducted in accordance with the <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle</i> (U.S. Fish and Wildlife Service 2017) and will document the following: (1) presence/absence of exit holes; (2) evaluation of riparian/ non-riparian habitat; and (3) suitability of shrubs to support valley elderberry longhorn beetle. Survey results and an analysis of the number of mitigation units that would be required based on the survey results will be submitted to USFWS in a biological assessment or an HCP. After receipt of an incidental take permit and before construction begins, the project proponent will compensate for direct effects on elderberry shrubs by transplanting shrubs that cannot be avoided to a USFWS-approved conservation area and planting additional elderberry shrubs and associated riparian habitat at a USFWS-approved conservation area. Any elderberry shrub containing stem(s) measuring 1 inch or more in diameter at ground level that is deemed suitable habitat and is adversely affected (i.e., trimmed, transplanted, or destroyed) will be mitigated by planting replacement habitat (i.e., elderberry shrub seedlings and associate plant species), in the conservation area, at a ratio ranging from 1:1 to 3:1 (mitigation unit to affected habitat). The number of mitigation units (1 unit = 0.041 acre) to be planted as replacement habitat are determined by either the acreage of habitat (elderberry shrub and associated riparian) removed or number of shrubs trimmed, as well as the presence or absence of exit holes and whether the shrub lies in a riparian or non-riparian habitat. Stock of either seedlings or cuttings would be obtained from local sources.</p> <p>At the discretion of USFWS, shrubs that are unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation. In cases where transplantation is not possible, mitigation ratios could be increased to offset the additional habitat loss.</p> <p>The relocation of the elderberry shrubs will be conducted according to USFWS-approved procedures outlined in the <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle</i> (U.S. Fish and Wildlife Service 2017), or the most current USFWS guidance. If possible, elderberry shrubs within the project construction area that cannot be avoided will be trans-planted during the plant's dormant phase (November through the first 2 weeks of February). A qualified biological monitor will remain onsite while the shrubs are being transplanted.</p> <p>Evidence of valley elderberry longhorn beetle occurrence in the conservation area,</p>				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
the condition of the elderberry shrubs in the conservation area, and the general condition of the conservation area itself will be monitored. Monitoring protocols and reporting timelines will be determined as part of the endangered species coordination/consultation with USFWS for the project. The project proponent will be responsible for funding and providing monitoring reports to USFWS in each of the years in which a monitoring report is required. As specified in the <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle</i> (U.S. Fish and Wildlife Service 2017), the report will include information on presence of exit holes, evaluation of success criteria, summary of weed control and site protection, assessment of threats to valley elderberry longhorn beetle on the site, and photo documentation of current habitat condition. Mitigation credits may be purchased at a USFWS-approved mitigation bank in lieu of the above monitoring requirements, as determined during coordination/consultation with USFWS for the project.				
<p>2020 Updated PEIR Mitigation Measure BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians</p> <p>The project proponent will ensure that BMPs and other appropriate measures, in accordance with measures developed for the EACCS, be incorporated into the appropriate design and construction documents. <i>Implementation of some of these measures will require that the project proponent obtain incidental take permits from USFWS (California red-legged frog and California tiger salamander) and from CDFW (California tiger salamander only) before construction begins.</i> Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., ESA or CESA incidental take authorization). The applicant will comply with the State Water Board NPDES construction general requirements for stormwater.</p> <ul style="list-style-type: none"> • Ground-disturbing activities will be limited to dry weather between April 15 and October 31. No ground-disturbing work will occur during wet weather. Wet weather is defined as when there has been 0.25 inch of rain in a 24-hour period. Ground disturbing activities halted due to wet weather may resume when precipitation ceases and the National Weather Service 72-hour weather forecast indicates a 30% or less chance of precipitation. No ground-disturbing work will occur during a dry-out period of 48 hours after the above-referenced wet weather. • Where applicable, barrier fencing will be installed around the worksite to prevent amphibians from entering the work area. Barrier fencing will be removed within 72 hours of completion of work. The need and location of barrier fencing will be identified by a qualified biologist in cooperation 	Prior to and during construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>with the County and/or any applicable resource agencies with the purpose of protecting dispersing special-status amphibians.</p> <ul style="list-style-type: none"> • Before construction begins, a qualified biologist will locate appropriate relocation areas and prepare a relocation plan for special-status amphibians that may need to be moved during construction. The proponent will submit this plan to USFWS and CDFW for review a minimum of 2 weeks prior to the start of construction. • A qualified biologist will conduct preconstruction surveys (i.e., visual surveys of the ground surface and areas within burrows visible from the surface) immediately prior to ground-disturbing activities (including equipment staging, vegetation removal, grading). The biologist will survey the work area and all suitable habitats within 300 feet of the work area. If individuals (including adults, juveniles, larvae, or eggs) are found, work will not begin until USFWS and/or CDFW is contacted to determine if moving these life-stages is appropriate. If relocation is deemed necessary, it will be conducted in accordance with the relocation plan. Incidental take permits are required for relocation of California tiger salamander (USFWS and CDFW) and California red-legged frog (USFWS). Relocation of western spadefoot toad requires a letter of permission or permit from CDFW authorizing this activity. • No monofilament plastic will be used for erosion control. • All project activity will terminate 30 minutes before sunset and will not resume until 30 minutes after sunrise during the migration/active season from November 1 to June 15. Sunrise and sunset times are established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area where the project is located. • Vehicles will not exceed a speed limit of 15 mph on unpaved roads within natural land cover types, or during offroad travel. • Trenches or holes more than 6 inches deep will be provided with one or more escape ramps constructed of earth fill or wooden planks and will be inspected by a qualified biologist prior to being filled. Any such features that are left open overnight will be searched each day prior to construction activities to ensure no covered species are trapped. Work will not continue until trapped animals have moved out of open trenches. • Work crews or the onsite biological monitor will inspect open trenches, pits, and under construction equipment and material left onsite in the 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>morning and evening to look for amphibians that may have become trapped or are seeking refuge.</p> <ul style="list-style-type: none"> If special-status amphibians are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist who is USFWS and/or CDFW-approved under a biological opinion and/or incidental take permit for the specific project, will trap and move special-status amphibians in accordance with the relocation plan. Relocation of western spadefoot toad requires a separate letter of permission or permit from CDFW authorizing this activity. 				
<p>PEIR Mitigation Measure BIO-5b: Compensate for loss of habitat for special-status amphibians</p> <p>Where impacts on aquatic and upland habitat for special-status amphibians cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the EACCS. In the event that take authorization is required, compensatory mitigation will be undertaken in accordance with the terms of the authorization in consultation with USFWS and/or CDFW.</p>	Prior to all construction activities; compensation paid according to terms of permit	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands</p> <p>Within 30 days prior to any ground disturbance, a qualified biologist will prepare a Grassland Restoration Plan in coordination with CDFW and subject to CDFW approval, to ensure that temporarily disturbed annual grasslands and areas planned for the removal of permanent roads and turbine pad areas are restored to preproject conditions. The Grassland Restoration Plan will include but not be limited to the following measures.</p> <ul style="list-style-type: none"> Gravel will be removed from areas proposed for grassland restoration. To the maximum extent feasible, topsoil will be salvaged from within onsite work areas prior to construction. Imported fill soils will be limited to weed-free topsoil similar in texture, chemical composition, and pH to soils found at the restoration site. Where appropriate, restoration areas will be seeded (hydroseeding is acceptable) to ensure erosion control. Seed mixes will be tailored to closely match that of reference site(s) within the program area and should include native or naturalized, noninvasive species sourced within the project area or from the nearest available location. Reclaimed roads will be restored in such a way as to permanently prevent 	Prior to all site disturbance and up to 3 years after construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
vehicular travel. The plan will include a requirement to monitor restoration areas annually (between March and October) for up to 3 years following the year of restoration. The restoration will be considered successful when the percent cover for restored areas is 70% absolute cover of the planted/seeded species compared to the percent absolute cover of nearby reference sites. No more than 5% relative cover of the vegetation in the restoration areas will consist of invasive plant species rated as "high" in California Invasive Plant Council's California Invasive Plant Inventory Database (http://www.cal-ipc.org). Remedial measures prescribed in the plan will include supplemental seeding, weed control, and other actions as determined necessary to achieve the long-term success criteria. Monitoring may be extended, if necessary, to achieve the success criteria or if drought conditions preclude restoration success. Other performance standards may also be required as they relate to special-status species habitat; these will be identified in coordination with CDFW and included in the plan. The project proponent will provide evidence that CDFW has reviewed and approved the Grassland Restoration Plan. Additionally, the project proponent will provide annual monitoring reports to the County by January 31 of each year, summarizing the monitoring results and any remedial measures implemented (if any are necessary) during the previous year.				
PEIR Mitigation Measure BIO-6: Conduct preconstruction surveys for western pond turtle and monitor construction activities if turtles are observed If it is determined through preconstruction surveys conducted pursuant to PEIR Mitigation Measure BIO-3a that suitable aquatic or upland habitat for western pond turtle is present within proposed work areas, the following measures, consistent with measures developed for the EACCS, will be implemented to ensure that the proposed project does not have a significant impact on western pond turtle. <ul style="list-style-type: none"> One week before and within 24 hours of beginning work in suitable aquatic habitat, a qualified biologist (one who is familiar with different species of turtles) will conduct surveys for western pond turtle. The surveys should be timed to coincide with the time of day and year when turtles are most likely to be active (during the cooler part of the day between 8 a.m. and 12 p.m. during spring and summer). Prior to conducting the surveys, the biologist should locate the microhabitats for turtle basking (logs, rocks, brush thickets) and determine a location to quietly observe turtles. Each survey should include a 30-minute wait time after arriving onsite to allow startled turtles to return to open basking areas. The survey should consist of a minimum 15-minute observation 	Prior to and during all site disturbance	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>period for each area where turtles could be observed.</p> <ul style="list-style-type: none"> If western pond turtles are observed during either survey, a biological monitor will be present during construction activities in the aquatic habitat where the turtle was observed. The biological monitor also will be mindful of suitable nesting and overwintering areas in proximity to suitable aquatic habitat and will periodically inspect these areas for nests and turtles. If one or more western pond turtles are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist will remove and relocate the turtle to appropriate aquatic habitat outside and away from the construction area. Relocation of western pond turtle requires a letter from CDFW authorizing this activity. 				
<p>2020 Updated PEIR Mitigation Measure BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles</p> <p>Where suitable habitat for Blainville's horned lizard, California glossy snake, Alameda whip-snake, or San Joaquin coachwhip is identified in proposed work areas, all project proponents will ensure that BMPs and other appropriate measures, in accordance with measures developed for the EACCS, be incorporated into the appropriate design and construction documents. Implementation of some of these measures may require that the project proponent obtain incidental take permits from USFWS and CDFW (Alameda whipsnake) before construction begins. Additional conservation measures or conditions of approval may be required in applicable project permits (i.e., ESA incidental take permit).</p> <ul style="list-style-type: none"> A qualified biologist will conduct preconstruction surveys immediately prior to ground-disturbing activities (e.g., equipment staging, vegetation removal, grading) associated with the program. If any Blainville's horned lizards, California glossy snake, Alameda whipsnakes, or San Joaquin coachwhips are found, work will not begin until they are moved out of the work area to a USFWS- and/ or CDFW-approved relocation site. Incidental take permits from USFWS and CDFW are required for relocation of Alameda whipsnake. Relocation of Blainville's horned lizard, California glossy snake, and San Joaquin coachwhip requires a letter from CDFW authorizing this activity. No monofilament plastic will be used for erosion control. Where applicable, barrier fencing will be used to exclude Blainville's horned lizard, California glossy snake, Alameda whipsnake, and San 	During project design, construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>Joaquin coachwhip. Barrier fencing will be removed within 72 hours of completion of work.</p> <ul style="list-style-type: none"> • Work crews or an onsite biological monitor will inspect open trenches and pits and under construction equipment and materials left onsite for special-status reptiles each morning and evening during construction. • Ground disturbance in suitable habitat will be minimized. • Vegetation within the proposed work area will be removed prior to grading. Prior to clearing and grubbing operations, a qualified biologist will clearly mark vegetation within the work area that will be avoided. Vegetation outside the work area will not be removed. Where possible hand tools (e.g., trimmer, chain saw) will be used to trim or remove vegetation. All vegetation removal will be monitored by the qualified biologist to minimize impacts on special-status reptiles. • If special-status reptiles are found in the work area during construction and cannot or do not move offsite on their own, a qualified biologist who is USFWS- and/or CDFW-approved under an incidental take permit for the specific project will trap and move the animal(s) to a USFWS and/or CDFW approved relocation area. Incidental take permits from USFWS and CDFW are required for relocation of Alameda whipsnake. Relocation of Blainville's horned lizard, California glossy snake, and San Joaquin coachwhip requires a letter or permit from CDFW authorizing this activity. 				
<p>PEIR Mitigation Measure BIO-7b: Compensate for loss of habitat for special-status reptiles</p> <p>Where impacts on habitat for special-status reptiles cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the EACCS. In the event that incidental take permits are required for Alameda whipsnake, compensatory mitigation will be undertaken in accordance with the terms of permits in consultation with USFWS and CDFW.</p>	According to terms through consultation with CDFW and USFWS	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>2020 Updated PEIR Mitigation Measure BIO-8a: Implement measures to avoid and minimize potential construction-related impacts on special-status and non-special-status nesting birds and raptors</p> <p>Where suitable habitat is present for raptors within 1 mile (within 2 miles for golden eagles) and for tree/shrub- and ground-nesting migratory birds (non-raptors) within 50 feet (1,300 feet for tricolored blackbird) of proposed work areas, the following measures will be implemented to ensure that the proposed</p>	During construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>project does not have a significant impact on nesting special-status and non-special-status birds.</p> <ul style="list-style-type: none"> Remove suitable nesting habitat (shrubs and trees) during the non-breeding season (September 1–January 31) for nesting birds. To the extent feasible, avoid construction activities in or near suitable or occupied nesting habitat during the breeding season of birds (generally February 1–August 31). If construction activities (including vegetation removal, clearing, and grading) will occur during the nesting season for migratory birds, a qualified biologist will conduct a total of three preconstruction nesting bird and raptor surveys. The construction area and a 1-mile buffer will be surveyed for tree-nesting raptors (except for golden eagles as addressed below), a 500-foot buffer will be surveyed for northern harrier, and a 1,300-foot buffer will be surveyed for tricolored blackbird if potential tricolored blackbird nesting substrates are present (i.e., flooded, thorny, or spiny vegetation such as cattails, tules, willows, blackberries, thistles, or nettles), and a 50-foot buffer will be surveyed for all other bird species. The first survey will be conducted within the areas described above between 30-60 days prior to the start of construction to identify potential nesting habitat that could be used by special-status and non-special-status birds and raptors within the survey area and to document any nesting behavior or activity. A second survey will be conducted no less than 14 days prior to starting construction to verify current occupancy status of nesting birds and raptors. A final survey will be conducted immediately prior to initiating ground-disturbing activities within disturbance areas and appropriate species buffers. The final surveys may be phased on the project site depending on which areas/components of the project would begin ground-disturbing activities, so that they are conducted immediately prior to ground disturbing activities within a specific area. Surveys to locate eagle nests within 2 miles of construction will be conducted during the breeding season prior to construction. A 1-mile no-disturbance buffer will be implemented for construction activities to protect nesting eagles from disturbance. Through coordination with USFWS, the no-disturbance buffer may be reduced to 0.5 mile if construction activities are not within line-of-sight of the nest. If an active nest (other than golden eagle) is identified near a proposed work area and work cannot be conducted outside the nesting season 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
(February 1–August 31), a no-activity zone will be established around the nest by a qualified biologist in coordination with USFWS and/or CDFW. Fencing and/or flagging will be used to delineate the no-activity zone. To minimize the potential to affect the reproductive success of the nesting pair, the extent of the no-activity zone will be based on the distance of the activity to the nest, the type and extent of the proposed activity, the duration and timing of the activity, the sensitivity and habituation of the species, and the dissimilarity of the proposed activity to background activities. The no-activity zone will be large enough to avoid nest abandonment and will be between 50 feet and 1 mile from the nest, or as otherwise required by USFWS and/or CDFW.				
<p>2020 Updated PEIR Mitigation Measure BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl</p> <p>Where suitable habitat for western burrowing owl is in or within 500 feet of proposed work areas, the following measures will be implemented to avoid or minimize potential adverse impacts on burrowing owls.</p> <ul style="list-style-type: none"> To the maximum extent feasible (e.g., where the construction footprint can be modified), construction activities within 500 feet of active burrowing owl burrows will be avoided during the nesting season (February 1–August 31). A qualified biologist will conduct a total of three preconstruction take avoidance surveys for burrowing owl. The first pre-construction survey will be conducted between 30-60 days prior to the start of construction to identify potential nest sites and to determine current occupancy status. A second survey will be conducted no less than 14 days prior to starting construction to verify current occupancy status. A final survey will be conducted within 24 hours of initiating ground-disturbing activities, or phased as discussed above (2020 Updated PEIR Mitigation Measure BIO-8a). The survey area will encompass the work area and a 500-foot buffer around this area. If an active burrow is identified near a proposed work area and work cannot be conducted outside the nesting season (February 1–August 31), a no-activity zone will be established by a qualified biologist in coordination with CDFW. The no-activity zone will be large enough to avoid nest abandonment and will extend a minimum of 250 feet around the burrow. 	During construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<ul style="list-style-type: none"> • If burrowing owls are present at the site during the non-breeding season (September 1–January 31), a qualified biologist will establish a no-activity zone that extends a minimum of 150 feet around the burrow. • If the designated no-activity zone for either breeding or non-breeding burrowing owls cannot be established, a wildlife biologist experienced in burrowing owl behavior will evaluate site-specific conditions and, in coordination with CDFW, recommend a smaller buffer (if possible) and/or other measure that still minimizes disturbance of the owls (while allowing reproductive success during the breeding season). The site-specific buffer (and/or other measure) will consider the type and extent of the proposed activity occurring near the occupied burrow, the duration and timing of the activity, the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity to background activities. • If burrowing owls are present in the direct disturbance area and cannot be avoided during the non-breeding season (generally September 1 through January 31), burrowing owls may be excluded from burrows through the installation of one-way doors at burrow entrances. A burrowing owl exclusion plan, prepared by the project proponent, must be approved by CDFW prior to exclusion of owls. One-way doors (e.g., modified dryer vents or other CDFW approved method), which will be left in place for a minimum of 1 week and monitored daily to ensure that the owl(s) have left the burrow(s). Excavation of the burrow will be conducted using hand tools. During excavation of the burrow, a section of flexible plastic pipe (at least 3 inches in diameter) will be inserted into the burrow tunnel to maintain an escape route for any animals that may be inside the burrow. Owls will be excluded from their burrows as a last resort and only if other avoidance and minimization measures cannot be implemented. • Avoid destruction of unoccupied burrows outside the work area and place visible markers near burrows to ensure that they are not collapsed. • Conduct ongoing surveillance of the project site for burrowing owls during project activities. If additional owls are observed using burrows within 500 feet of construction, the onsite biological monitor will determine, in coordination with CDFW, if the owl(s) are or would be affected by construction activities and if additional exclusion zones are required. 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>PEIR Mitigation Measure BIO-9: Compensate for the permanent loss of occupied habitat for western burrowing owl</p> <p>If construction activities would result in the removal of occupied burrowing owl habitat (determined during preconstruction surveys described in 2020 Updated PEIR Mitigation Measure BIO-8b), this habitat loss will be mitigated by permanently protecting mitigation land through a conservation easement or by implementing alternative mitigation determined through consultation with CDFW as described in its Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game 2012:11–13). The project proponent will work with the CDFW to develop the compensation plan, which will be subject to County review and approval.</p>	According to terms through consultation with CDFW	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>2020 Updated PEIR Mitigation Measure BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger</p> <p>Where suitable habitat is present for San Joaquin kit fox and American badger in and adjacent to proposed work areas, the following measures, consistent with measures developed in the EACCS, will be implemented to ensure that proposed project does not have a significant impact on San Joaquin kit fox or American badger. Implementation of some of these measures will require that the Project proponent obtain incidental take permits from USFWS and CDFW (San Joaquin kit fox) before construction begins. Implementation of state and federal requirements contained in such authorization may constitute compliance with corresponding measures in the PEIR.</p> <ul style="list-style-type: none"> • To the maximum extent feasible, suitable dens for San Joaquin kit fox and American badger will be avoided. • All project proponents will retain qualified approved biologists (as determined by USFWS) to conduct a preconstruction survey for potential San Joaquin kit fox dens. Resumes of biologists will be submitted to USFWS for review and approval prior to the start of the survey. • Preconstruction surveys for American badgers will be conducted in conjunction with San Joaquin kit fox preconstruction surveys. • The preconstruction survey will be conducted no less than 14 days and no more than 30 days before the beginning of ground disturbance, or any activity likely to affect San Joaquin kit fox. The biologists will conduct den searches by systematically walking transects through the project area and a buffer area to be determined in coordination with USFWS and CDFW. 	Prior to and during construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>Transect distance should be based on the height of vegetation such that 100% visual coverage of the project area is achieved. If a potential or known den is found during the survey, the biologist will measure the size of the den, evaluate the shape of the den entrances, and note tracks, scat, prey remains, and recent excavations at the den site. The biologists will also determine the status of the dens and map the features. Dens will be classified in one of the following four den status categories defined by USFWS.</p> <ul style="list-style-type: none"> ○ Potential den: Any subterranean hole within the species' range that has entrances of appropriate dimensions and for which available evidence is sufficient to conclude that it is being used or has been used by a kit fox. Potential dens include (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, ground squirrel) that otherwise has appropriate characteristics for kit fox use; or an artificial structure that otherwise has appropriate characteristics for kit fox use. ○ Known den: Any existing natural den or artificial structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records; past or current radiotelemetry or spotlighting data; kit fox sign such as tracks, scat, and/or prey remains; or other reasonable proof that a given den is being or has been used by a kit fox (USFWS discourages use of the terms active and inactive when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly). ○ Known natal or pupping den: Any den that is used, or has been used at any time in the past, by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two; therefore, for purposes of this definition either term applies. 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<ul style="list-style-type: none"> Known atypical den: Any artificial structure that has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings. <p>Written results of the survey including the locations of any potential or known San Joaquin kit fox dens will be submitted to USFWS within 5 days following completion of the survey and prior to the start of ground disturbance or construction activities.</p> <ul style="list-style-type: none"> After preconstruction den searches and before the commencement of repowering activities, exclusion zones will be established as measured in a radius outward from the entrance or cluster of entrances of each den. Repowering activities will be prohibited or greatly restricted within these exclusion zones. Only essential vehicular operation on existing roads and foot traffic will be permitted. All other repowering activities, vehicle operation, material and equipment storage, and other surface-disturbing activities will be prohibited in the exclusion zones. Barrier fencing will be removed within 72 hours of completion of work. Exclusion zones will be established using the following parameters. <ul style="list-style-type: none"> Potential and atypical dens: A total of four or five flagged stakes will be placed 50 feet from the den entrance to identify the den location. Known den: Orange construction barrier fencing will be installed between the work area and the known den site at a minimum distance of 100 feet from the den. The fencing will be maintained until construction-related disturbances have ceased. At that time, all fencing will be removed to avoid attracting subsequent attention to the den. Natal/pupping den: USFWS will be contacted immediately if a natal or pupping den is discovered in or within 200 feet of the work area. Any occupied or potentially occupied badger den will be avoided by establishing an exclusion zone consistent with a San Joaquin kit fox potential burrow (i.e., four or five flagged stakes will be placed 50 feet from the den entrance). In cases where avoidance is not a reasonable alternative, limited destruction of potential San Joaquin kit fox dens may be allowed as follows. <ul style="list-style-type: none"> Natal/pupping dens: Natal or pupping dens that are occupied will not be destroyed until the adults and pups have vacated the dens and then only after consultation with USFWS. Removal of natal/pupping dens requires incidental take authorization from USFWS and CDFW. 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<ul style="list-style-type: none"> ○ Known dens: Known dens within the footprint of the activity must be monitored for 3 days with tracking medium or an infrared camera to determine current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use. If kit fox activity is observed during this period, the den will be monitored for at least 5 consecutive days from the time of observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged by partially plugging its entrance(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied will the den be excavated under the direction of a biologist. If the fox is still present after 5 or more consecutive days of monitoring, the den may be excavated when, in the judgment of the biologist, it is temporarily vacant, such as during the fox's normal foraging activities. Removal of known dens requires incidental take authorization from USFWS and CDFW. ○ Potential dens: If incidental take permits have been received (from USFWS and CDFW), potential dens can be removed (preferably by hand excavation) by biologist or under the supervision of a biologist without monitoring, unless other restrictions were issued with the incidental take permits. If no take authorizations have been issued, the potential dens will be monitored as if they are known dens. If any den was considered a potential den but was later determined during monitoring or destruction to be currently or previously used by kit foxes (e.g., kit fox sign is found inside), then all construction activities will cease and USFWS and CDFW will be notified immediately. ● Nighttime work will be minimized to the extent possible. The vehicular speed limit will be reduced to 10 miles per hour during nighttime work. ● Pipes, culverts, and similar materials greater than 4 inches in diameter will be stored so as to prevent wildlife species from using these as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved. ● A representative appointed by the project proponent will be the contact for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured, or entrapped kit fox. The representative will be identified during environmental sensitivity training (2020 Updated PEIR Mitigation Measure BIO-1b) and his/her name and phone number 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>will be provided to USFWS and CDFW. Upon such incident or finding, the representative will immediately contact USFWS and CDFW.</p> <ul style="list-style-type: none"> The Sacramento USFWS office and CDFW will be notified in writing within 3 working days of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, and location of the incident, and any other pertinent information. 				
<p>PEIR Mitigation Measure BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger</p> <p>Where permanent impacts on habitat for San Joaquin kit fox and American badger cannot be avoided or minimized, compensatory mitigation will be undertaken in accordance with mitigation ratios and requirements developed under the EACCS. In the event that incidental take permits are required for San Joaquin kit fox, compensatory mitigation will be undertaken in accordance with the terms of permits in consultation with USFWS and CDFW.</p>	According to terms of permits	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure BIO-11a: Prepare a project-specific avian protection plan</p> <p>All project proponents will prepare a project-specific avian protection plan (APP) to specify measures and protocols consistent with the program-level mitigation measures that address avian mortality. The project-specific APPs will include, at a minimum, the following components.</p> <ul style="list-style-type: none"> Information and methods used to site turbines to minimize risk. Documentation that appropriate turbine designs are being used. Documentation that avian-safe practices are being implemented on project infrastructure. Methods used to discourage prey for raptors. A detailed description of the postconstruction avian fatality monitoring methods to be used (consistent with the minimum requirements outlined in Mitigation Measure BIO-11g). Methods used to compensate for the loss of raptors (consistent with the requirements of 2020 Updated PEIR Mitigation Measure BIO-11h). <p>Each project applicant will prepare and submit a draft project-specific APP to the County. The draft APP will be reviewed by the technical advisory committee (TAC) for consistency and the inclusion of appropriate mitigation measures that are consistent with the PEIR and recommended for approval by the County. Each project applicant must have an approved Final APP prior to commercial operation.</p>	During project design and prior to construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>2020 Updated PEIR Mitigation Measure BIO-11b: Site turbines to minimize potential mortality of birds</p> <p>Consistent with PEIR Mitigation Measure BIO-11b, and in recognition that focused siting of turbines using analyses of landscape features and location-specific bird use and behavior data to identify locations with reduced collision risk may result in reduced fatalities (Smallwood et al. 2009), project proponents will conduct a siting process and prepare a micro-siting analysis to select turbine locations to minimize potential impacts on bird and bat species. The proponent has utilized existing data and collected new site-specific data as part of the siting analysis.</p> <p>The project proponent will utilize currently available guidelines published by the Alameda County Scientific Review Committee (SRC) for siting wind turbines (Alameda County SRC 2010) and/or other currently available research or guidelines to conduct siting analysis. Additionally, project proponents will use the results of previous siting efforts to inform the analysis and siting methods as appropriate such that the science of siting continues to be advanced. All project proponents will collect field data that identify or confirm the behavior, utilization, and distribution patterns of affected avian and bat species prior to the installation of turbines. Project proponents will collect and utilize available existing information, including but not necessarily limited to: siting reports and monitoring data from previously installed projects; published use and abundance studies and reports; topographic features known to increase collision risk (trees, riparian areas, water bodies, and wetlands); and changes to the landscape caused by grading for the placement of turbine foundations.</p> <p>Project proponents will also collect and utilize additional field data as necessary to inform the siting analysis for golden eagle. As required in 2020 Updated Mitigation Measure BIO-8a, surveys will be conducted to locate golden eagle nests within 2 miles of proposed project areas. Siting of turbines within 2 miles of an active or alternative golden eagle nest or active golden eagle territory will be based on a site-specific analysis of risk based on the estimated eagle territories, conducted in consultation with USFWS.</p> <p>Project proponents will utilize methods (i.e., computer models) to identify dangerous locations for birds and bats based on site-specific risk factors informed by the information discussed above. The project proponents will compile the results of the siting analyses for each turbine and document these in the project-level APP, along with the specific location of each turbine. Consistent with past practice for previously approved repowering projects, the proponent shall submit the siting analysis for review and recommendations to the Alameda County</p>	During project design and construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
Wind Repowering/Avian Protection Technical Advisory Committee, which includes representatives of the CDFW and the USFWS, prior to applying for any building or grading permit. The County planning director shall have the authority to approve or deny such permits on the basis of the siting analysis and the recommendations of the Technical Advisory Committee.				
<p>PEIR Mitigation Measure BIO-11c: Use turbine designs that reduce avian impacts</p> <p>Use of turbines with certain characteristics is believed to reduce the collision risk for avian species. Project proponents will implement the design-related measures listed below.</p> <ul style="list-style-type: none"> • Turbine designs will be selected that have been shown or that are suspected to reduce avian fatalities, based on the height, color, configuration, or other features of the turbines. • Turbine design will limit or eliminate perching opportunities. Designs will include a tubular tower with internal ladders; external catwalks, railings, or ladders will be prohibited. • Turbine design will limit or eliminate nesting or roosting opportunities. Openings on turbines will be covered to prevent cavity-nesting species from nesting in the turbines. • Lighting will be installed on the fewest number of turbines allowed by Federal Aviation Administration (FAA) regulations, and all pilot warning lights will fire synchronously. Turbine lighting will employ only red or dual red-and-white strobe, strobe-like, or flashing lights (U.S. Fish and Wildlife Service 2012a). All lighting on turbines will be operated at the minimum allowable intensity, flashing frequency, and quantity allowed by FAA (Gehring et al. 2009; U.S. Fish and Wildlife Service 2012a). Duration between flashes will be the longest allowable by the FAA. 	During project design, construction, and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure</p> <p>The project proponent will apply the following measures when designing and siting turbine-related infrastructure. These measures will reduce the risk of bird electrocution and collision.</p> <ul style="list-style-type: none"> • Permanent meteorological stations will avoid use of guy wires. If it is not possible to avoid using guy wires, the wires will be at least 4/0 gauge to 	During project design, construction, and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>ensure visibility and will be fitted with bird deterrent devices.</p> <ul style="list-style-type: none"> All permanent meteorological towers will be unlit unless lighting is required by FAA. If lighting is required, it will be operated at the minimum allowable intensity, flashing frequency, and quantity allowed by FAA. To the extent possible, all power lines will be placed underground. However, lines may be placed aboveground immediately prior to entering the substation. All aboveground lines will be fitted with bird flight diverters or visibility enhancement devices (e.g., spiral damping devices). When lines cannot be placed underground, appropriate avian protection designs must be employed. As a minimum requirement, the collection system will conform with the most current edition of the Avian Power Line Interaction Committee guidelines to prevent electrocutions. Lighting will be focused downward and minimized to limit skyward illumination. Sodium vapor lamps and spotlights will not be used at any facility (e.g., laydown areas, substations) except when emergency maintenance is needed. Lighting at collection facilities, including substations, will be minimized using downcast lighting and motion-detection devices. The use of high-intensity lighting; steady-burning or bright lights such as sodium vapor, quartz, or halogen; or other bright spotlights will be minimized. Where lighting is required it will be designed for the minimum intensity required for safe operation of the facility. Green or blue lighting will be used in place of red or white lighting. 				
<p>PEIR Mitigation Measure BIO-11e: Retrofit existing infrastructure to minimize risk to raptors</p> <p>Any existing power lines in a specific project area that are owned by the wind project operator and that are associated with electrocution of an eagle or other raptor will be retrofitted within 30 days to make them raptor-safe according to Avian Power Line Interaction Committee guidelines. All other existing structures to remain in a project area during repowering will be retrofitted, as feasible, according to specifications of PEIR Mitigation Measure BIO-11c prior to repowered turbine operation.</p>	During operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure BIO-11f: Discourage prey for raptors</p> <p>The project proponent will apply the following measures when designing and siting turbine-related infrastructure. These measures are intended to minimize opportunities for fossorial mammals to become established and thereby create a prey base that could become an attractant for raptors.</p>	During construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<ul style="list-style-type: none"> Rodenticide will not be utilized on the project site to avoid the risk of raptors scavenging the remains of poisoned animals. Boulders (rocks more than 12 inches in diameter) excavated during project construction may be placed in aboveground piles in the project area so long as they are more than 500 meters (1,640 feet) from any turbine. Existing rock piles created during construction of first- and second-generation turbines will also be moved at least 500 meters (1,640 feet) from turbines. Gravel will be placed around each tower foundation to discourage small mammals from burrowing near turbines. 				
<p>2020 Updated PEIR Mitigation Measure BIO-11g: Implement postconstruction avian fatality monitoring for all repowering projects</p> <p>A postconstruction monitoring program will be conducted at each repowering project for a minimum of 3 years beginning on the commercial operation date (COD) of the project. Monitoring may continue beyond 3 years if construction is completed in phases. Moreover, if the results of the first 3 years indicate that baseline fatality rates (i.e., non-repowered fatality rates) are exceeded, monitoring will be extended until the average annual fatality rate has dropped below baseline fatality rates for 2 years, and to assess the effectiveness of adaptive management measures specified in Mitigation Measure BIO-11i. An additional 2 years of monitoring will be implemented at year 10 (i.e., the tenth anniversary of the COD). Project proponents will provide access to qualified third parties authorized by the County to conduct any additional monitoring after the initial 3-year monitoring period has expired and before and after the additional 2-year monitoring period, provided that such additional monitoring utilizes scientifically valid monitoring protocols.</p> <p>A TAC will be formed to oversee the monitoring program and to advise the County on adaptive management measures that may be necessary if fatality rates substantially exceed those predicted for the project (as described below in Mitigation Measure BIO-11i). The TAC will have a standing meeting, which will be open to the public, every 6 months to review monitoring reports produced by operators in the program area. In these meetings, the TAC will discuss any issues raised by the monitoring reports and recommend to the County next steps to address issues, including scheduling additional meetings, if necessary.</p> <p>The TAC will comprise representatives from the County (including one or more technical consultants, such as a biostatistician, an avian biologist, and a bat</p>	During operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>biologist), and wildlife agencies (CDFW, USFWS). Additional TAC members may also be considered (e.g., a representative from Audubon, a landowner in the program area, a representative of the operators) at the discretion of the County. The TAC will be a voluntary and advisory group that will provide guidance to the County Planning Department. To maintain transparency with the public, all TAC meetings will be open to the public, and notice of meetings will be given to interested parties.</p> <p>The TAC will have three primary advisory roles: (1) to review and advise on project planning documents (i.e., project-specific APPs) to ensure that project-specific mitigation measures and compensatory mitigation measures described in this PEIR are appropriately and consistently applied, (2) to review and advise on monitoring documents (protocols and reporting) for consistency with the mitigation measures, and (3) to review and advise on implementation of the adaptive management plans.</p> <p>Should fatality monitoring reveal that impacts exceed the baseline thresholds established in the PEIR, the TAC will advise the County on requiring implementation of adaptive management measures as described in Mitigation Measure BIO-11i. The County will have the decision-making authority, as it is the organization issuing the CUPs. However, the TAC will collaboratively inform the decisions of the County.</p> <p>Operators are required to provide for avian use surveys to be conducted within the project area boundaries for a minimum of 30 minutes duration. Surveyors will be qualified and trained and subject to approval by the County.</p> <p>Carcass surveys will be conducted at every turbine for projects with 20 or fewer turbines. For projects with more than 20 turbines, such surveys will be required at a minimum of 20 turbines, and a sample of the remaining turbines may be selected for carcass searches. The operator will be required to demonstrate that the sampling scheme and sample size are statistically rigorous and defensible. Where substantial variation in terrain, land cover type, management, or other factors may contribute to significant variation in fatality rates, the sampling scheme will be stratified to account for such variation. The survey protocol for sets and subsets of turbines, as well as proposed sampling schemes that do not entail a search of all turbines, must be approved by the County in consultation with the TAC prior to the start of surveys.</p> <p>The search interval will not exceed 7 days for the minimum of 20 turbines to be surveyed; however, the search interval for the additional turbines (i.e., those exceeding the 20-turbine minimum) that are to be included in the sampling scheme</p>				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>may be extended up to 28 days or longer if recommended by the TAC.</p> <p>The estimation of detection probability is a rapidly advancing field. Carcass placement trials, broadly defined, will be conducted to estimate detection probability during each year of monitoring. Sample sizes will be large enough to potentially detect significant variation by season, carcass size, and habitat type.</p> <p>Operators will be required to submit copies of all raw data forms to the County annually, will supply raw data in a readily accessible digital format to be specified by the County, and will prepare raw data for inclusion as appendices in the annual reports. The intent is to allow the County to conduct independent analyses and meta-analyses of data across the APWRA, and to supply these data to the regulatory agencies if requested.</p> <p>Annual reports submitted to the County will provide a synthesis of all information collected to date. Each report will provide an introduction; descriptions of the study area, methods, and results; a discussion of the results; and any suitable recommendations. Reports will provide raw counts of fatalities, adjusted fatality rates, and estimates of project-wide fatalities on both a per MW and per turbine basis.</p>				
<p>2020 Updated PEIR Mitigation Measure BIO-11h: Compensate for the loss of avian species, including golden eagles, by contributing to conservation efforts</p> <p>Discussion</p> <p>Several options to compensate for impacts on avian species, including raptors as well as smaller birds, are currently available. Some are targeted to benefit certain species, but they may also have benefits for other species. For example, USFWS's Eagle Conservation Plan (ECP) Guidelines currently outline a compensatory mitigation strategy for golden eagles using the retrofit of high-risk power poles (poles known or suspected to electrocute and kill eagles). The goal of this strategy is to eliminate hazards for golden eagles. However, because the poles are also dangerous for other large raptors (e.g., red-tailed hawk, Swainson's hawk), retrofitting them can benefit such species as well as golden eagles.</p> <p>Conversely, although the retrofitting of electrical poles may have benefits for large raptors, such an approach may provide minimal benefits for smaller birds such as American kestrel or tricolored blackbird. Consequently, additional measures would be required in an overall mitigation package to compensate for impacts on avian species in general.</p> <p>The Secretary of the Interior issued Order 3330 in October 2013, outlining a "landscape-scale" approach to mitigation policies and practices of the U.S.</p>	Prior to start of operation and during operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>Department of the Interior to provide for mutual benefit to multiple species when adopting strategies aimed at individual species, thereby benefitting the ecological landscape as a whole. The Order was intended for use by federal agencies, and thus the County was not required to take any particular action; however, the PEIR indicated confidence that such an approach would likely have the greatest mitigation benefits, especially when considering ongoing and long-term impacts from wind energy projects. In 2017, then Secretary of the Interior Ryan Zinke, acting on a presidential executive order, revoked Order 3330 and several other related environmental directives, primarily to ensure that federal policy did not burden the development or use of domestic oil, natural gas, coal, or nuclear energy resources. However, while the current federal administration (under Secretary of the Interior Deb Haaland) is not known to have formally reversed the 2017 revocation of Order 3330, it is expected to have effectively restored it with a shift of priorities towards protection of ecological values while also accelerating the development of renewable energy production such as from wind, solar and geothermal projects. For this reason, the County considers it to be in its interest to promote policies that benefit one species that also have high potential for benefit to additional species, or to a whole ecological system or habitat.</p> <p>With Order 3330 in mind, the PEIR outlined several options that are deemed available to compensate for impacts on avian species. The options discussed below are currently considered acceptable approaches to compensation for such impacts. Although not every option is appropriate for all species, it is hoped that as time proceeds, a more comprehensive approach to mitigation will be adopted to benefit a broader suite of species than might benefit from more species-specific measures. The County recognizes that the science of wind energy impacts on avifauna is continuing to evolve and that the suite of available compensation options may consequently change during implementation of approved projects.</p> <p>Conservation Measures</p> <p>To promote the conservation of avian species, project proponents will compensate for avian fatalities estimated within their project areas. Mitigation will be provided in 10-year increments, with the first increment based on the estimates (fatalities/MW/year and fatalities/ha RSA/year) provided in this analysis for existing repowered projects (Table 3.4-8). Each project proponent will conduct postconstruction fatality monitoring for at least 3 years beginning at project startup (date of commercial operation) and again for 2 years at year 10, as required under Mitigation Measure BIO-11g, to estimate the average number of birds taken each year by each individual project. The project proponent will compensate for</p>				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>this number of birds in subsequent 10-year increments for the life of the project (i.e., three 10-year increments) as outlined below. Mitigation Measure BIO-11g also requires additional fatality monitoring at year 10 of the project. The results of the first 3 years of monitoring and/or the monitoring at year 10 may lead to revisions of the estimated average number of birds taken, and mitigation provided may be adjusted accordingly on a one-time basis within each of the first two 10-year increments, based on the results of the monitoring required by Mitigation Measure BIO-11g, in consultation with the TAC.</p> <p>Prior to the start of operations, project proponents will submit for County approval an avian conservation strategy, as part of the project-specific APP outlined in PEIR Mitigation Measure BIO 11a, outlining the estimated number of avian fatalities based on the number and type of turbines being constructed, and the type or types of compensation options to be implemented. Project proponents will use the avian conservation strategy to craft an appropriate strategy using a balanced mix of the options presented below, as well as considering new options suggested by the growing body of knowledge during the course of the project lifespan, as supported by a Resource Equivalency Analysis (REA) (see example in Appendix C4) or similar type of compensation assessment acceptable to the County that demonstrates the efficacy of proposed mitigation for impacts on avian species.</p> <p>The County Planning Director, in consultation with the TAC, will consider, based on the REA, whether the proposed avian conservation strategy is adequate, including consideration of whether each avian mitigation plan incorporates a landscape-scale approach such that the conservation efforts achieve the greatest possible benefits. Compensation measures as detailed in an approved avian conservation strategy must be implemented within 1 year of the date of commercial operations. Avian conservation strategies will be reviewed and may be revised by the County every 10 years, and on a one-time basis in each of the two 10-year increments based on the monitoring required by 2020 Updated PEIR Mitigation Measure BIO-11g.</p> <ul style="list-style-type: none"> Retrofitting high-risk electrical infrastructure. USFWS's ECP Guidelines outline a compensatory mitigation strategy using the retrofit of high-risk power poles (poles known or suspected to electrocute and kill eagles). USFWS has developed an REA (U.S. Fish and Wildlife Service 2013) as a tool to estimate the compensatory mitigation (number of retrofits) required for the take of eagles. The REA takes into account the current understanding of eagle life history factors, the effectiveness of retrofitting poles, the expected annual take, and the timing of implementation of the pole retrofits. The project proponents may need to contract with a utility 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>or a third-party mitigation account (such as the National Fish and Wildlife Foundation) to retrofit the number of poles needed as demonstrated by a project-specific REA. If contracting directly, the project proponent will consult with utility companies to ensure that high-risk poles have been identified for retrofitting. Proponents will agree in writing to pay the utility owner/operator to retrofit the required number of power poles and maintain the retrofits for 10 years and will provide the County with documentation of the retrofit agreement. The first retrofits will be based on the estimated number of eagle fatalities as described above in this measure or as developed in the project-specific EIR for future projects. Subsequent numbers of retrofits required for additional 10-year durations will be based on the results of project-specific fatality monitoring as outlined in PEIR Mitigation Measure BIO-11g. If fewer eagle fatalities are identified through the monitoring, the number of future required retrofits may be reduced through a project-specific REA. Although retrofitting poles has not been identified as appropriate mitigation for other large raptors, they would likely benefit from such efforts, as they (particularly red-tailed and Swainson's hawks) constitute the largest non-eagle group to suffer electrocution on power lines (Avian Power Line Interaction Committee 2006).</p> <ul style="list-style-type: none"> • Measures outlined in an approved Eagle Conservation Plan and Bird and Bat Conservation Strategy. Project proponents may elect to apply for eagle incidental take permits from USFWS. The eagle incidental take permit process currently involves preparation of an ECP and a Bird and Bat Conservation Strategy (BBCS). The ECP specifies avoidance and minimization measures, advanced conservation practices, and compensatory mitigation for eagles—conditions that meet USFWS's criteria for issuance of a permit. The BBCS outlines measures being implemented by the applicant to avoid and minimize impacts on migratory birds, including raptors. If eagle incidental take permits are obtained by project proponents, those permit terms, including the measures outlined in the approved ECP and BBCS, may constitute an appropriate conservation measure for estimated take of golden eagles and other avian species, provided such terms are deemed by the County to be comparable to or more protective of birds than the other options listed herein. • Contribute to avian conservation efforts. Project proponents will contribute funds, in an amount equal to the average cost to rehabilitate 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>one raptor at the California Raptor Center, affiliated with the UC Davis School of Veterinary Medicine—which receives more than 200 injured or ill raptors annually (Stedman pers. comm.). The funds would be paid prior to commercial operation based on the projected/anticipated, worst-case raptor fatalities indicated in Table 3.4-8a, and for this purpose defined as 95 raptors per year, in 10-year increments to local and/or regional conservation efforts designed to protect, recover, and manage lands for raptors, or to conduct research involving methods to reduce raptor fatalities or increase raptor productivity. Ten-year installments are more advantageous than more frequent installments for planning and budgeting purposes.</p> <p>The funds will be contributed to an entity or entities engaged in these activities, such as the East Bay Regional Park District and the Livermore Area Regional Park District. Conservation efforts may include constructing and installing nest boxes and perches, conducting an awareness campaign to reduce the use of rodenticide, and conducting research to benefit raptors and other birds. The specific conservation effort to be pursued will be submitted to the County for approval as part of the avian conservation strategy review process. The donation receipt will be provided to the County as evidence of payment.</p> <p>The first contributions for any given project will be based on the estimated number of avian fatalities as estimated in this EIR. Funds for subsequent 10-year installments will be provided on the basis of the average annual avian fatality rates determined through postconstruction monitoring efforts, allowing for a one-time adjustment within each 10-year increment after the results of the monitoring efforts are available. If fewer avian fatalities are detected through the monitoring effort, the second installment amount may be reduced to account for the difference between the first estimated numbers and the monitoring results. In the event of such an adjustment, and on each 10-year anniversary, projected costs shall be adjusted for inflation (from the base amount described above) according to the consumer price index (CPI) through the remainder of the 10-year term or the subsequent 10-year term. Review shall occur at the time that monitoring reports are accepted by the Planning Director showing a change in total avian fatalities for the project. All avian species listed in Table 3.4-4 shall be accounted for in estimating the payment.</p>				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<ul style="list-style-type: none"> Contribute to regional conservation of avian habitat. Project proponents may address regional conservation of habitat for raptors and other birds by funding the acquisition of conservation easements within the APWRA or on lands in the same eco-region outside the APWRA, subject to County approval, for the purpose of long-term regional conservation of raptor habitat. Lands proposed for conservation must provide habitat similar to and in area proportional to habitats on lands within the project site. Project proponents will fund the regional conservation and improvement of lands (through habitat enhancement, lead abatement activities, elimination of rodenticides, and/or other measures) using a number of acres equivalent to the conservation benefit of the avian recovery and conservation efforts described above, or as determined through a project-specific REA (see example REA in PEIR Appendix C4). The conservation lands must be provided for compensation of a minimum of 10 years of avian fatalities, as 10-year increments will minimize the transaction costs associated with the identification and conservation of lands, thereby increasing overall cost effectiveness. The conservation easements will be held by an organization whose mission is to purchase and/or otherwise conserve lands, such as The Trust for Public Lands, The Nature Conservancy, California Rangeland Trust, or the East Bay Regional Parks District. The project proponents will obtain approval from the County regarding the amount of conserved lands, any enhancements proposed to increase raptor and other avian habitat value, and the entity holding the lands and/or conservation easement. Contribute to efforts benefitting eagles and other raptors. In addition to the conservation of avian habitat, the project proponent will also contribute to additional efforts for the benefit of eagles and other raptors in an amount equal to \$12,500/MW of installed capacity. The mitigation contribution is based on the per MW amount (\$10,500/MW) established under the 2010 Settlement Agreement between NextEra Energy Resources and the California Attorney General, adjusted for inflation and rounded up to the nearest \$100 increment. The funds will be used to support efforts that USFWS accepts as mitigation for an eagle take permit for the project. Such efforts may include, but are not limited to: retrofit of high-risk power poles; efforts that contribute to the regional management of eagle and raptor habitat; efforts that support the additional conservation of lands for the benefit of eagles and other raptors; and efforts that support the 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>reduction of rodenticide use in wildlands, which can have negative effects on raptor populations.</p> <ul style="list-style-type: none"> Other Conservation Measures Identified in the Future. As noted above, additional conservation measures for raptors and other birds may become available in the future. Conservation measures for avian species are currently being developed by USFWS and nongovernmental organizations (e.g., American Wind Wildlife Institute). Additional options for conservation could include purchasing credits at an approved mitigation bank, credits for the retirement of windfarms that are particularly dangerous to birds, the curtailment of prey elimination programs (e.g., ceasing the use of rodenticide use), and hunter-education programs that remove sources of lead from the environment. Under this option, the project proponent may make alternative proposals to the County for conservation measures—based on an REA or similar compensation assessment—that the County may accept as mitigation if they are deemed by the County to be comparable to or more protective of raptor species than the other options described herein. 				
<p>2020 Updated PEIR Mitigation Measure BIO-11i: Implement an avian adaptive management program</p> <p>If fatality monitoring described in Mitigation Measure BIO-11g results in an estimate that exceeds the preconstruction baseline fatality estimates (i.e., estimates at the non-repowered turbines as described in this PEIR) for any focal species or species group (i.e., individual focal species, all focal species, all raptors, all non-raptors, all birds combined), project proponents will prepare a project-specific adaptive management plan within 2 months following the availability of the fatality monitoring results. These plans will be used to adjust operation and mitigation to the results of monitoring, new technology, and new research to ensure that the best available science is used to minimize impacts to below baseline. Project-specific adaptive management plans will be reviewed by the TAC, revised by project proponents as necessary, and approved by the County. The TAC will take current research and the most effective impact reduction strategies into account when reviewing adaptive management plans and suggesting measures to reduce impacts. The project-specific adaptive management plans will be implemented within 2 months of approval by the County. The plans will include a stepped approach whereby an adaptive measure or measures are implemented, the results are monitored for success or failure for a year, and additional adaptive measures are added as necessary, followed by another year of monitoring, until the success</p>	<p>Within 2 months following the availability of fatality monitoring results and during operation</p>	<p>County—adopt a Condition of Approval; Operator—implement</p>	<p>County</p>	<p>Monitor compliance with Conditions of Approval</p>

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>criteria are achieved (i.e., estimated fatalities are below the baseline). Project proponents should use the best measures available when the plan is prepared in consideration of the specific adaptive management needs. For example, if only one threshold is exceeded, such as golden eagle fatalities, the plan and measures used will target that species. As set forth in other agreements in the APWRA, project proponents may also focus adaptive management measures on individual or multiple turbines if those turbines are shown to cause a significantly disproportionate number of fatalities.</p> <p>In general, the following types of measures will be considered by the TAC, in the order they are presented below; however, the TAC may recommend any of these or other measures that are shown to be successful in reducing the impact.</p> <p>ADMM-1: Visual Modifications. The project proponent will paint a pattern on a proportion of the turbine blades. The proportion and the pattern of the blades to be painted will be determined by the County in consultation with the TAC. Previous laboratory work has shown that painting a turbine blade may reduce motion smear—the blurring of turbine blades due to rapid rotation that renders them less visible and hence more perilous to birds in flight (Hodos 2003). A test of blade painting, performed in Norway, suggests that the technique can reduce avian fatalities by 70% (May et al. 2020). Suggested techniques include painting blades with staggered stripes or painting one blade black. The project proponent will conduct fatality studies on a controlled number of painted and unpainted turbines. The project proponent will coordinate with the TAC to determine the location of the painted turbines, but the intent is to implement this measure in areas that appear to be contributing most to the high number of fatalities detected.</p> <p>ADMM-2: Anti-Perching Measures. The County will consult with the TAC regarding the use of anti-perching measures to discourage bird use of the area. The TAC will use the most recent research and information available to determine, on a case-by-case basis, if anti-perching measures will be an effective strategy to reduce impacts. If determined to be feasible, antiperching devices will be installed on artificial structures, excluding utility poles, within 1 mile of project facilities (with landowner permission) to discourage bird use of the area.</p> <p>ADMM-3: Prey Reduction. The project proponent will implement a prey reduction program around the most hazardous turbines. Examples of prey reduction measures may include changes in grazing practices to make the area less desirable for prey species, active reduction through direct removal of prey species, or other measures provided they are consistent with management goals for threatened and endangered species.</p>				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>ADMM-4: Implementation of Experimental Technologies. Project proponents can deploy experimental technologies at their facilities to test their efficacy in reducing turbine-related fatalities. Examples may include, but are not limited to, visual deterrents, noise deterrents, and active radar systems.</p> <p>ADMM-5: Turbine Curtailment. If postconstruction monitoring indicates patterns of turbine-caused fatalities—such as seasonal spikes in fatalities, topographic or other environmental features associated with high numbers of fatalities, fatalities related to proximity to raptor nesting sites (nest trees, lattice towers or burrowing owl colonies), or other factors that can potentially be manipulated and that suggest that curtailment of a specific turbine’s operation would result in reducing future avian fatalities—the project operator will curtail operations of the offending turbine or turbines. Curtailment restrictions would be developed in coordination with the TAC and based on currently available fatality data, use data, and research.</p> <p>ADMM-6: Cut-in Speed Study. Changes in cut-in speed could be conducted to see if changing cut-in speeds from 3 meters per second to 5 meters per second (for example) would significantly reduce avian fatalities. The proponent will coordinate with the TAC in determining the feasibility of the measure for the particular species affected as well as the amount of the change in the cut-in speed.</p> <p>ADMM-7: Real-Time Turbine Curtailment. The project proponent can employ a real-time turbine curtailment program designed in consultation with the TAC. The intent would be to deploy a biologist to monitor onsite conditions and issue a curtailment order when raptors are near operating turbines. Alternatively, radar, video, or other monitoring measures could be deployed in place of a biological monitor if there is evidence to indicate that such a system would be as effective and more efficient than use of a human monitor.</p> <p>ADMM-8: Condor Evaluation and Curtailment. On an annual basis, the project proponent will review the known distribution of the California condor, relative to the project area, by coordinating with USFWS, CDFW, and U.S. Geological Survey regarding data tracking condor movements, and will use this data to identify all condor overflights in the project area, as well as evaluating trends in condor use of neighboring areas. The project proponent will report their findings to the County. If those data show California condors flying over the project area, the project proponent will coordinate with USFWS and CDFW regarding the risk assessment, and if necessary, measures to minimize the risk of fatalities. These measures could include the use of regional electronic monitoring to inform project operators of condors flying into the area, with responses including curtailment or implementing a visual detection system to reduce risks to condors; other effective measures may</p>				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
also be proposed. Measures implemented would depend on the extent of condor use in the project area and the evaluation of the risk of a condor mortality. The project proponent will inform the County of discussions with USFWS and CDFW and efforts it will undertake to reduce the risk of condor mortality, if necessary.				
<p>PEIR Mitigation Measure BIO-12a: Conduct bat roost surveys</p> <p>Prior to development of any repowering project, a qualified bat biologist will conduct a roost habitat assessment to identify potential colonial roost sites of special-status and common bat species within 750 feet of the construction area. If suitable roost sites are to be removed or otherwise affected by the proposed project, the bat biologist will conduct targeted roost surveys of all identified sites that would be affected. Because bat activity is highly variable (both spatially and temporally) across the landscape and may move unpredictably among several roosts, several separate survey visits may be required. Surveys will be repeated at different times of year if deemed necessary by the bat biologist to determine the presence of seasonally active roosts (hibernacula, migratory stopovers, maternity roosts). Appropriate field methods will be employed to determine the species, type, and vulnerability of the roost to construction disturbance. Methods will follow best practices for roost surveys such that species are not disturbed, and adequate temporal and spatial coverage is provided to increase likelihood of detection.</p> <p>Roost surveys may consist of both daylight surveys for signs of bat use and evening/night visit(s) to conduct emergence surveys or evaluate the status of night roosts. Survey timing should be adequate to account for individual bats or species that might not emerge until well after dark.</p> <p>Methods and approaches for determining roost occupancy status should include a combination of the following components as the biologist deems necessary for the particular roost site.</p> <ul style="list-style-type: none"> • Passive and/or active acoustic monitoring to assist with species identification. • Guano traps to determine activity status. • Night-vision equipment. • Passive infrared camera traps. <p>At the completion of the roost surveys, a report will be prepared documenting areas surveyed, methods, results, and mapping of high-quality habitat or confirmed roost locations.</p>	Prior to and during construction activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
PEIR Mitigation Measure BIO-12b: Avoid removing or disturbing bat roosts <ul style="list-style-type: none"> Active bat roosts will not be disturbed and will be provided a minimum buffer of 500 feet where preexisting disturbance is moderate or 750 feet where preexisting disturbance is minimal. Confirmation of buffer distances and determination of the need for a biological monitor for active maternity roosts or hibernacula will be obtained in consultation with CDFW. At a minimum, when an active maternity roost or hibernaculum is present within 750 feet of a construction site, a qualified biologist will conduct an initial assessment of the roost response to construction activities and will recommend buffer expansion if there are signs of disturbance from the roost. Structures (natural or artificial) showing evidence of significant bat use within the past year will be left in place as habitat wherever feasible. Should such a structure need to be removed or disturbed, CDFW will be consulted to determine appropriate buffers, timing and methods, and compensatory mitigation for the loss of the roost. All project proponents will provide environmental awareness training to construction personnel, establish buffers, and initiate consultation with CDFW if needed. Artificial night lighting within 500 feet of any roost will be shielded and angled such that bats may enter and exit the roost without artificial illumination and the roost does not receive artificial exposure to visual predators. Tree and vegetation removal will be conducted outside the maternity season (April 1–September 15) to avoid disturbance of maternity groups of foliage-roosting bats. If a maternity roost or hibernaculum is present within 500 feet of the construction site where preexisting disturbance is moderate or within 750 feet where preexisting disturbance is minimal, a qualified biological monitor will be onsite during groundbreaking activities. 	During construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
2020 Updated PEIR Mitigation Measure BIO-14a: Site and select turbines to minimize potential mortality of bats The project proponent will use the best information available to site turbines and to select from turbine models in such a manner as to reduce bat collision risk. The siting and selection process will take into account bat use of the area (e.g., proximity to maternity colony sites, hibernacula, and cover types that provide	During project design and prior to construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>foraging habitat for bats). Procedures followed should be consistent with guidance provided by the California guidelines for reducing impacts on birds and bats from wind energy development (California Energy Commission and California Department of Fish and Game 2007).</p> <p>To generate site-specific “best information” to inform turbine siting and operation decisions, a bat habitat assessment and roost survey will be conducted in the project area to identify and map habitat of potential significance to bats, such as potential roost sites (trees and shrubs, significant rock formations, artificial structures) and water sources. Turbine siting decisions will incorporate relevant bat use survey data and bat fatality records published by other projects in the APWRA. Roost surveys will be carried out according to the methods described in PEIR Mitigation Measure BIO-12a.</p> <p>Consistent with past practice for previously approved repowering projects, the proponent shall submit the siting analysis for review and recommendations to the Alameda County Wind Repowering/Avian Protection Technical Advisory Committee, which includes representatives of the CDFW and the USFWS, prior to applying for any building or grading permit. The County planning director shall have the authority to approve or deny such permits on the basis of the siting analysis and the recommendations of the Technical Advisory Committee.</p>				
<p>2020 Updated PEIR Mitigation Measure BIO-14b: Implement postconstruction bat fatality monitoring program for all repowering projects</p> <p>A scientifically defensible, postconstruction bat fatality monitoring program will be implemented to estimate actual bat fatalities and determine if additional mitigation is required. Bat-specific modifications to the 3-year postconstruction monitoring program described in PEIR Mitigation Measure BIO-11g, developed in accordance with California Energy Commission and California Department of Fish and Game (2007) will be implemented.</p> <p>In addition to the requirements outlined in 2020 Updated PEIR Mitigation Measure BIO-11g, the following three bat-specific requirements will be added.</p> <ul style="list-style-type: none"> • Include on the TAC at least one biologist with significant expertise in bat research and wind energy impacts on bats. • Perform postconstruction bat fatality monitoring using trained dogs with handlers. In order to optimize monitoring success, these efforts should also include searching to a maximum radius around wind turbines that includes all deposited carcasses, searching along transects spaced closely together, and searching frequently. Recognizing that most bat fatalities in the 	During operation and 3 years post-construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>APWRA are recorded from September through November, it is appropriate to concentrate search efforts during that period, while still maintaining some level of search effort throughout the year.</p> <ul style="list-style-type: none"> Conduct bat acoustic surveys concurrently with fatality monitoring at the project site to estimate nightly, seasonal, or annual variations in relative activity and species use patterns, and to contribute to the body of knowledge on seasonal bat movements and relationships between acoustic bat activity and turbine fatality. Should emerging research support the approach, these data may be used to generate site-specific predictive models to increase the precision and effectiveness of mitigation measures (e.g., the season specific, multivariate models described by Weller and Baldwin 2011:11). Acoustic bat surveys will be designed, and data analysis conducted by qualified biologists with significant experience in acoustic bat survey techniques. Methods will be informed by the latest available guidelines (California Energy Commission and California Department of Fish and Game 2007), except where best available science supports technological or methodological updates. High-quality, sensitive acoustic equipment will be used to produce data of sufficient quality to generate species identifications. Survey design and methods will be scientifically defensible and will include, at a minimum, the following elements: <ul style="list-style-type: none"> Acoustic detectors will be installed at multiple stations to adequately sample range of habitats at the project site for both resident and migratory bats. The number of detector arrays installed per project site will incorporate emerging research on the density of detectors required to adequately meet sampling goals and inform mitigation approaches (Weller and Baldwin 2011:10). Acoustic detector arrays will sample multiple airspace heights including as close to the repowered rotor swept area as possible. Vertical structures used for mounting may be preexisting or may be installed for the project (e.g., temporary or permanent meteorological towers). Surveys will be conducted such that data are collected continuously from early July to early November to cover the activity transition from maternity to migration season and determine if there is elevated activity during migration. Survey season may be adjusted to more accurately reflect the full extent of the local migration season and/or season(s) of greatest local bat fatality risk, if scientifically sound data 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>support doing so.</p> <ul style="list-style-type: none"> Anticipated adaptive management goals, such as determining justifiable timeframes to reduce required periods of cut-in speed adjustments, will be reviewed with the TAC and incorporated in designing the acoustic monitoring and data analysis program. <p>Modifications to the fatality search protocol will be implemented to obtain better information on the number and timing of bat fatalities (e.g., Johnston et al. 2013:85). Modifications will include decreases in the transect width and search interval for a period of time coinciding with high levels of bat mortality, i.e., the fall migration season (roughly August to early November, or as appropriate in the view of the TAC). The nature of bat-specific transect distance and search intervals will be determined in consultation with the TAC and will be guided by scientifically sound and pertinent data on rates of bat carcass detection at wind energy facilities (e.g., Johnston et al. 2013:54–55) and site-specific data from APWRA repowering project fatality monitoring programs as these data become available.</p> <p>Other methods to achieve the goals of the bat fatality monitoring program while avoiding prohibitive costs may be considered subject to approval by the TAC, if these methods have been peer reviewed and evidence indicates the methods are effective. For example, if project proponents wish to have the option of altering search methodology to a newly developed method, such as searching only roads and pads, a statistically robust field study to index the results of the methodology against standard search methods will be conducted concurrently to ensure site-specific, long-term validity of the new methods.</p> <p>Finally, detection probability trials will utilize bat carcasses to develop bat-specific detection probabilities. Care should be taken to avoid introducing novel disease reservoirs; such avoidance will entail using onsite fatalities or using carcasses obtained from within a reasonably anticipated flight distance for that species.</p>				
<p>PEIR Mitigation Measure BIO-14c: Prepare and publish annual monitoring reports on the findings of bat use of the project area and fatality monitoring results</p> <p>Annual reports of bat use results and fatality monitoring will be produced within 3 months of the end of the last day of fatality monitoring. Special-status bat species records will be reported to CNDDB.</p>	Within 3 months of the end of the last day of fatality monitoring	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>2020 Updated PEIR Mitigation Measure BIO-14d: Develop and implement a bat adaptive management plan</p> <p>In concert with 2020 Updated PEIR Mitigation Measure BIO-14b, the project</p>	Prior to and during construction	County—adopt a Condition of Approval;	County	Monitor compliance with Conditions of

Table MMRP-1. Continued

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>proponent will develop adaptive management plans to ensure appropriate, feasible, and current incorporation of emerging information. The goals of the adaptive management plans are to ensure that the best available science and emerging technologies are used to assess impacts on bats, and that impacts are minimized to the greatest extent possible while maximizing energy production.</p> <p>The project-specific adaptive management plans will be used to adjust operation and mitigation to incorporate the results of project area monitoring and new technology and research results when sufficient evidence exists to support these new approaches. These plans will be reviewed by the TAC and approved by the County. All adaptive management measures (ADMMs) will be implemented within a reasonable timeframe. Based on fatality rates recorded at Golden Hills and Golden Hills North, it is reasonably certain that the threshold fatality rate identified in the PEIR of 3.207 bats/MW/year will be exceeded at the proposed project¹. For this reason, ADMM-7 will be implemented at the commencement of project operations. If ADMM-7 is not successful in reducing bat fatalities to below threshold levels, ADMM-8 or ADMM-9 will be implemented within a timeframe sufficient to allow the measures to take effect in the first fall migration season following the year of monitoring in which the adaptive management threshold was crossed. The ADMMs may be modified by the County in consultation with the TAC to take into account current research, site-specific data, and the most effective impact reduction strategies. ADMMs will include a scientifically defensible, controlled research component and minimum post-implementation monitoring time to evaluate the effectiveness and validity of the measures.</p> <p>The TAC may also direct implementation of adaptive management measures for other appropriate reasons, such as an unexpectedly and markedly high fatality rate observed for any bat species, or special-status species being killed in unexpectedly high numbers.</p> <p>ADMMs for bats may be implemented using a stepped approach until necessary fatality reductions are reached, and monitoring methods must be revised as needed to ensure accurate measurement of the effectiveness of the ADMMs. Additional ADMMs for bats should be developed as new technologies or science supports doing so.</p> <p>ADMM-7: Seasonal Turbine Cut-in Speed Increase. Cut-in speed increases offer the most promising and immediately available approach to reducing bat fatalities at fourth-generation wind turbines. Reductions in fatalities of as much as 93% have been observed when increasing modern turbine cut-in speeds (Good et al. 2012:iii).</p>		Operator— implement		Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>A recent study in the APWRA documented significant reductions in fatalities using curtailment during the peak migration period (Smallwood and Bell 2019). Work at a site in Wisconsin has shown that a site-specific, real-time curtailment algorithm using wind speed and bat activity information (referred to as “smart-curtailment”) can yield 74-92% fatality reductions at a 3.2% cost in revenue from the turbines (Hayes et al. 2019). Other curtailment studies, also performed in sites outside the APWRA, have shown comparable effectiveness (e.g. Hein et al. 2014). The optimal cut-in speed increase is not yet well developed, and may vary between sites or regions, however most current research points to significant benefits using a cut in speed change of at least 5.0 m/s, with greater cut-in speed increases yielding improved benefit (Hayes et al. 2019).</p> <p>Cut-in speed increases will be implemented as outlined below, with effectiveness assessed annually.</p> <ul style="list-style-type: none"> Beginning with initial project operations, the project proponent will observe a cut-in speed of 5.0 m/s from sunset to sunrise from August 1 through October 31, which corresponds to the peak bat migration season in the APWRA. This measure shall apply for the first three full years of project operations. If, after the first three full years of project operations, fatalities are still exceeding established thresholds, the project proponent will: <ul style="list-style-type: none"> increase the cut in speed in 0.5 m/s increments (up to a maximum of a 6.0 m/s cut in speed change), or implement an additional 1-month spring cut in speed change to 5.0 m/s (with the timing to be determined based on the results of the initial 3 years of fatality monitoring), or a combination of cut in speed increases and the spring cut in speed change. At any time following the end of the first three full years of project operations, the project proponent may request modifications to the initial operational requirements, including a changed cut-in speed or a change in the dates of curtailment, or to implement a smart- 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>curtailment operations regime. The project proponent must present evidence in support of such changes, including evidence from fatality monitoring during the first three years of project monitoring, acoustic survey or other evidence documenting bat activity during the migration season, and such other evidence as the project proponent deems relevant. Should resource agencies and the TAC find there is sufficient evidence to authorize the proposed changes, the supporting evidence will be documented for the public record and the revised operational requirements may be implemented.</p> <ul style="list-style-type: none"> • When the project proponent requests a modification of operational requirements, the TAC shall also consider whether evidence from the APWRA or other sites supports the institution of additional requirements to further minimize bat fatalities. Such requirements may include further cut-in speed increases or changes to the timing or duration of curtailment. • The project proponent may request exceptions to cut-in speed increases for particular weather events or wind patterns if substantial evidence is available from onsite acoustic or other monitoring to support such exceptions (i.e., all available literature and onsite surveys indicate that bat activity ceases during specific weather events or other predictable conditions). <p>ADMM-8: Acoustic Deterrents. The project proponent shall present to the TAC a proposal for the evaluation of acoustic deterrents to reduce bat fatalities. Any such proposal shall incorporate a paired study in which at least 12 operational turbines are subject to monitoring under 2020 Updated PEIR Mitigation Measure BIO-14b, with half of the turbines carrying acoustic deterrents and half reserved as a control group. The study shall at a minimum include one spring and one fall migration season. The acoustic deterrents shall be of a design similar to those described by Weaver et al. (2020), who demonstrated bat fatality rate reductions of up to 78% for hoary bat, which is the second-most-commonly killed bat documented in surveys at the APWRA. Based on the results of this study the TAC may call for permanent implementation of acoustic deterrents on all project turbines.</p>				

Table MMRP-1. Continued

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>ADMM-9: Emerging Technology as Mitigation. The project proponent may request, with consultation and approval from agencies, replacement or augmentation of cut-in speed increases with developing technology or another mitigation approach that has been proven to achieve similar bat fatality reductions.</p> <p>The project proponent may also request the second tier of adaptive management to be the adoption of a promising but not fully proven technology or mitigation method. These requests are subject to review and approval by the TAC and must include a controlled research component designed by a qualified principal investigator so that the effectiveness of the method may be accurately assessed. Some examples of such emerging technologies and research areas that could be incorporated in adaptive management plans are listed below.</p> <ul style="list-style-type: none"> • The use of altitude-specific radar, night vision and/or other technology allowing bat use monitoring and assessment of at-risk bat behavior (Johnston et al. 2013: 90-91) if research in these areas advances sufficiently to allow effective application of these technologies. <p>Application of emerging peer-reviewed studies on bat biology (such as studies documenting migratory corridors or bat behavior in relation to turbines) that support specific mitigation methods.</p> <p>¹ The PEIR identified predicted total fatality rates of 1.679 fatalities/MW/year from the Vasco Winds repowering project. That fatality rate has been revised upwards to 3.207 fatalities/MW/year, taking into account the correction noted on page 3.4-69 of this Final SEIR.</p>				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
PEIR Mitigation Measure BIO-14e: Compensate for expenses incurred by rehabilitating injured bats The cost of reasonable, licensed rehabilitation efforts for any injured bats taken to wildlife care facilities from the program area will be assumed in full by project proponents.	During operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
PEIR Mitigation Measure BIO-16: Compensate for the loss of riparian habitat If riparian habitat is filled or removed as part of a project, the project proponent will compensate for the loss of riparian habitat to ensure no net loss of habitat functions and values. Compensation ratios will be based on site-specific information and determined through coordination with state and federal agencies (CDFW, USFWS, USACE). The compensation will be at a minimum 1:1 ratio (1 acre restored or created for every 1 acre filled) and may be a combination of onsite restoration/creation, offsite restoration, and mitigation credits. A restoration and monitoring plan will be developed and implemented. The plan will describe how riparian habitat will be created and monitored.	Prior to disturbance; compensation paid according to permit terms	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
2020 Updated PEIR Mitigation Measure BIO-18: Compensate for the loss of wetlands and streams If wetlands or streams are filled or disturbed as part of a project, the project proponent will compensate for the loss to ensure no net loss of habitat functions and values. Compensation ratios will be based on site-specific information and determined through coordination with state and federal agencies (CDFW, USFWS, USACE, Regional Water Board). The compensation will be at a minimum 1:1 ratio (1 acre restored or created for every 1 acre filled) and may be a combination of onsite restoration/creation, offsite restoration, and mitigation credits. A restoration and monitoring plan will be developed and implemented. The plan will describe how wetlands and streams will be created and monitored.	Prior to disturbance; compensation paid according to permit terms	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
2020 New Mitigation Measure BIO-22a: Conduct a preconstruction habitat assessment and focused surveys for western bumble bee Prior to the start of construction, qualified biologist(s) will conduct botanical surveys in late spring/early summer to identify and map concentrations of flowering plants that provide food resources for western bumble bee. The areas containing higher densities and varieties of flowering plants will be evaluated by a qualified invertebrate biologist to determine if these areas provide suitable foraging habitat for western bumble bee. The habitat evaluation surveys would follow recommendations in the Rusty Patched Bumble Bee Habitat Assessment Form and Guide (Xerces Society for Invertebrate Conservation 2017).	Prior to and during construction activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>If moderate to high quality foraging habitat for western bumble bee is identified in the project area based on the habitat assessment, these areas will be surveyed by qualified invertebrate biologist(s) (with experience conducting bumble bee surveys) within 1 year prior to the start of construction. Surveys would be conducted according to the methods in Thorp et al. (1983) or according to any future survey methodology specifically for western bumble bee proposed or approved by CDFW. The methods in Thorp et al. (1983) recommend surveys be conducted during four evenly spaced sampling periods during the flight season (March through September) (Thorp et al. 1983). For each sampling event, the biologist(s) would survey suitable habitat using nonlethal netting methods for 1 person-hour per 3 acres of the highest quality habitat or until 150 bumble bees are sighted, whichever comes first. If initial sampling of a given habitat area indicates that the habitat is of low quality or nonexistent, no further sampling of that area would be required. General guidelines and best practices for bumble bee surveys would follow USFWS' Survey Protocols for the Rusty Patched Bumble Bee (<i>Bombus affinis</i>) (U.S. Fish and Wildlife Service 2019b), which are consistent with other bumble bee survey protocols used by The Xerces Society (Hatfield et al. 2017; Washington Department of Fish and Wildlife et al. 2019).</p> <p>If western bumble bee is determined not to be present at the project site or a qualified invertebrate biologist (experienced with bumble bees) concludes that there is a very low likelihood that the species is present, then no additional mitigation is required. If western bumble bees are determined to be present at the project site, then the project proponent will implement 2020 New Mitigation Measure BIO-22b.</p>				
<p>2020 New Mitigation Measure BIO-22b: Implement protection measures to avoid and minimize effects on western bumble bee</p> <p>If it is determined through preconstruction surveys conducted pursuant to 2020 New Mitigation Measure BIO-22a that western bumble bees are present at the project site, the following measures will be implemented to ensure that the proposed project does not have a significant impact on western bumble bee. Implementation of some of these measures may require that the project proponent obtain incidental take permit from CDFW if western bumble bee remains a candidate or is formally listed under CESA before construction begins. Additional conservation measures or conditions of approval may be required in applicable project permits (e.g., CESA incidental take permit).</p> <ul style="list-style-type: none"> If bumble bee surveys identify occupied western bumble bee habitat within the project area, the project biologist would then conduct additional 	Prior to and during construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>preconstruction surveys within the project disturbance footprint for active bee nest colonies and associated floral resources (i.e., flowering vegetation on which bees from the colony are observed foraging) no more than 30 days prior to any ground disturbance between March and September. The purpose of this preconstruction survey would be to identify active nest colonies and associated floral resources outside of permanent impact areas that could be avoided by construction personnel. The project biologist would establish, monitor, and maintain no-work buffers around nest colonies and floral resources identified during surveys. The size and configuration of the no-work buffer would be based on best professional judgment of the project biologist in coordination with the County. At a minimum, the buffer would provide at least 20 feet of clearance around nest entrances. Construction activities would not occur within the no-work buffers until the colony is no longer active (i.e., no bees are seen flying in or out of the nest for three consecutive days indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony). Monitoring of an active nest could be conducted using a motion-detecting wildlife trail camera.</p> <ul style="list-style-type: none"> • To minimize temporary disturbance of suitable foraging and nesting habitat for western bumble bee, ground disturbance within suitable annual grassland habitat will be restricted to the minimum area necessary to perform construction activities. • To encourage growth of additional nectar and pollen producing plants at the project site, disturbed grasslands that are revegetated in accordance with PEIR Mitigation Measure BIO-5c will use a seed mix combination that includes nectar and pollen producing plants commonly used as a food source by western bumble bee. Plants of the following genus are appropriate: <i>Cirsium</i> sp., <i>Erigeron</i> sp., <i>Solidago</i> sp., <i>Aster</i> sp., <i>Centaurea</i> sp., and <i>Penstemon</i> sp. These annual plants would be incorporated into the seed mix, as applicable for the existing habitat conditions. • To minimize impacts on bees from herbicide drift, herbicide application around tower foundations will be performed using handheld equipment and will be restricted to a 20-foot radius buffer area around the tower foundations. The contractor will use an herbicide that has been shown to be less toxic to amphibians and invertebrates, such as 2, 4 D. Herbicides containing the surfactant POEA (polyoxyethylene tallow amine) will not be used at the project site. The most current information on herbicide toxicity 				

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
on wildlife will be used to inform future decisions about herbicide use during operations.				
Cultural Resources				
PEIR Mitigation Measure CUL-2c: Conduct worker awareness training for archaeological resources prior to construction Prior to the initiation of any site preparation and/or the start of construction, the project applicant will ensure that all construction workers receive training overseen by a qualified professional archaeologist who is experienced in teaching nonspecialists, to ensure that forepersons and field supervisors can recognize archaeological resources (e.g., areas of shellfish remains, chipped stone or groundstone, historic debris, building foundations, human bone) in the event that any are discovered during construction.	Prior to construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
PEIR Mitigation Measure CUL-2d: Stop work if cultural resources are encountered during ground-disturbing activities The project applicant will ensure that construction specifications include a stop-work order if prehistoric or historic-era cultural resources are unearthed during ground-disturbing activities. If such resources are encountered, the project applicant will immediately halt all activity within 100 feet of the find until a qualified archaeologist can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil (“midden”) containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If the find is determined to be potentially significant, the archaeologist, in consultation with the Native American representative (if appropriate), will develop a treatment plan that could include site avoidance, capping, or data recovery.	During construction ground-disturbing activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
PEIR Mitigation Measure CUL-3: Stop work if human remains are encountered during ground-disturbing activities The project applicant will ensure the construction specifications include a stop-work order if human remains are discovered during construction or demolition. There will be no further excavation or disturbance of the site within a 100-foot radius of the location of such discovery, or any nearby area reasonably suspected to overlie adjacent remains. The Alameda County Coroner will be notified and will	During construction ground-disturbing activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to the coroner's authority, the coroner will notify the Native American Heritage Commission, who will attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this state law, then the landowner will re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. A final report will be submitted to Alameda County. This report will contain a description of the mitigation program and its results, including a description of the monitoring and testing resources analysis methodology and conclusions and a description of the disposition/curation of the resources.				
Geology, Soils, Mineral Resources, and Paleontological Resources				
PEIR Mitigation Measure GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report Prior to construction activities at any site, the project proponent will retain a geotechnical firm with local expertise in geotechnical investigation to prepare a site-specific geotechnical report. This report will be prepared by a licensed geotechnical engineer or engineering geologist and will be submitted to the County building department as part of the approval process. This report will be based on data collected from subsurface exploration, laboratory testing of samples, and surface mapping and will address the following issues. <ul style="list-style-type: none"> • Potential for surface fault rupture and turbine site location: The geotechnical report will investigate the Greenville, Corral Hollow-Carnegie, and the Midway faults (as appropriate to the location) and determine whether they pose a risk of surface rupture. Turbine foundations and power collection systems will be sited according to recommendations in this report. • Strong ground shaking: The geotechnical report will analyze the potential for strong ground shaking at the project site and provide turbine foundation design recommendations, as well as recommendations for power collection systems. • Slope failure: The geotechnical report will investigate the potential for slope failure (both seismically and nonseismically induced) and develop site-specific turbine foundation and power collection system plans engineered for the terrain, rock and soil types, and other conditions 	Prior to construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>present at the project site in order to provide long-term stability.</p> <ul style="list-style-type: none"> Expansive soils: The geotechnical report will assess the soil types at the project site and determine the best engineering designs to accommodate the soil conditions. Unstable cut or fill slopes: The geotechnical report will address geologic hazards related to the potential for grading to create unstable cut or fill slopes and make site-specific recommendations related to design and engineering. 				
<p>PEIR Mitigation Measure GEO-7a: Retain a qualified professional paleontologist to monitor significant ground-disturbing activities</p> <p>The applicant will retain a qualified professional paleontologist as defined by the SVP's <i>Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources</i> (2010) to monitor activities with the potential to disturb sensitive paleontological resources. Data gathered during detailed Project design will be used to determine the activities that will require the presence of a monitor. In general, these activities include any ground-disturbing activities involving excavation deeper than 3 feet in areas with high potential to contain sensitive paleontological resources. Recovered fossils will be prepared so that they can be properly documented. Recovered fossils will then be curated at a facility that will properly house and label them, maintain the association between the fossils and field data about the fossils' provenance, and make the information available to the scientific community.</p>	During project design and construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure GEO-7b: Educate construction personnel in recognizing fossil material</p> <p>The applicant will ensure that all construction personnel receive training provided by a qualified professional paleontologist experienced in teaching non-specialists to ensure that they can recognize fossil materials in the event any are discovered during construction.</p>	Prior to construction activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
<p>PEIR Mitigation Measure GEO-7c: Stop work if substantial fossil remains are encountered during construction</p> <p>If substantial fossil remains (particularly vertebrate remains) are discovered during earth disturbing activities, activities within 100 feet of the find will stop immediately until a state-registered professional geologist or qualified professional paleontologist can assess the nature and importance of the find and a qualified professional paleontologist can recommend appropriate treatment. Treatment may include preparation and recovery of fossil materials so that they can be housed in</p>	During construction activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The applicant will be responsible for ensuring that recommendations regarding treatment and reporting are implemented.				
Greenhouse Gas Emissions				
<p>PEIR Mitigation Measure GHG-2a: Implement best available control technology for heavy-duty vehicles</p> <p>The applicant will require existing trucks/trailers to be retrofitted with the best available technology and/or CARB-approved technology consistent with the CARB Truck and Bus Regulation (California Air Resources Board 2019). The CARB Truck and Bus Regulation applies to all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds.</p> <p>Starting January 1, 2015, the applicant must replace lighter trucks (GVWR of 14,001 to 26,000 pounds) with engines that are 20 years or older with newer trucks. The Applicant has the option to install a PM filter retrofit on a lighter truck by 2014 to make the truck exempt from replacement until January 1, 2020, and any lighter truck equipped with a PM filter retrofit prior to July 2011 would receive credit toward the compliance requirements for a heavier truck or bus in the same fleet.</p> <p>Starting January 1, 2012, the applicant is required to meet the engine model year schedule shown below for heavier trucks (GVWR greater than 26,000 pounds). To comply with the schedule, the applicant will install the best available PM filter on 1996 model year and newer engines and would replace the vehicle 8 years later. The Applicant will replace trucks with 1995 model year and older engines starting in 2015. Replacements with 2010 model year or newer engines meets the final requirements, but the applicant could also replace trucks with used trucks that would have a future compliance date on the schedule. For example, a replacement with a 2007 model year engine complies until 2023. By 2023 all trucks and buses must have 2010 model year engines with few exceptions.</p>	During construction and during operation if applicable	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
Engine Model Year Schedule for Heavier Trucks				
Engine Year	Requirement from January 1			
Pre-1994	No requirements until 2015, then 2010 engine			
1994–1995	No requirements until 2016, then 2010 engine			
1996–1999	PM filter from 2012 to 2020, then 2010 engine			
2000–2004	PM filter from 2013 to 2021, then 2010 engine			
2005–2006	PM filter from 2014 to 2022, then 2010 engine			
2007–2009	No requirements until 2023, then 2010 engine			
2010	Meets final requirements			

In addition, the applicant could comply with a phase-in option that would allow the applicant to decide which vehicles to retrofit or replace, regardless of engine model year. The applicant must report information about all heavier trucks starting January 31, 2012, to use this option.

The Applicant could comply by demonstrating that trucks have met the percentage requirement each year as shown in the table below. For example, by 2012 the applicant's fleet would need to have PM filters on 30% of the heavier trucks in the fleet. This option counts 2007 model year and newer engines originally equipped with PM filters toward compliance and would reduce the overall number of retrofit PM filters needed. Any engine with a PM filter regardless of model year would be compliant until at least 2020. Beginning January 1, 2020, all heavier trucks would need to meet the requirements specified in the Compliance Schedule for Heavier Trucks.

Phase-In Option for Heavier Trucks	
Compliance Date	Vehicles with PM Filters
1-Jan-12	30%
1-Jan-13	60%
1-Jan-14	90%
1-Jan-15	90%
1-Jan-16	100%

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
PEIR Mitigation Measure GHG-2b: Install low SF₆ leak rate circuit breakers and monitoring The applicant will ensure that any new circuit breaker installed at a substation has a guaranteed SF ₆ leak rate of 0.5% by volume or less. The applicant will provide Alameda County with documentation of compliance, such as specification sheets, prior to installation of the circuit breaker. In addition, the applicant will monitor the SF ₆ -containing circuit breakers at the substation consistent with Scoping Plan Measure H-6 for the detection and repair of leaks.	During construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
PEIR Mitigation Measure GHG-2c: Require new construction to use building materials containing recycled content The applicant will require the construction of all new substation and other permanent buildings to incorporate materials for which the sum of post-consumer recycled content plus one-half of the post-industrial content constitutes at least 10% of the total value of the materials in the Project.	During construction and operation	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
PEIR Mitigation Measure GHG-2d: Comply with construction and demolition debris management ordinance The applicant will comply with the County's revised Green Building Ordinance regarding construction and demolition debris as follows: (1) 100% of inert waste and 50% wood/vegetative/scrap metal not including Alternative Daily Cover (ADC) and unsalvageable material will be put to other beneficial uses at landfills, and (2) 100% of inert materials (concrete and asphalt) will be recycled or put to beneficial reuse.	During construction and demolition	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval
Hazards and Hazardous Materials				
PEIR Mitigation Measure HAZ-4: Perform a Phase I Environmental Site Assessment prior to construction activities and remediate if necessary (only including the portion of the mitigation measure relevant to the proposed project) If contamination is uncovered as part of Phase I or II environmental site assessments, remediation will be required. If materials such as asbestos-containing materials, lead-based paint, or PCB-containing equipment are identified, these materials will be properly managed and disposed of prior to or during the demolition process.	Prior to and during construction	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>Any contaminated soil identified on a project site must be properly disposed of in accordance with DTSC regulations in effect at the time. Hazardous wastes generated by the proposed project will be managed in accordance with the California Hazardous Waste Control Law (HSC, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulation (Title 22, CCR, Division 4.5).</p> <p>If, during construction/demolition of structures, soil or groundwater contamination is suspected, the construction/demolition activities will cease and appropriate health and safety procedures will be implemented, including the use of appropriate personal protective equipment (e.g., respiratory protection, protective clothing, helmets, goggles).</p>				
Hydrology and Water Quality				
<p>PEIR Mitigation Measure WQ-1: Comply with NPDES requirements</p> <p>Project contractors will obtain coverage under the Construction General Permit before the onset of any construction activities, because the Project would disturb 1 acre or more. A SWPPP will be developed by a qualified engineer or erosion control specialist in accordance with the appropriate Water Board's requirements for NPDES compliance and implemented prior to the issuance of any grading permit. The SWPPP will be kept onsite during construction activities and will be made available upon request to representatives of the Regional Water Boards.</p> <p>Compliance and coverage with the local stormwater management programs and Construction General Permit will require controls of pollutant discharges that utilize BMPs and technology to reduce erosion and sediments to meet water quality standards. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other nonpoint-source runoff. Measures range from source control, such as reduced surface disturbance, to the treatment of polluted runoff, such as detention basins.</p> <p>BMPs to be implemented as part of the Storm Water Management Program and Construction General Permit (and SWPPP) may include the following practices.</p> <ul style="list-style-type: none"> • Temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) will be employed to control erosion from disturbed areas. • Use a dry detention basin (which is typically dry except after a major rainstorm, when it will temporarily fill with stormwater), designed to 	Prior to and during all construction activities	County—adopt a Condition of Approval; Operator—implement	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>decrease runoff during storm events, prevent flooding, and allow for off-peak discharge. Basin features will include maintenance schedules for the periodic removal of sediments, excessive vegetation, and debris that may clog basin inlets and outlets.</p> <ul style="list-style-type: none"> • Cover or apply nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more) that could contribute sediment to waterways. • Enclose and cover exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways. • Ensure that no earth or organic material will be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water. • Prohibit the following types of materials from being rinsed or washed into the streets, shoulder areas, or gutters: concrete, solvents and adhesives, thinners, paints, fuels, sawdust, dirt, gasoline, asphalt and concrete saw slurry, and heavily chlorinated water. • Ensure that grass or other vegetative cover will be established on the construction site as soon as possible after disturbance. <p>The contractor will select a combination of BMPs (consistent with the Construction General Permit) that is expected to minimize runoff and remove contaminants from stormwater discharges. The final selection of BMPs will be subject to approval by the San Francisco Bay Regional Water Board and the Central Valley Water Board.</p> <p>The contractor will verify that a notice of intent has been filed with the State Water Board and that a SWPPP has been developed before allowing construction to begin. The contractor will perform inspections of the construction area, to verify that the BMPs specified in the SWPPP are properly implemented and maintained. The contractor will notify the appropriate Regional Water Board immediately if there is a noncompliance issue and will require compliance. If necessary, the contractor or their agent will require that additional BMPs be designed and implemented if those originally constructed do not achieve the identified performance standard.</p>				
Transportation/Traffic				
<p>PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan</p> <p>Prior to starting construction-related activities, the Applicant shall prepare and implement a Traffic Control Plan (TCP) that will reduce or eliminate impacts</p>	Prior to and during all construction activities	County—adopt a Condition of Approval; Operator—	County	Monitor compliance with Conditions of Approval

Table MMRP-1. Continued

EXHIBIT B, RESOLUTION Z-21-XX, Mitigation Monitoring and Reporting Program

Mitigation Measure	Timing	Implementing Party	Monitoring Party	Monitoring Actions
<p>associated with the proposed project. The TCP shall adhere to Alameda County, San Joaquin County, and Caltrans requirements, and must be submitted for review and approval of the County Public Works Department prior to implementation. The TCP shall include the following elements. The County and Caltrans may require additional elements to be identified during their review and approval of the TCP.</p> <ul style="list-style-type: none"> • Schedule construction hours to minimize concentrations of construction workers commuting to/from the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.). • Limit truck access to the project site during typical peak commute hours (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.). • Require that written notification be provided to contractors regarding appropriate haul routes to and from the project site, as well as the weight and speed limits on local county roads used to access the project site. • Provide access for emergency vehicles to and through the project site at all times. • When lane/road closures occur during delivery of oversized loads, provide advance notice to local fire, police, and emergency service providers to ensure that alternative evacuation and emergency routes are designated to maintain service response times. • Provide adequate onsite parking for construction trucks and worker vehicles. • Require suitable public safety measures in the project site and at the entrance roads, including fences, barriers, lights, flagging, guards, and signs, to give adequate warning to the public of the construction and of any dangerous conditions that could be encountered as a result thereof. • Complete road repairs on local public roads as needed during construction to prevent excessive deterioration. This work may include construction of temporary roadway shoulders to support any necessary detour lanes. • Repair or restore the road right-of-way to its original condition or better upon completion of the work. • Coordinate project-related construction activities, including schedule, truck traffic, haul routes, and the delivery of oversized or overweight materials, with Alameda County, Caltrans, and affected cities and counties to identify and minimize overlap with other area construction projects. 		implement		

Exhibit C

Mulqueeney Ranch Wind Repowering Project Statement of Overriding Considerations

Pursuant to the requirements of Public Resources Code Sections 21002, 21002.1, and 21081, and Section 15093 of the State CEQA Guidelines, the East County Board of Zoning Adjustments (EBZA) finds that approval of the proposed Mulqueeney Ranch Wind Repowering Project (project or proposed project), whose potential environmental impacts have been evaluated in the Final SEIR, and as indicated in the findings presented in Exhibit A, will result in the occurrence of significant effects that are not avoided or substantially lessened, as described in Exhibit A. These significant effects are listed below.

- **Project Impact BIO-11:** Avian mortality resulting from interaction with wind energy facilities
- **Project Impact BIO-14:** Turbine-related fatalities of special-status and other bats
- **Project Impact BIO-19:** Potential impact on the movement of any native resident or migratory wildlife species or established native resident or migratory wildlife corridors, and the use of native wildlife nursery sites
- **Air Quality (Cumulative):** Construction-related emissions of ROG and NO_x would be substantial, resulting in a cumulatively considerable contribution to a cumulative impact.
- **Biological Resources (Cumulative):** Mortality of hoary bats from interaction with wind energy facilities would result in a cumulatively considerable contribution to a cumulative impact.

Further, as required by CEQA Section 21081(b) and State CEQA Guidelines Section 15093, the EBZA finds that the unavoidable significant effects listed above are outweighed by specific overriding economic, legal, social, technological, or other benefits offered by the project. Specifically, the project will provide the benefits described below.

Environmental Benefits

California's Renewables Portfolio Standard (RPS) requires all electricity retailers in the state, including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators, to adopt RPS goals of obtaining 33% by the end of 2020, 40% by 2024, 50% by 2026, 60% by 2030, and 100% by 2045. Originally established in 2002 under Senate Bill (SB) 1078 and amended in 2006 and 2011 by SBs 107 and X1-2, respectively, the current RPS was codified at its current level by SB 100 in 2018.

Wind energy is a renewable energy source. The project will assist California in meeting the legislated RPS for the generation of renewable electric energy in the state both by maintaining renewable energy output and by enabling and accelerating the repowering of old-generation turbines, which are known to be hazardous to avian species.

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, establishes a statewide goal of reducing greenhouse gas (GHG) emissions to 1990 levels by 2020 and requires ARB and other state agencies to develop and enforce regulations and other initiatives for reducing GHG emissions. This statute also requires ARB to develop a “Scoping Plan” that describes the specific programs that California will employ to meet this goal. The Scoping Plan was first considered by ARB in 2008 and its first update was adopted on May 22, 2014. The RPS program is an integral part of the suite of GHG emissions reduction programs that are relied upon by the Scoping Plan. Therefore, the program will assist California in maintaining its legislated Global Warming Solutions Act criteria that require reductions in carbon dioxide and other GHG emissions, which in turn represent benefits in the region. Approval of the program will aid the County in meeting energy needs in an efficient and environmentally sound manner, as provided in the County General Plan, which encourages utilization of renewable energy resources.

Economic Benefits

The proposed project will provide new full-time jobs during construction. The project will provide economic benefits to the County and its residents by increased spending in the community as a result of construction and development-related work. In addition, the program is compatible with the existing agricultural use. It will promote the long-term economic viability of grazing in unincorporated Alameda County by providing financial support to property owners through a second income stream from ground leases within the project area. The property owners can use the funding to enhance or continue agricultural operations. Project road maintenance will also enhance agricultural operations by improving access throughout the project properties.

Technological Benefits

The project will contribute to technological benefits through the replacement of large numbers of existing wind energy collection systems with a smaller number of more technologically advanced systems. Although the new turbines are larger, the available evidence indicates that repowering with the improved technology could substantially reduce turbine-related avian fatalities (although fatalities remain a significant impact).

Safety Benefits

The project would install up to 36 new wind turbine generators, towers, and installation of a new power collection system. This would result in public safety benefits for several reasons: reductions in fire hazard, the underground placement of new collection lines, and improved turbine technology that reduces the risk of blade throw. Sections 3.9 and 3.19 of the SEIR provides a discussion of fire risks, and indicates that the most common causes of wildland fire at windfarms are hardware and/or conductor failures of power collection lines, dropping of collection lines, turbine malfunction or mechanical failure, and avian-related incidents. Because of their age, design, and large number, the existing turbines present a greater risk of fire ignition than do the proposed new turbines. The project, by replacing old turbines with new, fourth-generation turbines and undergrounding the electrical collection system, would therefore reduce the likelihood of fire ignition associated with

hardware failure, electrical line failure, and avian electrocutions. Installation of new turbines would also greatly reduce the potential and probability of blade throw or failure associated with existing wind turbines. Most fourth-generation turbines, such as those proposed for the project, are equipped with newer safety and engineering features to reduce the risk of blade failure and are designed for safe operation under normal conditions. The rotors of these turbines are provided with blade pitch controls that regulate the angle of the rotor blade into the wind, as well as redundant brake mechanisms that can control speed and shutdown or slowdown in response to excessive wind speed. Overall, the project would reduce the probability of blade throw, which in any case is far lower for new generation than for old-generation turbines.

Benefits to the Knowledge Base

Postconstruction monitoring, which will be required once the new turbines are in operation, will provide data to quantify the actual change in the extent of avian fatalities from repowering and the extent of avian fatalities for projects in the project area. This will contribute to the body of knowledge about avian fatalities in the Altamont Pass region and will support future environmental analyses and mitigations.

Summary

The County is obligated by Section 15093 of the State CEQA Guidelines to balance the competing interests of identified project benefits against the unavoidable environmental risks when determining whether to approve a project. The County finds that the project, with all the mitigation measures proposed, would best balance the advancement of wind technology, while also reducing the unavoidable impacts on protected or special-status avian wildlife species, including bats, golden eagles and other raptors, to the lowest acceptable level.