Executive Summary

This Draft Program Environmental Impact Report (PEIR) has been prepared in accordance with the provisions of the California Environmental Quality Act (CEQA) to evaluate the potential impacts of repowering the Alameda County portion of the Altamont Pass Wind Resources Area (APWRA), including two individual wind energy repowering projects: the Golden Hills Wind Energy Facility Repowering Project (Golden Hills Project), and the Patterson Pass Wind Farm Repowering Project (Patterson Pass Project). The PEIR is intended to identify the anticipated environmental impacts of conditional use permits (CUPs) that may be approved by Alameda County (County) for repowering windfarm projects in the Alameda County portion of the APWRA—a modified boundary of which is hereafter referred to as the *program area*—through 2018 and beyond: both those currently proposed—the individual projects—and those expected to be proposed (collectively, the *program* addressed in this PEIR).

This PEIR is intended to enable the County to comply with CEQA in approving the Golden Hills and Patterson Pass projects described in this PEIR, as well as to provide a basis for the preparation of CEQA documentation and review of applications for subsequent wind repowering projects. The County is the CEQA Lead Agency for the proposed and anticipated subsequent CUPs. This PEIR is the first tier of environmental documentation, providing program-level analysis of the complete repowering of the program area with new turbines, and project-level analysis of the two repowering projects. This analysis will be augmented or supplemented by second-tier environmental documents as appropriate when additional details for other specific repowering projects are developed.

The proposed and anticipated subsequent repowering projects that are evaluated in this PEIR would be located in eastern Alameda County, California. As required by Section 15123 of the State CEQA Guidelines, this Executive Summary contains the following.

- A brief summary of the proposed actions (wind repowering CUPS), including goals and objectives.
- Significant impacts and proposed mitigation measures.
- Alternatives that would reduce or avoid identified significant effects.
- Areas of controversy known to the Lead Agency, including issues raised by agencies and the public.
- Issues to be resolved.

ES.1 Summary of Proposed Wind Repowering CUPs

ES.1.1 Program/Project Location

The APWRA is an approximately 50,000-acre area that extends across the northeastern hills of Alameda County and into a small portion of Contra Costa County to the north (Figure 1-1). As noted above, this PEIR covers projects proposed in and around the Alameda County portion of the APWRA. The County will consider applications within the revised APWRA boundary that was established through an early phase of developing a Natural Communities Conservation Plan/Habitat

Conservation Plan (NCCP/HCP) in Alameda County (i.e., the program area). The program area assessed in this PEIR encompasses 43,358 acres (Figures 1-2 and 1-3).

ES.1.2 Background

The APWRA has supported numerous wind energy projects operated by numerous companies since the 1980s, after the State of California designated the area for production of renewable energy (in 1980) based on federal legislation passed in 1978 to achieve a range of renewable energy, source diversity, and market goals. The result of the designation was the development of a vast array of windfarms in the APWRA that was the largest of its kind in the United States by the mid-1990s.

In general, the current operating facilities consist of *old generation* turbines with limited electrical generation capacity (i.e., up to 300 kilovolts [kV]). With some exceptions, these projects can operate under the provisions of their existing CUPs until September 2018, at which time the operators would either apply to renew their CUPs, or the CUPs would expire. The wind operators intend to repower these projects—that is, remove the old generation turbines and replace them with modern, state-of-the-art turbines with generation capacities ranging up to 3 megawatts (MW).

Three wind operators are also subject to the requirements of the 2007 Settlement Agreement with two nongovernmental environmental advocacy organizations—the Golden Gate Audubon Society (Audubon) and Californians for Renewable Energy (CARE)—and with Alameda County. The Settlement Agreement required certain steps to be taken to reduce mortality of four focal raptor species (i.e., golden eagle, red-tailed hawk, American kestrel, and western burrowing owl), including the development of an NCCP or similar agreement as provided for under the California Fish and Game Code. Accordingly, the County began developing an NCCP/HCP in 2008, but in 2010 the largest operator (NextEra Energy Resources) reached a new and separate agreement with Audubon, CARE, and the state Attorney General regarding repowering its wind power assets. The 2010 agreement did not affect the requirement for an NCCP or similar agreement; but, in effect, the County and the companies shifted their focus to establishing mitigation measures for wind repowering that would apply to future projects and that would address the same issues. Preparation of a program EIR covering the anticipated repowering of the whole of the program area was chosen as the method to accomplish this.

ES.1.3 Anticipated Environmental Benefits

Repowering is anticipated to result in an array of environmental benefits. New technology, the substantial reduction in the number of turbines, and the undergrounding of electrical collection lines are expected to reduce the number of avian fatalities associated with the repowered facilities. Similarly, the more widely distributed facilities, in conjunction with the potential to decommission existing facilities, could facilitate habitat enhancement and a reduction in habitat fragmentation. New roads would be designed to more effectively protect surface water quality, and compensatory mitigation proposed in this PEIR would contribute to landscape-level conservation efforts both within the program area and in the wider eco-region.

The new turbines, while larger, would detract from views less from a viewer standpoint than do the numerous old-generation turbines, allowing for more prominent view of the rolling, grassy terrain of the program area.

New turbine design and technology would result in reduced fire hazard associated with hardware and electrical line failure and bird electrocution incidents. The reduced number of turbines and safety features incorporated into rotor design would reduce the risk of blade throw.

Fourth-generation turbines, being upwind turbines with relatively low rotational speeds and pitch control on the rotor blades, typically generate lower sound levels than the first- and second-generation turbines they are replacing.

ES.1.4 Program- and Project-Level Analysis

In compliance with the directive provided in the 2005 CUPs and the 2007 Settlement Agreement, the program as defined in this Draft PEIR has three separate but related components.

- The "continued operation of existing turbine facilities (and progressive removal under the repowering program)" as described in the 2007 Settlement Agreement and as permitted under the 2005 CUPs (described in Section 2.4).
- The anticipated approval of new CUPs to allow repowering of wind turbines in the Alameda County portion of the APWRA (described in Section 2.5).
- Two specific repowering proposals: the Golden Hills Project and the Patterson Pass Project (described in Section 2.6).

This document is designed to provide both program-level analysis of repowering of the APWRA, providing a framework for area-wide analysis, and project-level analysis of the two permit applications for specific repowering projects in the program area that have been submitted to the County.

- The Golden Hills Project, proposed by Golden Hills Wind, LLC (a subsidiary of NextEra Energy Resources, LLC).
- The Patterson Pass Project, proposed by EDF Renewable Energy (EDF RE—formerly known as enXco) through its operating subsidiary Patterson Pass Wind, LLC.

The Golden Hills and Patterson Pass projects are independent wind energy repowering projects that the County has chosen to analyze in this combined program/project EIR at a project level, together with a program-level analysis of the overall repowering of all the anticipated projects, including those for which specific applications have not yet been submitted. The project-level analyses will enable the specific projects to be approved separately from each other and from other repowering proposals. Their approval is not dependent on the approval of any other repowering project, and the approval of either will not cause the repowering of any other project. However, it is anticipated that these independent projects will substantially conform to repowering standards as described in this PEIR.

ES.1.5 Program Description

The program is the anticipated approval by the County of new CUPs to allow new windfarm uses in the APWRA, as permitted by both the *East County Area Plan* (ECAP) and the County Zoning Ordinance. Windfarm uses are conditionally permitted in the "A" (Agriculture) zone district, which encompasses the entire program area, and in areas designated under the ECAP as Large Parcel Agriculture (LPA), which applies to almost all of the program area. As a program EIR, this document analyzes a series of actions that are related geographically and that are likely to have similar

environmental effects that can be mitigated in similar ways (see State CEQA Guidelines Section 15168[a]). The series of actions—anticipated approvals of a series of CUPs—will result in progressive repowering of the APWRA: decommissioning of existing old-generation turbines, installation of new turbines, and operation for the expected life of the new turbines under a 30-year permit and conditions of approval that include implementation of the identified mitigation measures. When approving new CUPs for repowering, the County intends to facilitate such repowering projects through reliance on the mitigation measures contained in this PEIR as uniform standards where appropriate and by tiering from this PEIR to provide a framework for an area-wide analysis.

Two program alternatives for repowering of the APWRA have been identified for detailed analysis in this PEIR: Alternative 1, under which a maximum capacity of 417 MW in combined nameplate capacity would be developed; and Alternative 2, with a maximum capacity of 450 MW, which is being considered to serve the objective of increasing the output of clean energy and meeting state energy portfolio goals, in light of evidence that the current generation of wind turbines can greatly reduce avian mortality. With the exception of the nameplate capacity and the estimated difference in the total number of turbines (i.e., approximately 260 turbines under Alternative 1 and 281 under Alternative 2), the two alternatives are identical in the context of the description presented below.

The description in this PEIR of the proposed program addresses the components listed below.

Repowering Timeline

Once CEQA compliance is completed and new CUPs are approved, buildout of repowered windfarms is expected to take place over a 4-year period. CUPs will be issued for a period of 30 years.

Repowering Activities

A repowering project typically includes the following major steps.

- Temporary meteorological tower installation.
- Temporary staging area set-up.
- Existing wind turbine removal.
- Temporary meteorological tower removal.
- Road infrastructure upgrades.
- Wind turbine construction.
    - Final site selection and preparation.
    - Batch plant construction.
    - Foundation excavation and construction.
    - Crane pad construction.
    - Tower assembly.
    - Installation of turbine nacelle.
    - Attachment of rotors.
- Collection system upgrades and installation.

- Communication system installation.
- Permanent meteorological tower installation.
- Reclamation of landscape.

Operations and Maintenance (O&M) Activities

Turbines would be operated in accordance with manufacturer recommendations and avoidance and minimization measures set forth in this PEIR. Seasonal shutdown of individual turbines may be required as an adaptive management action, but only if impacts on avian species are higher than anticipated in the estimates presented in this PEIR (Section 3.4, *Biological Resources*). Repowered turbines, once installed, would not be permanently shut down or decommissioned prior to the end of the permit term, proposed for a 30-year period.

Maintenance activities would consist of equipment replacement, collection system repair, and road maintenance as necessary.

ES.1.6 Project Descriptions

Golden Hills

Golden Hills proposes to repower an existing wind energy facility in the program area with new-generation turbines, pursuant to the *2010 Agreement to Repower Turbines in the Altamont Pass Wind Resource Area* (see Section 2.6.1). The proposed Golden Hills Wind Energy Facility Repowering Project (Golden Hills Project) would decommission and remove 775 existing wind turbines on the site, install up to 52 new 1.7 MW GE turbines, make improvements to related infrastructure, and yield a nameplate capacity of 88.4 MW. The project site encompasses 38 separate parcels on more than 4,500 acres, on which there are seven CUPs currently in effect.

Patterson Pass

The Patterson Pass Project would entail repowering of the existing 21.8 MW windfarm, permitted under CUP C-8263, ENXCO, Inc. / Patterson Pass Farms, owned by Patterson Pass Wind Farm, LLC, an operating subsidiary of EDF Renewable Energy (EDF RE). The existing windfarm originally comprised 336 Nordtank and Bonus 65 kW turbines, of which 317 turbines remain operational. The repowered project would consist of 8–12 turbines with a total nameplate capacity of 19.8 MW. The site consists of three parcels encompassing 952 acres.

ES.2 APWRA Repowering Objectives

The two primary objectives of the County in considering applications for repowering in the program area are to facilitate efficient wind energy production through repowering and to avoid and minimize impacts on terrestrial and avian wildlife caused by repowered wind turbine construction, operation, and maintenance. The County's specific objectives are listed below.

- Allow for appropriate and compatible repowering and operation of wind turbines consistent with existing repowering timeline requirements set forth in the 2005 CUPs (as amended in 2007), related agreements, and project-specific power purchase agreements.

- Reduce avian mortality caused by wind energy generation in the program area through repowering.
- Meet the County's goals to provide environmentally sensitive, clean-renewable wind energy for the twenty-first century as identified in the *East County Area Plan* (Policies 168 through 175 and Programs 73 through 76).
- Help meet the Governor's Executive Order S-14-08 in meeting the Renewable Portfolio Standard target that all retail sellers of electricity serve 33% of their load with renewable energy by 2020.
- Contribute to state progress toward air quality improvement and greenhouse gas emission reduction goals, as set forth in Assembly Bill 32.
- Improve habitat quality in the program area through removal of roads and existing wind turbines and their supporting infrastructure, resulting in lower overall operational footprint, and providing a wide range of habitat benefits to sensitive terrestrial and avian species.

ES.3 Project Objectives

ES.3.1 Golden Hills Project

As recognized by the County, the proposed Golden Hills Project would serve the public and market need for electrical energy, the documented and public policy need to produce renewable energy, and the widely held public and regulatory agency need to substantially reduce avian mortality related to wind turbine operations. The goals of the applicant are to repower its windfarm assets in compliance with the existing CUPs and applicable laws, reduce avian mortality, and meet County general plan and state goals for production of renewable energy.

The applicant's objectives for the proposed project include implementation of provisions of the 2010 *Agreement to Repower Turbines at the Altamont Pass Wind Resource Area*. Consistent with that agreement, Golden Hills intends to replace approximately 2,400 turbines between 2010 and 2014, and will shut down all its existing turbines no later than 2015. Golden Hills' objective over 4 years is to replace its estimated 160 MW of generating capacity in two phases, beginning with the 88.4 Golden Hills Phase 1 Project, which is the project addressed in this PEIR. Golden Hills Phase 2 will be evaluated in a separate CEQA document. The 2010 Agreement was in part intended to satisfy NextEra's obligations under the 2007 Settlement Agreement.

ES.3.2 Patterson Pass Project

The Patterson Pass Project objective is to repower the existing Patterson Pass Wind Farm on private land owned by EDF RE and develop a 19.8 MW commercially viable wind energy facility that would deliver renewable energy to the power grid to meet the state's RPS goals. Patterson Pass Wind, LLC and its parent company EDF RE were party to the 2007 Settlement Agreement described above; the proposed repowering would fulfill EDF RE's obligations under that agreement.

ES.4 Impacts and Mitigation Measures

ES.4.1 Summary of Impacts

Impacts identified in this EIR are summarized in Table ES-1 (presented at the end of this summary). For potentially significant impacts, mitigation measures are identified where feasible to reduce the impact on the environmental resources to a less-than-significant level. Refer to Chapter 3, *Impact Analysis*, for a detailed discussion of impacts and detailed description of the mitigation measures.

Overall, either of the two program alternatives considered in this EIR would have a range of impacts, most of which could be reduced to less-than-significant levels with mitigation measures identified in this PEIR. Three specific impact areas were found to be significant even with mitigation, leaving these impacts significant and unavoidable. Significant and unavoidable impacts are related to turbine operational impacts on birds and bats; air quality impacts, both at the program level and cumulatively; and cumulative traffic impacts during windfarm construction.

Impacts resulting from construction and operation of the two specific projects considered in this EIR would be similar to those identified for the program alternatives, with unavoidable operational impacts on birds and bats and construction-related air quality impacts.

Mitigation measures identified include both standard construction measures, such as compliance with NPDES requirements, and site-specific measures to avoid identified significant impacts on resources, including avoidance of a small area of prime farmland, avoidance of adverse effects on views from an undeveloped portion of a scenic roadway, and avoidance of known or unknown cultural resources. Mitigation measures for biological resources were developed to be consistent with the East Alameda County Conservation Strategy and the Settlement Agreements.

ES.4.2 Significant and Unavoidable Impacts

Section 21067 of CEQA and Sections 15126(b) and 15126.2(b) of the State CEQA Guidelines require that an EIR describe any significant impacts, including those that can be mitigated but not reduced to a less-than-significant level. Furthermore, where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should also be described. This PEIR has identified the following significant and unavoidable impacts.

- **Air Quality:** Construction emissions of reactive organic gases (ROG) and nitrogen oxides (NO_x) for program Alternatives 1 and 2 would exceed the BAAQMD thresholds after implementation of Mitigation Measures AQ-1 and AQ-2 (Table 3.3-11); accordingly, cumulative construction impacts would be significant and unavoidable. For the Golden Hills and the Patterson Pass projects individually, construction emissions of NO_x would exceed the BAAQMD thresholds after implementation of Mitigation Measures AQ-1 and AQ-2 (Tables 3.3-16 and 3.3-21); accordingly, cumulative construction impacts would be significant and unavoidable.
- **Biological Resources:** Operation of either of the program alternatives, as well as the Golden Hills and Patterson Pass projects considered separately, would result in turbine-related mortality of raptors, other birds, and bats migrating through and wintering in the program area. Although mitigation can reduce these impacts, the likelihood of ongoing turbine-related mortality would constitute a significant and unavoidable impact.

- **Cumulative Traffic Impacts:** Cumulative impacts on traffic operation, safety hazards, emergency access, and bicycle facilities could result from program and project construction activities if they take place concurrently with construction of the Sand Hill Repowering Project, which has been identified as resulting in a significant and unavoidable traffic impact.

ES.5 Alternatives

ES.5.1 Alternatives Evaluated

Two program alternatives were considered at an equal level in this EIR.

- Program Alternative 1, with a maximum capacity of 417 MW.
- Program Alternative 2, with a maximum capacity of 450 MW.

With the exception of the nameplate capacity and the resultant total number of turbines (i.e., a maximum of approximately 260 turbines under Alternative 1 and 281 turbines under Alternative 2), these two alternatives are identical.

Several other alternatives were considered at a comparative level. Chapter 4 presents the alternatives screening process and the results of the analysis. In addition to the two alternatives described above, the following five alternatives were evaluated.

- No Project—No Repowering, Reauthorization of Existing CUPs
- No Repowering—Full Decommissioning
- Fewer New Turbines
- Avoid Specific Biologically Sensitive / Constrained Areas
- No New Roads

ES.5.2 Comparison of Alternatives

The impacts of program Alternatives 1 and 2 were found to be very similar. Because turbines were assumed to be installed in projects consistent with the size typically proposed, approximately 80 MW per project, construction on a daily and seasonal basis would be the same. Because the number of turbines associated with program Alternative 2 would be only 21 more than that associated with program Alternative 1, the additional construction period would not be much longer than under Alternative 1. Therefore, impacts related to construction, such as air emissions and traffic, would be the same.

Because program Alternative 2 would result in the construction of more turbines, generating more power, that alternative would have a greater impact related to bird and bat mortality, an impact found to be significant and unavoidable under all alternatives with the exception of the No Project alternative. Other impacts that may be higher under program Alternative 2 than under program Alternative 1, such as impacts related to cultural or paleontological resources, visual resources, or impacts related to erosion, could all be reduced to a less-than-significant level by the same mitigation measures as those provided for program Alternative 1.

For the other alternatives considered at a comparative level, Table 4-2 presents a summary matrix of the program impacts in comparison with the five alternatives.

No feasible alternatives would reduce the significant and unavoidable impacts of the project to a less-than-significant level. Of all of the alternatives evaluated, the No Project - No Repowering, Reauthorization of Existing CUPs alternative would have greater impacts on birds and bats, as older models of turbines would not be replaced with models that reduce bird and bat mortality. The Fewer New Turbines alternative would reduce overall impacts slightly, with the exception of GHG. GHG impacts would be greater, because the benefits of full repowering would be reduced. The No New Roads alternative would reduce impacts associated with grading and road construction but would substantially increase impacts related to air emissions and GHG, because helicopters would be used for construction. The Avoid Specific Biologically Sensitive / Constrained Areas alternative would have the same impacts of either of the program alternatives, and could be implemented at either the 417MW or 450MW level, but would reduce the significant impacts associated with disturbance of biological resources at specific geographic locations. These impacts are not significant and unavoidable, as they can be reduced to a less-than-significant level by feasible mitigation measures identified in this EIR, but the impacts would be avoided under the Avoid Specific Biologically Sensitive / Constrained Areas alternative.

ES.5.3 Environmentally Superior Alternative

As described in more detail in Chapter 4, the No Project—No Repowering, Reauthorization of Existing CUPs alternative would have greater impacts on birds and bats, as older models of turbines would not be replaced with models that reduce bird and bat mortality. The Fewer New Turbines alternative would reduce overall impacts slightly, with the exception of GHG emissions. GHG impacts would be greater, as the benefits of full repowering would be reduced. The No New Roads alternative would reduce impacts associated with grading and road construction but would substantially increase impacts related to air pollutant and GHG emissions, as helicopters would be used for construction. The Avoid Specific Biologically Sensitive / Constrained Areas alternative would have the same impacts as either program alternative and could be implemented at either the 417 MW or 450 MW level, but would reduce the significant impacts associated with disturbance of biological resources at specific geographic locations. These impacts are not significant and unavoidable, as they can be reduced to a less-than-significant level by feasible mitigation measures identified in this EIR, but the impacts would be avoided under the Avoid Specific Biologically Sensitive / Constrained Areas alternative.

As described in more detail in Chapter 4, the No Repowering, Full Decommissioning alternative would have the least environmental impacts of all of the alternatives analyzed. For this reason, it would be the environmentally superior alternative.

ES.6 Potential Areas of Controversy/Issues to be Resolved

The areas of controversy and issues to be resolved concerning operation of wind turbines in the APWRA and concerning repowering that have been expressed in the past are listed below. These items are addressed in this EIR.

- The environmental impacts of the repowering program.
- The effectiveness of the various strategies to reduce and minimize avian mortality and other adverse impacts on wildlife (e.g., new wind turbine technology, site-specific measures, grazing management, conservation strategies).
- The benefit of repowering as a means of substantially and significantly reducing the amount of avian injury and mortality resulting from most existing types of turbines.
- The appropriate means of ensuring that repowered turbines have the lowest possible rate of avian mortality.
- How to provide incentives for an increased rate of repowering, including expanding areas where wind power facilities may be permitted.

ES.7 How to Comment on this Draft EIR

Reviewers of the Draft PEIR should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate significant environmental effects.

The Draft PEIR has been released for a 45-day public review period from June 6, 2014, to 5 p.m. July 21, 2014. Comments on this draft PEIR are due to the County no later than 5 p.m. on July 21, 2014, and can be forwarded by any of the following methods.

Mail: Sandra Rivera
Assistant Planning Director
224 W. Winton, Room 111
Hayward, CA 94544

Email: Sandra.Rivera@acgov.org

Fax: 510-785-8793

A public meeting will be held at 1:30 p.m. on June 26, 2014, in the City of Pleasanton Council Chambers, at a meeting of the East County Board of Zoning Adjustments, 200 Old Bernal Avenue, Pleasanton. Comments on the Draft PEIR will be received during the regularly scheduled meeting.

Table ES-1. Summary of Impacts and Mitigation Measures for Repowering the APWRA

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Aesthetics			
AES-1a-1: Temporary visual impacts caused by construction activities—program Alternative 1: 417 MW	S	AES-1: Limit construction to daylight hours	LTS
AES-1a-2: Temporary visual impacts caused by construction activities—program Alternative 2: 450 MW	S	AES-1: Limit construction to daylight hours	LTS
AES-1b: Temporary visual impacts caused by construction activities—Golden Hills Project	S	AES-1: Limit construction to daylight hours	LTS
AES-1c: Temporary visual impacts caused by construction activities—Patterson Pass Project	S	AES-1: Limit construction to daylight hours	LTS
AES-2a-1: Have a substantial adverse effect on a scenic vista—program Alternative 1: 417 MW	S	AES-2a: Require site development review	LTS
		AES-2b: Maintain site free of debris and restore abandoned roadways	
		AES-2c: Screen surplus parts and materials	
AES-2a-2: Have a substantial adverse effect on a scenic vista—program Alternative 2: 450 MW	S	AES-2a: Require site development review	LTS
		AES-2b: Maintain site free of debris and restore abandoned roadways	
		AES-2c: Screen surplus parts and materials	
AES-2b: Have a substantial adverse effect on a scenic vista—Golden Hills Project	LTS		LTS
AES-2c: Have a substantial adverse effect on a scenic vista—Patterson Pass Project	LTS		LTS
AES-3a-1: Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a scenic highway—program Alternative 1: 417 MW	S	AES-2a: Require site development review	LTS
		AES-2b: Maintain site free of debris and restore abandoned roadways	
		AES-2c: Screen surplus parts and materials	
		AES-3: Do not construct turbines on the undeveloped portion of the Golden Hills project area along Flynn Road	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
AES-3a-2: Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a scenic highway—program Alternative 2: 450 MW	S	AES-2a: Require site development review	LTS
		AES-2b: Maintain site free of debris and restore abandoned roadways	
		AES-2c: Screen surplus parts and materials	
		AES-3: Do not construct turbines on the undeveloped portion of the Golden Hills project area along Flynn Road	
AES-3b: Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a scenic highway—Golden Hills Project	S	AES-2a: Require site development review	LTS
		AES-2b: Maintain site free of debris and restore abandoned roadways	
		AES-2c: Screen surplus parts and materials	
		AES-3: Do not construct turbines on the undeveloped portion of the Golden Hills project area along Flynn Road	
AES-3c: Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a scenic highway—Patterson Pass Project	LTS		LTS
AES-4a-1: Substantially degrade the existing visual character or quality of the site and its surroundings—program Alternative 1: 417 MW	S	AES-2a: Require site development review	LTS
		AES-2b: Maintain site free of debris and restore abandoned roadways	
		AES-2c: Screen surplus parts and materials	
		AES-3: Do not construct turbines on the undeveloped portion of the Golden Hills project area along Flynn Road	
AES-4a-2: Substantially degrade the existing visual character or quality of the site and its surroundings—program Alternative 2: 450 MW	S	AES-2a: Require site development review	LTS
		AES-2b: Maintain site free of debris and restore abandoned roadways	
		AES-2c: Screen surplus parts and materials	

Table ES-1. Continued

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		AES-3: Do not construct turbines on the undeveloped portion of the Golden Hills project area along Flynn Road	
AES-4b: Substantially degrade the existing visual character or quality of the site and its surroundings—Golden Hills Project	S	AES-2a: Require site development review	LTS
		AES-2b: Maintain site free of debris and restore abandoned roadways	
		AES-2c: Screen surplus parts and materials	
		AES-3: Do not construct turbines on the undeveloped portion of the Golden Hills project area along Flynn Road	
AES-4c: Substantially degrade the existing visual character or quality of the site and its surroundings—Patterson Pass Project	S	AES-2a: Require site development review	LTS
		AES-2b: Maintain site free of debris and restore abandoned roadways	
		AES-2c: Screen surplus parts and materials	
AES-5a-1: Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area—program Alternative 1: 417 MW	S	AES-5: Analyze shadow flicker distance and mitigate effects or incorporate changes into project design to address shadow flicker	LTS
AES-5a-2: Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area—program Alternative 2: 450 MW	S	AES-5: Analyze shadow flicker distance and mitigate effects or incorporate changes into project design to address shadow flicker	LTS
AES-5b: Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area—Golden Hills Project	S	AES-5: Analyze shadow flicker distance and mitigate effects or incorporate changes into project design to address shadow flicker	LTS
AES-5c: Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area—Patterson Pass Project	S	AES-5: Analyze shadow flicker distance and mitigate effects or incorporate changes into project design to address shadow flicker	LTS
AES-6a-1: Consistency with state and local policies—program Alternative 1: 417 MW	S	AES-2a: Require site development review	LTS
		AES-2b: Maintain site free of debris and restore abandoned roadways	
		AES-2c: Screen surplus parts and materials	
		AES-3: Do not construct turbines on the undeveloped portion of the Golden Hills project area along Flynn Road	

Table ES-1. Continued

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		AES-5: Analyze shadow flicker distance and mitigate effects or incorporate changes into project design to address shadow flicker	
AES-6a-2: Consistency with state and local policies—program Alternative 2: 450 MW	S	AES-2a: Require site development review	LTS
		AES-2b: Maintain site free of debris and restore abandoned roadways	
		AES-2c: Screen surplus parts and materials	
		AES-3: Do not construct turbines on the undeveloped portion of the Golden Hills project area along Flynn Road	
		AES-5: Analyze shadow flicker distance and mitigate effects or incorporate changes into project design to address shadow flicker	
AES-6b: Consistency with state and local policies— Golden Hills Project	S	AES-2a: Require site development review	LTS
		AES-2b: Maintain site free of debris and restore abandoned roadways	
		AES-2c: Screen surplus parts and materials	
		AES-3: Do not construct turbines on the undeveloped portion of the Golden Hills project area along Flynn Road	
		AES-5: Analyze shadow flicker distance and mitigate effects or incorporate changes into project design to address shadow flicker	
AES-6c: Consistency with state and local policies—Patterson Pass Project	S	AES-2a: Require site development review	LTS
		AES-2b: Maintain site free of debris and restore abandoned roadways	
		AES-2c: Screen surplus parts and materials	
		AES-3: Do not construct turbines on the undeveloped portion of the Golden Hills project area along Flynn Road	
		AES-5: Analyze shadow flicker distance and mitigate effects or incorporate changes into project design to address shadow flicker	

Table ES-1. Continued

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Agricultural and Forestry Resources			
AG-1a-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use—program Alternative 1: 417 MW	S	AG-1: Avoid conversion of Prime Farmland	LTS
AG-1a-2: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use—program Alternative 2: 450 MW	S	AG-1: Avoid conversion of Prime Farmland	LTS
AG-1b: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use—Golden Hills Project	NI		
AG-1c: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use—Patterson Pass Project	NI		
AG-2a-1: Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract—program Alternative 1: 417 MW	NI		
AG-2a-2: Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract—program Alternative 2: 450 MW	NI		
AG-2b: Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract—Golden Hills Project	NI		
AG-2c: Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract—Patterson Pass Project	NI		
AG-3a-1: Conflict with existing zoning for, or cause rezoning of forest land, timberland, or timberland zoned Timberland Production—program Alternative 1: 417 MW	NI		
AG-3a-2: Conflict with existing zoning for, or cause rezoning of forest land, timberland, or timberland zoned Timberland Production—program Alternative 2: 450 MW	NI		
AG-3b: Conflict with existing zoning for, or cause rezoning of forest land, timberland, or timberland zoned Timberland Production—Golden Hills Project	NI		
AG-3c: Conflict with existing zoning for, or cause rezoning of forest land, timberland, or timberland zoned Timberland Production—Patterson Pass Project	NI		
AG-4a-1: Result in the loss of forest land or conversion of forest land to non-forest use—Program Alternative 1: 417 MW	NI		

Table ES-1. Continued

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
AG-4a-2: Result in the loss of forest land or conversion of forest land to non-forest use—Program Alternative 2: 450 MW	NI		
AG-4b: Result in the loss of forest land or conversion of forest land to non-forest use—Golden Hills Project	NI		
AG-4c: Result in the loss of forest land or conversion of forest land to non-forest use—Patterson Pass Project	NI		
AG-5a-1: Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use—program Alternative 1: 417 MW	S	AG-1: Avoid conversion of Prime Farmland	LTS
AG-5a-2: Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use—Program Alternative 2: 450 MW	S	AG-1: Avoid conversion of Prime Farmland	LTS
AG-5b: Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use—Golden Hills Project	NI		
AG-5c: Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use—Patterson Pass Project	NI		
Air Quality			
AQ-1a-1: Conflict with or obstruct implementation of the applicable air quality plan—program Alternative 1: 417 MW	LTS		
AQ-1a-2: Conflict with or obstruct implementation of the applicable air quality plan—Program Alternative 2: 450 MW	LTS		
AQ-1b: Conflict with or obstruct implementation of the applicable air quality plan—Golden Hills Project	LTS		
AQ-1c: Conflict with or obstruct implementation of the applicable air quality plan—Patterson Pass Project	LTS		
AQ-2a-1: Violate any air quality standard or contribute substantially to an existing or projected air quality violation—program Alternative 1: 417 MW	S	AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures	SU

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures	
AQ-2a-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation—program Alternative 2: 450 MW	S	AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures	SU
		AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures	
AQ-2b: Violate any air quality standard or contribute substantially to an existing or projected air quality violation—Golden Hills Project	S	AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures	SU
		AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures	
AQ-2c: Violate any air quality standard or contribute substantially to an existing or projected air quality violation—Patterson Pass Project	S	AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures	SU
		AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures	
AQ-3a-1: Result in a 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 (including releasing emissions that exceed quantitative thresholds for ozone precursors)—Program Alternative 1: 417 MW	S	AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures	SU
		AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures	
AQ-3a-2: Result in a 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 (including releasing emissions that exceed quantitative thresholds for ozone precursors)—Program Alternative 2: 450 MW	S	AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures	SU

Table ES-1. Continued

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures	
AQ-3b: Result in a 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 (including releasing emissions that exceed quantitative thresholds for ozone precursors)—Golden Hills Project	S	AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures	SU
		AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures	
AQ-3c: Result in a 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 (including releasing emissions that exceed quantitative thresholds for ozone precursors)—Patterson Pass Project	S	AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures	SU
		AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures	
AQ-4a-1: Expose sensitive receptors to substantial pollutant concentrations—program Alternative 1: 417 MW	S	AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures	LTS
		AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures	
AQ-4a-2: Expose sensitive receptors to substantial pollutant concentrations—Program Alternative 2: 450 MW	S	AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures	LTS
		AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures	
AQ-4b: Expose sensitive receptors to substantial pollutant concentrations—Golden Hills Project	S	AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures	LTS

Table ES-1. Continued

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures	
AQ-4c: Expose sensitive receptors to substantial pollutant concentrations—Patterson Pass Project	S	AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures	LTS
		AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures	
AQ-5a-1: Create objectionable odors affecting a substantial number of people—program Alternative 1: 417 MW	LTS		
AQ-5a-2: Create objectionable odors affecting a substantial number of people—Program Alternative 2: 450 MW	LTS		
AQ-5b: Create objectionable odors affecting a substantial number of people—Golden Hills Project	LTS		
AQ-5c: Create objectionable odors affecting a substantial number of people—Patterson Pass Project	LTS		
Biological Resources			
BIO-1a-1: Potential for ground-disturbing activities to result in adverse effects on special-status plants or habitat occupied by special-status plants—program Alternative 1: 417 MW	S	BIO-1a: Conduct surveys to determine the presence or absence of special-status plant species	LTS
		BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	
		BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones	
		BIO-1d: Compensate for impacts on special-status plant species	
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
BIO-1a-2: Potential for ground-disturbing activities to result in adverse effects on special-status plants or habitat occupied by special-status plants—program Alternative 2: 450 MW	S	BIO-1a: Conduct surveys to determine the presence or absence of special-status plant species	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	
		BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones	
		BIO-1d: Compensate for impacts on special-status plant species	
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
BIO-1b: Potential for ground-disturbing activities to result in adverse effects on special-status plants or habitat occupied by special-status plants—Golden Hills Project	S	BIO-1a: Conduct surveys to determine the presence or absence of special-status plant species	LTS
		BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	
		BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones	
		BIO-1d: Compensate for impacts on special-status plant species	
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
BIO-1c: Potential for ground-disturbing activities to result in adverse effects on special-status plants or habitat occupied by special-status plants—Patterson Pass Project	S	BIO-1a: Conduct surveys to determine the presence or absence of special-status plant species	LTS
		BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	
		BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones	
		BIO-1d: Compensate for impacts on special-status plant species	
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
BIO-2a-1: Adverse effects on special-status plants and natural communities resulting from the introduction and spread of invasive plant species—program Alternative 1: 417 MW	S	BIO-2: Prevent introduction, spread, and establishment of invasive plant species	LTS

Table ES-1. Continued

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
BIO-2a-2: Adverse effects on special-status plants and natural communities resulting from the introduction and spread of invasive plant species—program Alternative 2: 450 MW	S	BIO-2: Prevent introduction, spread, and establishment of invasive plant species	LTS
BIO-2b: Adverse effects on special-status plants and natural communities resulting from the introduction and spread of invasive plant species—Golden Hills Project	S	BIO-2: Prevent introduction, spread, and establishment of invasive plant species	LTS
BIO-2c: Adverse effects on special-status plants and natural communities resulting from the introduction and spread of invasive plant species—Patterson Pass Project	S	BIO-2: Prevent introduction, spread, and establishment of invasive plant species	LTS
BIO-3a-1: Potential mortality of or loss of habitat for vernal pool branchiopods and curved-footed hygrotus diving beetle—program Alternative 1: 417 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-3b: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-footed hygrotus diving beetle	
BIO-3a-2: Potential mortality of or loss of habitat for vernal pool branchiopods and curved-footed hygrotus diving beetle—program Alternative 2: 450 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-3b: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-footed hygrotus diving beetle	
BIO-3b: Potential mortality of or loss of habitat for vernal pool branchiopods and curved-footed hygrotus diving beetle—Golden Hills Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-3b: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-footed hygrotus diving beetle	
BIO-3c: Potential mortality of or loss of habitat for vernal pool branchiopods and curved-footed hygrotus diving beetle—Patterson Pass Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-3b: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-footed hygrotus diving beetle	
BIO-4a-1: Potential disturbance or mortality of and loss of suitable habitat for valley elderberry longhorn beetle—program Alternative 1: 417 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle	
		BIO-4b: Compensate for direct and indirect effects on valley elderberry longhorn beetle	
BIO-4a-2: Potential disturbance or mortality of and loss of suitable habitat for valley elderberry longhorn beetle—program Alternative 2: 450 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-4b: Compensate for direct and indirect effects on valley elderberry longhorn beetle	
BIO-4b: Potential disturbance or mortality of and loss of suitable habitat for valley elderberry longhorn beetle—Golden Hills Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle	
		BIO-4b: Compensate for direct and indirect effects on valley elderberry longhorn beetle	
BIO-4c: Potential disturbance or mortality of and loss of suitable habitat for valley elderberry longhorn beetle—Patterson Pass Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle	
		BIO-4b: Compensate for direct and indirect effects on valley elderberry longhorn beetle	
BIO-5a-1: 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—program Alternative 1: 417 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians	

Table ES-1. Continued

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-5b: Compensate for loss of habitat for special-status amphibians	
		BIO-5c: Restore disturbed annual grasslands	
BIO-5a-2: 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—program Alternative 2: 450 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians	
		BIO-5b: Compensate for loss of habitat for special-status amphibians	
		BIO-5c: Restore disturbed annual grasslands	
BIO-5b: 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—Golden Hills Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians	
		BIO-5b: Compensate for loss of habitat for special-status amphibians	
		BIO-5c: Restore disturbed annual grasslands	
BIO-5c: 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—Patterson Pass Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians	
		BIO-5b: Compensate for loss of habitat for special-status amphibians	
		BIO-5c: Restore disturbed annual grasslands	
BIO-6a-1: Potential disturbance or mortality of and loss of suitable habitat for western pond turtle—program Alternative 1: 417 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-6: Conduct preconstruction surveys for western pond turtle and monitor construction activities if turtles are observed	
BIO-6a-2: Potential disturbance or mortality of and loss of suitable habitat for western pond turtle—program Alternative 2: 450 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-6: Conduct preconstruction surveys for western pond turtle and monitor construction activities if turtles are observed	
BIO-6b: Potential disturbance or mortality of and loss of suitable habitat for western pond turtle—Golden Hills Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-6: Conduct preconstruction surveys for western pond turtle and monitor construction activities if turtles are observed	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
BIO-6c: Potential disturbance or mortality of and loss of suitable habitat for western pond turtle—Patterson Pass Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-6: Conduct preconstruction surveys for western pond turtle and monitor construction activities if turtles are observed	
BIO-7a-1: Potential disturbance or mortality of and loss of suitable habitat for Blainville's horned lizard, Alameda whipsnake, and San Joaquin coachwhip—program Alternative 1: 417 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles	
		BIO-7b: Compensate for loss of habitat for special-status reptiles	
BIO-7a-2: Potential disturbance or mortality of and loss of suitable habitat for Blainville's horned lizard, Alameda whipsnake, and San Joaquin coachwhip—program Alternative 2: 450 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles	
		BIO-7b: Compensate for loss of habitat for special-status reptiles	

Table ES-1. Continued

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
BIO-7b: Potential disturbance or mortality of and loss of suitable habitat for Blainville's horned lizard, Alameda whipsnake, and San Joaquin coachwhip—Golden Hills Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles	
		BIO-7b: Compensate for loss of habitat for special-status reptiles	
BIO-7c: Potential disturbance or mortality of and loss of suitable habitat for Blainville's horned lizard, Alameda whipsnake, and San Joaquin coachwhip—Patterson Pass Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles	
		BIO-7b: Compensate for loss of habitat for special-status reptiles	
BIO-8a-1: Potential construction-related disturbance or mortality of special-status and non–special-status migratory birds—program Alternative 1: 417 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-5c: Restore disturbed annual grasslands	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non–special-status nesting birds	
		BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl	
BIO-8a-2: Potential construction-related disturbance or mortality of special-status and non–special-status migratory birds—program Alternative 2: 450 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non–special-status nesting birds	
		BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl	
BIO-8b: Potential construction-related disturbance or mortality of special-status and non–special-status migratory birds—Golden Hills Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non-special-status nesting birds	
		BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl	
BIO-8c: Potential construction-related disturbance or mortality of special-status and non-special-status migratory birds—Patterson Pass Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non-special-status nesting birds	
		BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl	
BIO-9a-1: Permanent and temporary loss of occupied habitat for western burrowing owl and foraging habitat for tricolored blackbird and other special-status and non–special-status birds—program Alternative 1: 417 MW	S	BIO-5b: Compensate for loss of habitat for special-status amphibians	LTS
		BIO-5c: Restore disturbed annual grasslands	
		BIO-9: Compensate for the permanent loss of occupied habitat for western burrowing owl	
BIO-9a-2: Permanent and temporary loss of occupied habitat for western burrowing owl and foraging habitat for tricolored blackbird and other special-status and non–special-status birds—program Alternative 2: 450 MW	S	BIO-5b: Compensate for loss of habitat for special-status amphibians	LTS
		BIO-5c: Restore disturbed annual grasslands	
		BIO-9: Compensate for the permanent loss of occupied habitat for western burrowing owl	
BIO-9b: Permanent and temporary loss of occupied habitat for western burrowing owl and foraging habitat for tricolored blackbird and other special-status and non–special-status birds—Golden Hills Project	S	BIO-5b: Compensate for loss of habitat for special-status amphibians	LTS
		BIO-5c: Restore disturbed annual grasslands	
		BIO-9: Compensate for the permanent loss of occupied habitat for western burrowing owl	
BIO-9c: Permanent and temporary loss of occupied habitat for western burrowing owl and foraging habitat for tricolored blackbird and other special-status and non-special-status birds—Patterson Pass Project	S	BIO-5b: Compensate for loss of habitat for special-status amphibians	LTS
		BIO-5c: Restore disturbed annual grasslands	
		BIO-9: Compensate for the permanent loss of occupied habitat for western burrowing owl	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
BIO-10a-1: Potential injury or mortality of and loss of habitat for San Joaquin kit fox and American badger—program Alternative 1: 417 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species BIO-5c: Restore disturbed annual grasslands BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger	LTS
BIO-10a-2: Potential injury or mortality of and loss of habitat for San Joaquin kit fox and American badger—program Alternative 2: 450 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species BIO-5c: Restore disturbed annual grasslands BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger	LTS
BIO-10b: Potential injury or mortality of and loss of habitat for San Joaquin kit fox and American badger—Golden Hills Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species BIO-5c: Restore disturbed annual grasslands BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger	
BIO-10c: Potential injury or mortality of and loss of habitat for San Joaquin kit fox and American badger—Patterson Pass Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger	
		BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger	
BIO-11a-1: Avian mortality resulting from interaction with wind energy facilities—program Alternative 1: 417 MW	S	BIO-11a: Prepare a project-specific avian protection plan	SU
		BIO-11b: Site turbines to minimize potential mortality of birds	
		BIO-11c: Use turbine designs that reduce avian impacts	
		BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure	
		BIO-11e: Retrofit existing infrastructure to minimize risk to raptors	
		BIO-11f: Discourage prey for raptors	
		BIO-11g: Implement postconstruction avian fatality monitoring for all repowering projects	
		BIO-11h: Compensate for the loss of raptors, including golden eagles, by contributing to conservation efforts	
		BIO-11i: Implement an avian adaptive management program	
BIO-11a-2: Avian mortality resulting from interaction with wind energy facilities—program Alternative 2: 450 MW	S	BIO-11a: Prepare a project-specific avian protection plan	SU
		BIO-11b: Site turbines to minimize potential mortality of birds	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-11c: Use turbine designs that reduce avian impacts	
		BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure	
		BIO-11e: Retrofit existing infrastructure to minimize risk to raptors	
		BIO-11f: Discourage prey for raptors	
		BIO-11g: Implement postconstruction avian fatality monitoring for all repowering projects and implement adaptive management measures as necessary	
		BIO-11h: Compensate for the loss of raptors, including golden eagles, by contributing to conservation efforts	
		BIO-11i: Implement an avian adaptive management program	
BIO-11b: Avian mortality resulting from interaction with wind energy facilities—Golden Hills Project	S	BIO-11a: Prepare a project-specific avian protection plan	SU
		BIO-11b: Site turbines to minimize potential mortality of birds	
		BIO-11c: Use turbine designs that reduce avian impacts	
		BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure	
		BIO-11e: Retrofit existing infrastructure to minimize risk to raptors	
		BIO-11f: Discourage prey for raptors	
		BIO-11g: Implement postconstruction avian fatality monitoring for all repowering projects and implement adaptive management measures as necessary	
		BIO-11h: Compensate for the loss of raptors, including golden eagles, by contributing to conservation efforts	
		BIO-11i: Implement an avian adaptive management program	
BIO-11c: Avian mortality resulting from interaction with wind energy facilities—Patterson Pass Project	S	BIO-11a: Prepare a project-specific avian protection plan	SU
		BIO-11b: Site turbines to minimize potential mortality of birds	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-11c: Use turbine designs that reduce avian impacts	
		BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure	
		BIO-11e: Retrofit existing infrastructure to minimize risk to raptors	
		BIO-11f: Discourage prey for raptors	
		BIO-11g: Implement postconstruction avian fatality monitoring for all repowering projects and implement adaptive management measures as necessary	
		BIO-11h: Compensate for the loss of raptors, including golden eagles, by contributing to conservation efforts	
		BIO-11i: Implement an avian adaptive management program	
BIO-12a-1: Potential mortality or disturbance of bats from roost removal or disturbance—program Alternative 1: 417 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-12a: Conduct bat roost surveys	
		BIO-12b: Avoid removing or disturbing bat roosts	
BIO-12a-2: Potential mortality or disturbance of bats from roost removal or disturbance—program Alternative 2: 450 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-12a: Conduct bat roost surveys	
		BIO-12b: Avoid removing or disturbing bat roosts	
BIO-12b: Potential mortality or disturbance of bats from roost removal or disturbance—Golden Hills Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	LTS
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-12a: Conduct bat roost surveys	
		BIO-12b: Avoid removing or disturbing bat roosts	

Table ES-1. Continued

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
BIO-12c: Potential mortality or disturbance of bats from roost removal or disturbance—Patterson Pass Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species BIO-12a: Conduct bat roost surveys BIO-12b: Avoid removing or disturbing bat roosts	LTS
BIO-13a-1: Potential for construction activities to temporarily remove or alter bat foraging habitat—program Alternative 1: 417 MW	LTS		
BIO-13a-2: Potential for construction activities to temporarily remove or alter bat foraging habitat—program Alternative 2: 450 MW	LTS		
BIO-13b: Potential for construction activities to temporarily remove or alter bat foraging habitat—Golden Hills Project	LTS		
BIO-13c: Potential for construction activities to temporarily remove or alter bat foraging habitat—Patterson Pass Project	LTS		
BIO-14a-1: Turbine-related fatalities of special-status and other bats—program Alternative 1: 417 MW	S	BIO-14a: Site and select turbines to minimize potential mortality of bats BIO-14b: Implement postconstruction bat fatality monitoring program for all repowering projects BIO-14c: Prepare and publish annual monitoring reports on the findings of bat use of the project area and fatality monitoring results BIO-14d: Develop and implement a bat adaptive management plan BIO-14e: Compensate for expenses incurred by rehabilitating injured bats	SU
BIO-14a-2: Turbine-related fatalities of special-status and other bats—program Alternative 2: 450 MW	S	BIO-14a: Site and select turbines to minimize potential mortality of bats BIO-14b: Implement postconstruction bat fatality monitoring program for all repowering projects BIO-14c: Prepare and publish annual monitoring reports on the findings of bat use of the project area and fatality monitoring results	SU

Table ES-1. Continued

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-14d: Develop and implement a bat adaptive management plan	
		BIO-14e: Compensate for expenses incurred by rehabilitating injured bats	
BIO-14b: Turbine-related fatalities of special-status and other bats—Golden Hills Project	S	BIO-14a: Site and select turbines to minimize potential mortality of bats	SU
		BIO-14b: Implement postconstruction bat fatality monitoring program for all repowering projects	
		BIO-14c: Prepare and publish annual monitoring reports on the findings of bat use of the project area and fatality monitoring results	
		BIO-14d: Develop and implement a bat adaptive management plan	
		BIO-14e: Compensate for expenses incurred by rehabilitating injured bats	
BIO-14c: Turbine-related fatalities of special-status and other bats—Patterson Pass Project	S	BIO-14a: Site and select turbines to minimize potential mortality of bats	SU
		BIO-14b: Implement postconstruction bat fatality monitoring program for all repowering projects	
		BIO-14c: Prepare and publish annual monitoring reports on the findings of bat use of the project area and fatality monitoring results	
		BIO-14d: Develop and implement a bat adaptive management plan	
		BIO-14e: Compensate for expenses incurred by rehabilitating injured bats	
BIO-15a-1: Potential for road infrastructure upgrades to result in adverse effects on alkali meadow—program Alternative 1: 417 MW	S	BIO-15: Compensate for the loss of alkali meadow habitat	LTS
BIO-15a-2: Potential for road infrastructure upgrades to result in adverse effects on alkali meadow—program Alternative 2: 450 MW	S	BIO-15: Compensate for the loss of alkali meadow habitat	LTS
BIO-15b: Potential for road infrastructure upgrades to result in adverse effects on alkali meadow—Golden Hills Project	S	BIO-15: Compensate for the loss of alkali meadow habitat	LTS
BIO-15c: Potential for road infrastructure upgrades to result in adverse effects on alkali meadow—Patterson Pass	NI		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
BIO-16a-1: Potential for road infrastructure upgrades to result in adverse effects on riparian habitat—program Alternative 1: 417 MW	S	BIO-16: Compensate for the loss of riparian habitat	LTS
BIO-16a-2: Potential for road infrastructure upgrades to result in adverse effects on riparian habitat—program Alternative 2: 450 MW	S	BIO-16: Compensate for the loss of riparian habitat	LTS
BIO-16b: Potential for road infrastructure upgrades to result in adverse effects on riparian habitat—Golden Hills Project	S	BIO-16: Compensate for the loss of riparian habitat	LTS
BIO-16c: Potential for road infrastructure upgrades to result in adverse effects on riparian habitat—Patterson Pass Project	S	BIO-16: Compensate for the loss of riparian habitat	LTS
BIO-17a-1: Potential for ground-disturbing activities to result in direct adverse effects on common habitats—program Alternative 1: 417 MW	LTS		
BIO-17a-2: Potential for ground-disturbing activities to result in direct adverse effects on common habitats—program Alternative 2: 450 MW	LTS		
BIO-17b: Potential for ground-disturbing activities to result in direct adverse effects on common habitats—Golden Hills Project	LTS		
BIO-17c: Potential for ground-disturbing activities to result in direct adverse effects on common habitats—Patterson Pass Project	LTS		
BIO-18a-1: Potential for road infrastructure upgrades to result in adverse effects on wetlands—program Alternative 1: 417 MW	S	BIO-18: Compensate for the loss of wetlands	LTS
BIO-18a-2: Potential for road infrastructure upgrades to result in adverse effects on wetlands—program Alternative 2: 450 MW	S	BIO-18: Compensate for the loss of wetlands	LTS
BIO-18b: Potential for road infrastructure upgrades to result in adverse effects on wetlands—Golden Hills Project	S	BIO-18: Compensate for the loss of wetlands	LTS
BIO-18c: Potential for road infrastructure upgrades to result in adverse effects on wetlands—Patterson Pass Project	S	BIO-18: Compensate for the loss of wetlands	LTS
BIO-19a-1: 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—program Alternative 1: 417 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	SU
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle	
		BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles	
		BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non–special-status nesting birds	
		BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl	
		BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger	
		BIO-11b: Site turbines to minimize potential mortality of birds	
		BIO-11c: Use turbine designs that reduce avian impacts	
		BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure	
		BIO-11e: Retrofit existing infrastructure to minimize risk to raptors	
		BIO-11i: Implement an avian adaptive management program	
		BIO-12a: Conduct bat roost surveys	
		BIO-12b: Avoid removing or disturbing bat roosts	
		BIO-14a: Site and select turbines to minimize potential mortality of bats	
		BIO-14d: Develop and implement a bat adaptive management plan	
BIO-19a-2: 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—program Alternative 2: 450 MW	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	SU
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle	
		BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles	
		BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non–special-status nesting birds	
		BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl	
		BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger	
		BIO-11b: Site turbines to minimize potential mortality of birds	
		BIO-11c: Use turbine designs that reduce avian impacts	
		BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure	
		BIO-11e: Retrofit existing infrastructure to minimize risk to raptors	
		BIO-11i: Implement an avian adaptive management program	
		BIO-12a: Conduct bat roost surveys	
		BIO-12b: Avoid removing or disturbing bat roosts	
		BIO-14a: Site and select turbines to minimize potential mortality of bats	
		BIO-14d: Develop and implement a bat adaptive management plan	
BIO-19b: Potential impact on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites—Golden Hills Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	SU

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle	
		BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles	
		BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non–special-status nesting birds	
		BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl	
		BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger	
		BIO-11b: Site turbines to minimize potential mortality of birds	
		BIO-11c: Use turbine designs that reduce avian impacts	
		BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure	
		BIO-11e: Retrofit existing infrastructure to minimize risk to raptors	
		BIO-11i: Implement an avian adaptive management program	
		BIO-12a: Conduct bat roost surveys	
		BIO-12b: Avoid removing or disturbing bat roosts	
		BIO-14a: Site and select turbines to minimize potential mortality of bats	
		BIO-14d: Develop and implement a bat adaptive management plan	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
BIO-19c: Potential impact on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites—Patterson Pass Project	S	BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	SU
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species	
		BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle	
		BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles	
		BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non–special-status nesting birds	
		BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl	
		BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger	
		BIO-11b: Site turbines to minimize potential mortality of birds	
		BIO-11c: Use turbine designs that reduce avian impacts	
		BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure	
		BIO-11e: Retrofit existing infrastructure to minimize risk to raptors	
		BIO-11i: Implement an avian adaptive management program	
		BIO-12a: Conduct bat roost surveys	
		BIO-12b: Avoid removing or disturbing bat roosts	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-14a: Site and select turbines to minimize potential mortality of bats	
		BIO-14d: Develop and implement a bat adaptive management plan	
BIO-20a-1. Conflict with local plans or policies—program Alternative 1: 417 MW	S	BIO-1a: Conduct surveys to determine the presence or absence of special-status species	LTS
		BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	
		BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones	
		BIO-1d: Compensate for impacts on special-status plant species	
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-footed hygrotus diving beetle	
		BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle	
		BIO-4b: Compensate for direct and indirect effects on valley elderberry longhorn beetle	
		BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians	
		BIO-5b: Compensate for loss of habitat for special-status amphibians	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles	
		BIO-7b: Compensate for loss of habitat for special-status reptiles	
		BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non-special-status nesting birds	
		BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-9: Compensate for the permanent loss of foraging habitat for western burrowing owl	
		BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger	
		BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger	
		BIO-15: Compensate for the loss of alkali meadow habitat	
		BIO-16: Compensate for the loss of riparian habitat	
		BIO-18: Compensate for the loss of wetlands	
BIO-20a-2. Conflict with local plans or policies—program Alternative 2: 450 MW	S	BIO-1a: Conduct surveys to determine the presence or absence of special-status species	LTS
		BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	
		BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones	
		BIO-1d: Compensate for impacts on special-status plant species	
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-footed hygrotus diving beetle	
		BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle	
		BIO-4b: Compensate for direct and indirect effects on valley elderberry longhorn beetle	
		BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians	
		BIO-5b: Compensate for loss of habitat for special-status amphibians	
		BIO-5c: Restore disturbed annual grasslands	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles	
		BIO-7b: Compensate for loss of habitat for special-status reptiles	
		BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non-special-status nesting birds	
		BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl	
		BIO-9: Compensate for the permanent loss of foraging habitat for western burrowing owl	
		BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger	
		BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger	
		BIO-15: Compensate for the loss of alkali meadow habitat	
		BIO-16: Compensate for the loss of riparian habitat	
		BIO-18: Compensate for the loss of wetlands	
BIO-20b. Conflict with local plans or policies—Golden Hills Project	S	BIO-1a: Conduct surveys to determine the presence or absence of special-status species	LTS
		BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	
		BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones	
		BIO-1d: Compensate for impacts on special-status plant species	
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-footed hygrotus diving beetle	
		BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-4b: Compensate for direct and indirect effects on valley elderberry longhorn beetle	
		BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians	
		BIO-5b: Compensate for loss of habitat for special-status amphibians	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles	
		BIO-7b: Compensate for loss of habitat for special-status reptiles	
		BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non-special-status nesting birds	
		BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl	
		BIO-9: Compensate for the permanent loss of foraging habitat for western burrowing owl	
		BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger	
		BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger	
		BIO-15: Compensate for the loss of alkali meadow habitat	
		BIO-16: Compensate for the loss of riparian habitat	
		BIO-18: Compensate for the loss of wetlands	
BIO-20c. Conflict with local plans or policies—Patterson Pass Project	S	BIO-1a: Conduct surveys to determine the presence or absence of special-status species	LTS
		BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	
		BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones	
		BIO-1d: Compensate for impacts on special-status plant species	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		BIO-3a: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-footed hygrotus diving beetle	
		BIO-4a: Implement measures to avoid or protect habitat for valley elderberry longhorn beetle	
		BIO-4b: Compensate for direct and indirect effects on valley elderberry longhorn beetle	
		BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians	
		BIO-5b: Compensate for loss of habitat for special-status amphibians	
		BIO-5c: Restore disturbed annual grasslands	
		BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles	
		BIO-7b: Compensate for loss of habitat for special-status reptiles	
		BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non-special-status nesting birds	
		BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl	
		BIO-9: Compensate for the permanent loss of foraging habitat for western burrowing owl	
		BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger	
		BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger	
		BIO-15: Compensate for the loss of alkali meadow habitat	
		BIO-16: Compensate for the loss of riparian habitat	
		BIO-18: Compensate for the loss of wetlands	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
BIO-21a-1: Conflict with provisions of an adopted HCP/NCCP or other approved local, regional, or state habitat conservation plan—program Alternative 1: 417 MW	NI		
BIO-21a-2: Conflict with provisions of an adopted HCP/NCCP or other approved local, regional, or state habitat conservation plan—program Alternative 2: 450 MW	NI		
BIO-21b: Conflict with provisions of an adopted HCP/NCCP or other approved local, regional, or state habitat conservation plan—Golden Hills Project	NI		
BIO-21c: Conflict with provisions of an adopted HCP/NCCP or other approved local, regional, or state habitat conservation plan—Patterson Pass Project	NI		
Cultural Resources			
CUL-1a-1: Cause a substantial adverse change in the significance of a historical resource—program Alternative 1: 417 MW	S	CUL-1a: Avoid historic resources	LTS
		CUL-1b: Appropriate recordation of historic resources	
CUL-1a-2: Cause a substantial adverse change in the significance of a historical resource—program Alternative 2: 450 MW	S	CUL-1a: Avoid historic resources	LTS
		CUL-1b: Appropriate recordation of historic resources	
CUL-1b: Cause a substantial adverse change in the significance of a historic resource—Golden Hills Project	S	CUL-1a: Avoid historic resources	LTS
		CUL-1b: Appropriate recordation of historic resources	
CUL-1c: Cause a substantial adverse change in the significance of a historic resource—Patterson Pass Project	NI		
CUL-2a-1: Cause a substantial adverse change in the significance of an archaeological resource—program Alternative 1: 417 MW	S	CUL-2a: Conduct a preconstruction cultural field survey and cultural resources inventory and evaluation	LTS
		CUL-2b: Develop a treatment plan for any identified significant cultural resources	
		CUL-2c: Conduct worker awareness training for archaeological resources prior to construction	
		CUL-2d: Stop work if cultural resources are encountered during ground-disturbing activities	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
CUL-2a-2: Cause a substantial adverse change in the significance of an archaeological resource—program Alternative 2: 450 MW	S	CUL-2a: Conduct a preconstruction cultural field survey and cultural resources inventory and evaluation	LTS
		CUL-2b: Develop a treatment plan for any identified significant cultural resources	
		CUL-2c: Conduct worker awareness training for archaeological resources prior to construction	
		CUL-2d: Stop work if cultural resources are encountered during ground-disturbing activities	
CUL-2b: Cause a substantial adverse change in the significance of an archaeological resource—Golden Hills Project	S	CUL-2a: Conduct a preconstruction cultural field survey and cultural resources inventory and evaluation	LTS
		CUL-2b: Develop a treatment plan for any identified significant cultural resources	
		CUL-2c: Conduct worker awareness training for archaeological resources prior to construction	
		CUL-2d: Stop work if cultural resources are encountered during ground-disturbing activities	
		CUL-2e: Avoid all cultural resources during construction and operation	
CUL-2c: Cause a substantial adverse change in the significance of an archaeological resource—Patterson Pass Project	S	CUL-2a: Conduct a preconstruction cultural field survey and cultural resources inventory and evaluation	LTS
		CUL-2b: Develop a treatment plan for any identified significant cultural resources	
		CUL-2c: Conduct worker awareness training for archaeological resources prior to construction	
		CUL-2d: Stop work if cultural resources are encountered during ground-disturbing activities	
CUL-3a-1: Disturb any human remains, including those interred outside of formal cemeteries—program Alternative 1: 417 MW	S	CUL-3: Stop work if human remains are encountered during ground-disturbing activities	LTS
CUL-3a-2: Disturb any human remains, including those interred outside of formal cemeteries—program Alternative 2: 450 MW	S	CUL-3: Stop work if human remains are encountered during ground-disturbing activities	LTS
CUL-3b: Disturb any human remains, including those interred outside of formal cemeteries—Golden Hills Project	S	CUL-3: Stop work if human remains are encountered during ground-disturbing activities	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
CUL-3c: Disturb any human remains, including those interred outside of formal cemeteries—Patterson Pass Project	S	CUL-3: Stop work if human remains are encountered during ground-disturbing activities	LTS
Geology, Soils, Mineral Resources, and Paleontological Resources			
GEO-1a-1: 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—program Alternative 1: 417 MW	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-1a-2: 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—program Alternative 2: 450 MW	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-1b: 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—Golden Hills Project	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-1c: 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—Patterson Pass Project	LTS		
GEO-2a-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, as a result of strong seismic ground shaking—program Alternative 1: 417 MW	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-2a-2: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, as a result of strong seismic ground shaking—program Alternative 2: 450 MW	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-2b: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, as a result of strong seismic ground shaking— Golden Hills Project	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-2c: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, as a result of strong seismic ground shaking— Patterson Pass Project	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-3a-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, as a result of seismic-related ground failure, including landsliding and liquefaction—program Alternative 1: 417 MW	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
GEO-3a-2: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, as a result of seismic-related ground failure, including landsliding and liquefaction—program Alternative 2: 450 MW	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-3b: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, as a result of seismic-related ground failure, including landsliding and liquefaction—Golden Hills Project	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-3c: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, as a result of seismic-related ground failure, including landsliding and liquefaction—Patterson Pass Project	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-4a-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, as a result of landsliding—program Alternative 1: 417 MW	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-4a-2: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, as a result of landsliding—program Alternative 2: 450 MW	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-4b: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, as a result of landsliding—Golden Hills Project	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-4c: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death as a result of landsliding—Patterson Pass Project	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-5a-1: Result in substantial soil erosion or the loss of topsoil—program Alternative 1: 417 MW	LTS		
GEO-5a-2: Result in substantial soil erosion or the loss of topsoil—program Alternative 2: 450 MW	LTS		
GEO-5b: Result in substantial soil erosion or the loss of topsoil—Golden Hills Project	LTS		
GEO-5c: Result in substantial soil erosion or the loss of topsoil—Patterson Pass Project	LTS		
GEO-6a-1: Be located on expansive soil, creating substantial risks to life or property—program Alternative 1: 417 MW	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
GEO-6a-2: Be located on expansive soil, creating substantial risks to life or property—program Alternative 2: 450 MW	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-6b: Be located on expansive soil, creating substantial risks to life or property—Golden Hills Project	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-6c: Be located on expansive soil, creating substantial risks to life or property—Patterson Pass Project	S	GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
GEO-7a-1: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature—program Alternative 1: 417 MW	S	GEO-7a: Retain a qualified professional paleontologist to monitor significant ground-disturbing activities GEO-7b: Educate construction personnel in recognizing fossil material GEO-7c: Stop work if substantial fossil remains are encountered during construction	LTS
GEO-7a-2: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature—program Alternative 2: 450 MW	S	GEO-7a: Retain a qualified professional paleontologist to monitor significant ground-disturbing activities GEO-7b: Educate construction personnel in recognizing fossil material GEO-7c: Stop work if substantial fossil remains are encountered during construction	LTS
GEO-7b: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature—Golden Hills Project	S	GEO-7a: Retain a qualified professional paleontologist to monitor significant ground-disturbing activities GEO-7b: Educate construction personnel in recognizing fossil material GEO-7c: Stop work if substantial fossil remains are encountered during construction	LTS
GEO-7c: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature—Patterson Pass Project	S	GEO-7a: Retain a qualified professional paleontologist to monitor significant ground-disturbing activities GEO-7b: Educate construction personnel in recognizing fossil material	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		GEO-7c: Stop work if substantial fossil remains are encountered during construction	
Greenhouse Gas Emissions			
GHG-1a-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment—program Alternative 1: 417 MW	LTS		
GHG-1a-2: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment—program Alternative 2: 450 MW	LTS		
GHG-1b: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment—Golden Hills Project	LTS		
GHG-1c: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment—Patterson Pass Project	LTS		
GHG-2a-1: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases—program Alternative 1: 417 MW	S	GHG-2a: Implement best available control technology for heavy-duty vehicles	LTS
		GHG-2b: Install low SF_6 leak rate circuit breakers and monitoring	
		GHG-2c: Require new construction to use building materials containing recycled content	
		GHG-2d: Comply with construction and demolition debris management ordinance	
GHG-2a-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases—program Alternative 2: 450 MW	S	GHG-2a: Implement best available control technology for heavy-duty vehicles	LTS
		GHG-2b: Install low SF_6 leak rate circuit breakers and monitoring	
		GHG-2c: Require new construction to use building materials containing recycled content	
		GHG-2d: Comply with construction and demolition debris management ordinance	
GHG-2b: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases—Golden Hills Project	S	GHG-2a: Implement best available control technology for heavy-duty vehicles	LTS
		GHG-2b: Install low SF_6 leak rate circuit breakers and monitoring	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		GHG-2c: Require new construction to use building materials containing recycled content	
		GHG-2d: Comply with construction and demolition debris management ordinance	
GHG-2c: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases—Patterson Pass Project	S	GHG-2a: Implement best available control technology for heavy-duty vehicles	LTS
		GHG-2b: Install low SF_6 leak rate circuit breakers and monitoring	
		GHG-2c: Require new construction to use building materials containing recycled content	
		GHG-2d: Comply with construction and demolition debris management ordinance	
Hazards and Hazardous Materials			
HAZ-1a-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials—program Alternative 1: 417 MW	LTS		
HAZ-1a-2: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials—program Alternative 2: 450 MW	LTS		
HAZ-1b: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials—Golden Hills Project	LTS		
HAZ-1c: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials—Patterson Pass Project	LTS		
HAZ-2a-1: Create 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—program Alternative 1: 417 MW	LTS		
HAZ-2a-2: Create 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—program Alternative 2: 450 MW	LTS		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
HAZ-2b: Create 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—Golden Hills Project	LTS		
HAZ-2c: Create 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—Patterson Pass Project	LTS		
HAZ-3a-1: Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school—program Alternative 1: 417 MW	NI		
HAZ-3a-2: Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school—program Alternative 2: 450 MW	NI		
HAZ-3b: Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school—Golden Hills Project	NI		
HAZ-3c: Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school—Patterson Pass Project	NI		
HAZ-4a-1: Location on a hazardous materials site, creating a significant hazard to the public or the environment—program Alternative 1: 417 MW	S	HAZ-4: Perform a Phase I Environmental Site Assessment prior to construction activities and remediate if necessary	LTS
HAZ-4a-2: Location on a hazardous materials site, creating a significant hazard to the public or the environment—program Alternative 2: 450 MW	S	HAZ-4: Perform a Phase I Environmental Site Assessment prior to construction activities and remediate if necessary	LTS
HAZ-4b: Location on a hazardous materials site, creating a significant hazard to the public or the environment—Golden Hills Project	S	HAZ-4: Perform a Phase I Environmental Site Assessment prior to construction activities and remediate if necessary	LTS
HAZ-4c: Location on a hazardous materials site, creating a significant hazard to the public or the environment—Patterson Pass Project	S	HAZ-4: Perform a Phase I Environmental Site Assessment prior to construction activities and remediate if necessary	LTS
HAZ-5a-1: Location 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 for people residing or working in the project area—program Alternative 1: 417 MW	S	HAZ-5: Coordinate with the Contra Costa ALUC prior to final design	LTS
HAZ-5a-2: Location 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 for people residing or working in the project area—program Alternative 2: 450 MW	S	HAZ-5: Coordinate with the Contra Costa ALUC prior to final design	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
HAZ-5b: Location 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 for people residing or working in the project area—Golden Hills Project	LTS		
HAZ-5c: Location 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 for people residing or working in the project area—Patterson Pass Project	LTS		
HAZ-6a-1: Location within the vicinity of a private airstrip, resulting in a safety hazard for people residing or working in the project area—program Alternative 1: 417 MW	LTS		
HAZ-6a-2: Location within the vicinity of a private airstrip, resulting in a safety hazard for people residing or working in the project area—program Alternative 2: 450 MW	LTS		
HAZ-6b: Location within the vicinity of a private airstrip, resulting in a safety hazard for people residing or working in the project area—Golden Hills Project	LTS		
HAZ-6c: Location within the vicinity of a private airstrip, resulting in a safety hazard for people residing or working in the project area—Patterson Pass Project	LTS		
HAZ-7a-1: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan—program Alternative 1: 417 WM	S	TRA-1: Develop and implement a construction traffic control plan	LTS
HAZ-7a-2: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan—program Alternative 2: 450 WM	S	TRA-1: Develop and implement a construction traffic control plan	LTS
HAZ-7b: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan—Golden Hills Project	S	TRA-1: Develop and implement a construction traffic control plan	LTS
HAZ-7c: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan—Patterson Pass Project	LTS	TRA-1: Develop and implement a construction traffic control plan	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
HAZ-8a-1: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands—program Alternative 1: 417 WM	LTS		
HAZ-8a-2: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands—program Alternative 2: 450 WM	LTS		
HAZ-8b: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands—Golden Hills Project	LTS		
HAZ-8c: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands—Patterson Pass Project	LTS		
HAZ-9a-1: During normal operation, the effects of bending and stress on rotor blades over time could lead to blade failure and become a potential blade throw hazard—program Alternative 1: 417 MW	LTS		
HAZ-9a-2: During normal operation, the effects of bending and stress on rotor blades over time could lead to blade failure and become a potential blade throw hazard—program Alternative 2: 450 MW	LTS		
HAZ-9b: During normal operation, the effects of bending and stress on rotor blades over time could lead to blade failure and become a potential blade throw hazard—Golden Hills Project	LTS		
HAZ-9c: During normal operation, the effects of bending and stress on rotor blades over time could lead to blade failure and become a potential blade throw hazard—Patterson pass Project	LTS		
Hydrology and Water Quality			
WQ-1a-1: Violate any water quality standards or waste discharge requirements—program Alternative 1: 417 MW	S	WQ-1: Comply with NPDES requirements	LTS
WQ-1a-2: Violate any water quality standards or waste discharge requirements—program Alternative 2: 450 MW	S	WQ-1: Comply with NPDES requirements	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
WQ-1b: Violate any water quality standards or waste discharge requirements—Golden Hills Project	S	WQ-1: Comply with NPDES requirements	LTS
WQ-1c: Violate any water quality standards or waste discharge requirements—Patterson Pass Project	S	WQ-1: Comply with NPDES requirements	LTS
WQ-2a-1: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)—program Alternative 1: 417 MW	LTS		
WQ-2a-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)—program Alternative 2: 450 MW	LTS		
WQ-2b: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)—Golden Hills Project	LTS		
WQ-2c: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)—Patterson Pass Project	LTS		
WQ-3a-1: 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—program Alternative 1: 417 MW	S	WQ-1: Comply with NPDES requirements	LTS
WQ-3a-2: 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—program Alternative 2: 450 MW	S	WQ-1: Comply with NPDES requirements	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
WQ-3b: 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—Golden Hills Project	S	WQ-1: Comply with NPDES requirements	LTS
WQ-3c: 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—Patterson Pass Project	S	WQ-1: Comply with NPDES requirements	LTS
WQ-4a-1: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite—program Alternative 1: 417 MW	S	WQ-1: Comply with NPDES requirements	LTS
WQ-4a-2: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite—program Alternative 2: 450 MW	S	WQ-1: Comply with NPDES requirements	LTS
WQ-4b: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite—Golden Hills Project	S	WQ-1: Comply with NPDES requirements	LTS
WQ-4c: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite—Patterson Pass Project	S	WQ-1: Comply with NPDES requirements	LTS
WQ-5a-1: 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—program Alternative 1: 417 MW	S	WQ-1: Comply with NPDES requirements	LTS
WQ-5a-2: 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—program Alternative 2: 450 MW	S	WQ-1: Comply with NPDES requirements	LTS
WQ-5b: 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—Golden Hills Project	S	WQ-1: Comply with NPDES requirements	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
WQ-5c: 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—Patterson Pass Project	S	WQ-1: Comply with NPDES requirements	LTS
WQ-6a-1: Otherwise substantially degrade water quality—program Alternative 1: 417 MW	S	WQ-1: Comply with NPDES requirements	LTS
WQ-6a-2: Otherwise substantially degrade water quality—program Alternative 2: 450 MW	S	WQ-1: Comply with NPDES requirements	LTS
WQ-6b: Otherwise substantially degrade water quality—Golden Hills Project	S	WQ-1: Comply with NPDES requirements	LTS
WQ-6c: Otherwise substantially degrade water quality—Patterson Pass Project	S	WQ-1: Comply with NPDES requirements	LTS
WQ-7a-1: Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map—program Alternative 1: 417 MW	NI		
WQ-7a-2: Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map—program Alternative 2: 450 MW	NI		
WQ-7b: Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map—Golden Hills Project	NI		
WQ-7c: Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map—Patterson Pass Project	NI		
WQ-8a-1: Place within a 100-year flood hazard area structures that would impede or redirect floodflows—program Alternative 1: 417 MW	NI		
WQ-8a-2: Place within a 100-year flood hazard area structures that would impede or redirect floodflows—program Alternative 2: 450 MW	NI		
WQ-8b: Place within a 100-year flood hazard area structures that would impede or redirect floodflows—Golden Hills Project	NI		
WQ-8c: Place within a 100-year flood hazard area structures that would impede or redirect floodflows—Patterson Pass Project	NI		
WQ-9a-1: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam—program Alternative 1: 417 MW	NI		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
WQ-9a-2: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam—program Alternative 2: 450 MW	LTS		
WQ-9b: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam—Golden Hills Project	LTS		
WQ-9c: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam—Patterson Pass Project	LTS		
WQ-10a-1: Contribute to inundation by seiche, tsunami, or mudflow—program Alternative 1: 417 MW	S	WQ-1: Comply with NPDES requirements	LTS
WQ-10a-2: Contribute to inundation by seiche, tsunami, or mudflow—program Alternative 2: 450 MW	S	WQ-1: Comply with NPDES requirements	LTS
WQ-10b: Contribute to inundation by seiche, tsunami, or mudflow—Golden Hills Project	S	WQ-1: Comply with NPDES requirements	LTS
WQ-10c: Contribute to inundation by seiche, tsunami, or mudflow—Patterson Pass Project	S	WQ-1: Comply with NPDES requirements	LTS
Land Use and Planning			
LU-1a-1: Physically divide an established community—program Alternative 1: 417 MW	NI		
LU-1a-2: Physically divide an established community—program Alternative 2: 450 MW	NI		
LU-1b: Physically divide an established community—Golden Hills Project	NI		
LU-1c: Physically divide an established community—Patterson Pass Project	NI		
LU-2a-1: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect—program Alternative 1: 417 MW	NI		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
LU-2a-2: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect—program Alternative 2: 450 MW	NI		
LU-2b: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect—Golden Hills Project	NI		
LU-2c: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect—Patterson Pass Project	NI		
LU-3a-1: Conflict with any applicable habitat conservation plan or natural community conservation plan—program Alternative 1: 417 MW	NI		
LU-3a-2: Conflict with any applicable habitat conservation plan or natural community conservation plan—program Alternative 2: 450 MW	NI		
LU-3b: Conflict with any applicable habitat conservation plan or natural community conservation plan—Golden Hills Project	NI		
LU-3c: Conflict with any applicable habitat conservation plan or natural community conservation plan—Patterson Pass Project	NI		
Noise			
NOI-1a-1: Exposure of residences to noise from new wind turbines—program Alternative 1: 417 MW	S	NOI-1: Perform project-specific noise studies and implement measures to comply with County noise standards	LTS
NOI-1a-2: Exposure of residences to noise from new wind turbines—program Alternative 2: 450 MW	S	NOI-1: Perform project-specific noise studies and implement measures to comply with County noise standards	LTS
NOI-1b: Exposure of residences to noise from new wind turbines—Golden Hills Project	S	NOI-1: Perform project-specific noise studies and implement measures to comply with County noise standards	LTS
NOI-1c: Exposure of residences to noise from new wind turbines—Patterson Pass Project	LTS		

Table ES-1. Continued

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
NOI-2a-1: Exposure of residences to noise during decommissioning and new turbine construction—program Alternative 1: 417 MW	S	NOI-2: Employ noise-reducing practices during decommissioning and new turbine construction	LTS
NOI-2a-2: Exposure of residences to noise during decommissioning and new turbine construction—program Alternative 2: 450 MW	S	NOI-2: Employ noise-reducing practices during decommissioning and new turbine construction	LTS
NOI-2b: Exposure of residences to noise during decommissioning and new turbine construction—Golden Hills Project	S	NOI-2: Employ noise-reducing practices during decommissioning and new turbine construction	LTS
NOI-2c: Exposure of residences to noise during decommissioning and new turbine construction—Patterson Pass Project	LTS		
Population and Housing			
POP-1a-1: Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)—program Alternative 1: 417 MW	NI		
POP-1a-2: Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)—program Alternative 2: 450 MW	NI		
POP-1b: Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly)e.g., through extension of roads or other infrastructure)—Golden Hills Project	NI		
POP-1c: Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)—Patterson Pass Project	NI		
POP-2a-1: Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere—program Alternative 1: 417 MW	NI		
POP-2a-2: Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere—program Alternative 2: 450 MW	NI		
POP-2b: Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere—Golden Hills Project	NI		
POP-2c: Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere—Patterson Pass Project	NI		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
POP-3a-1: Displace a substantial number of people, necessitating the construction of replacement housing elsewhere—program Alternative 1: 417 MW	NI		
POP-3a-2: Displace a substantial number of people, necessitating the construction of replacement housing elsewhere—program Alternative 2: 450 MW	NI		
POP-3b: Displace a substantial number of people, necessitating the construction of replacement housing elsewhere—Golden Hills Project	NI		
POP-3c: Displace a substantial number of people, necessitating the construction of replacement housing elsewhere—Patterson Pass Project	NI		
Public Services			
PS-1a-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection; police protection; schools; parks; other public facilities—program Alternative 1: 417 MW	NI		
PS-1a-2: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection; police protection; schools; parks; other public facilities—program Alternative 2: 450 MW	NI		
PS-1b: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection; police protection; schools; parks; other public facilities—Golden Hills Project	NI		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
PS-1c: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection; police protection; schools; parks; other public facilities—Patterson Pass Project	NI		
Recreation			
REC-1a-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated—program Alternative 1: 417 MW	NI		
REC-1a-2: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated—program Alternative 2: 450 MW	NI		
REC-1b: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated—Golden Hills Project	NI		
REC-1c: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated—Patterson Pass Project	NI		
REC-2a-1: Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment—program Alternative 1: 417 MW	NI		
REC-2a-2: Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment—program Alternative 2: 450 MW	NI		
REC-2b: Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment—Golden Hills Project	NI		
REC-2c: Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment—Patterson Pass Project	NI		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Transportation/Traffic			
TRA-1a-1: Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit or conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways—program Alternative 1: 417 MW	S	TRA-1: Develop and implement a construction traffic control plan	LTS
TRA-1a-2: Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit or conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways—program Alternative 2: 450 MW	S	TRA-1: Develop and implement a construction traffic control plan	LTS
TRA-1b: Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit or conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways—Golden Hills Project	S	TRA-1: Develop and implement a construction traffic control plan	LTS

Table ES-1. Continued

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
TRA-1c: Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit or conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways—Patterson Pass Project	S	TRA-1: Develop and implement a construction traffic control plan	LTS
TRA-2a-1: Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways—program Alternative 1: 417 MW	LTS		
TRA-2a-2: Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways— program Alternative 2: 450 MW	LTS		
TRA-2b: Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways—Golden Hills Project	LTS		
TRA-2c: Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways—Patterson Pass Project	LTS		
TRA-3a-1: 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—program Alternative 1: 417 MW	LTS		
TRA-3a-2: 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—program Alternative 2: 450 MW	LTS		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
TRA-3b: 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 —Golden Hills Project	LTS		
TRA-3c: 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 —Patterson Pass Project	LTS		
TRA-4a-1: Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) due to construction-generated traffic—program Alternative 1: 417 MW	S	TRA-1: Develop and implement a construction traffic control plan	LTS
TRA-4a-2: Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) due to construction-generated traffic—program Alternative 2: 450 MW	S	TRA-1: Develop and implement a construction traffic control plan	LTS
TRA-4b: Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) due to construction-generated traffic—Golden Hills Project	S	TRA-1: Develop and implement a construction traffic control plan	LTS
TRA-4c: Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) due to construction-generated traffic—Patterson Pass Project	S	TRA-1: Develop and implement a construction traffic control plan	LTS
TRA-5a-1: Result in inadequate emergency access due to construction-generated traffic—program Alternative 1: 417 MW	S	TRA-1: Develop and implement a construction traffic control plan	LTS
TRA-5a-2: Result in inadequate emergency access due to construction-generated traffic—program Alternative 2: 450 MW	S	TRA-1: Develop and implement a construction traffic control plan	LTS
TRA-5b: Result in inadequate emergency access due to construction-generated traffic—Golden Hills Project	S	TRA-1: Develop and implement a construction traffic control plan	LTS
TRA-5c: Result in inadequate emergency access due to construction-generated traffic—Patterson Pass Project	S	TRA-1: Develop and implement a construction traffic control plan	LTS
TRA-6a-1: Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities—program Alternative 1: 417 MW	S	TRA-1: Develop and implement a construction traffic control plan	LTS
TRA-6a-2: Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities—program Alternative 2: 450 MW	S	TRA-1: Develop and implement a construction traffic control plan	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
TRA-6b: Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities—Golden Hills Project	S	TRA-1: Develop and implement a construction traffic control plan	LTS
TRA-6c: Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities—Patterson Pass Project	S	TRA-1: Develop and implement a construction traffic control plan	LTS
Utilities and Service Systems			
UT-1a-1: Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board—program Alternative 1: 417 MW	LTS		
UT-1a-2: Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board—program Alternative 2: 450 MW	LTS		
UT-1b: Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board—Golden Hills Project	LTS		
UT-1c: Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board—Patterson Pass Project	LTS		
UT-2a-1: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects—program Alternative 1: 417 MW	NI		
UT-2a-2: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects—program Alternative 2: 450 MW	NI		
UT-2b: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects—Golden Hills Project	NI		
UT-2c: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects—Patterson Pass Project	NI		
UT-3a-1: Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects—program Alternative 1: 417 MW	LTS		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
UT-3a-2: Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects—program Alternative 2: 450 MW	LTS		
UT-3b: Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects—Golden Hills Project	LTS		
UT-3c: Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects—Patterson Pass Project	LTS		
UT-4a-1: Require new or expanded entitlements to water resources—program Alternative 1: 417 MW	LTS		
UT-4a-2: Require new or expanded entitlements to water resources—program Alternative 2: 450 MW	LTS		
UT-4b: Require new or expanded entitlements to water resources—Golden Hills Project	LTS		
UT-4c: Require new or expanded entitlements to water resources—Patterson Pass Project	LTS		
UT-5a-1: Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the program's projected demand in addition to the provider's existing commitments—program Alternative 1: 417 MW	NI		
UT-5a-2: Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the program's projected demand in addition to the provider's existing commitments—program Alternative 2: 450 MW	NI		
UT-5b: Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments—Golden Hills Project	NI		
UT-5c: Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments—Patterson Pass Project	NI		

Table ES-1. Continued

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
UT-6a-1: Generate solid waste that would exceed the permitted capacity of landfills to accommodate the program's solid waste disposal needs—program Alternative 1: 417 MW	LTS		
UT-6a-2: Generate solid waste that would exceed the permitted capacity of landfills to accommodate the program's solid waste disposal needs—program Alternative 2: 450 MW	LTS		
UT-6b: Generate solid waste that would exceed the permitted capacity of landfills to accommodate the program's solid waste disposal needs—Golden Hills Project	LTS		
UT-6c: Generate solid waste that would exceed the permitted capacity of landfills to accommodate the program's solid waste disposal needs—Patterson Pass Project	LTS		
UT-7a-1: Not comply with federal, state, and local statutes and regulations related to solid waste—program Alternative 1: 417 MW	NI		
UT-7a-2: Not comply with federal, state, and local statutes and regulations related to solid waste—program Alternative 2: 450 MW	NI		
UT-7b: Not comply with federal, state, and local statutes and regulations related to solid waste—Golden Hills Project	NI		
UT-7c: Not comply with federal, state, and local statutes and regulations related to solid waste—Patterson Pass Project	NI		

SU = significant and unavoidable; S = significant; LTS = less than significant; NI = no impact.