EXECUTIVE SUMMARY

ES.1 Introduction

This Draft Environmental Impact Report (EIR) analyzes the direct, indirect, and cumulative environmental impacts of the proposed Fountain Wind Project (Project) and alternatives to the Project that have been identified by the staff of the Shasta County (County) Department of Resource Management, Planning Division, and recommends mitigation measures to avoid or reduce the environmental effects of the Project that have been identified as "significant" for purposes of the California Environmental Quality Act (CEQA) and its implementing regulations, the CEQA Guidelines. This Draft EIR is an informational document whose purpose is not to recommend either approval or denial of the Project, but rather is to inform agency decision makers and the public of the potential environmental consequences of the Project. Because environmental considerations are but one of multiple factors that may be taken into consideration when an agency is deciding whether to approve a proposal, the County will consider factors outside the scope of CEQA when it decides whether to approve the Project.

ES.2 Project Summary

ES.2.1 Project Overview

The Fountain Wind Project is a renewable wind energy generation development proposed on approximately 4,464 acres in unincorporated Shasta County (Project Site). Access to the Project Site would be provided regionally and locally by Interstate 5 (I-5), approximately 35 miles to the west of the Project Site; State Route (SR) 139, approximately 60 miles to the east of the Project Site; SR 299; Moose Camp Road; and three existing, gated logging roads that would be used to enter the Project Site.

Within the Project Site, the applicant has applied for a Use Permit (UP 16-007) to construct, operate, maintain, and ultimately decommission up to 72 wind turbines and associated transformers together with associated infrastructure and ancillary facilities. Each turbine would be no more than 679 feet tall, as measured from ground level to vertical blade tip (total tip height), and would have a generating capacity of 3 to 5.7 megawatts (MW). The Project would have a maximum total nameplate generating capacity of up to 216 MW.[1] Associated infrastructure and facilities would include: a 34.5-kilovolt (kV) overhead and underground electrical collector system to connect turbines together and to an onsite collector substation; overhead and underground fiber-

[1] "Nameplate capacity" is the amount of power that would be generated under ideal conditions. Actual output can differ from nameplate capacity for a number of reasons, including wind speeds and other weather conditions, and equipment maintenance.

optic communication lines; an onsite switching station to connect the Project to the regional grid operated by Pacific Gas and Electric Company (PG&E); a temporary construction and equipment laydown area; 14 temporary laydown areas distributed throughout the Project Site to store and stage building materials and equipment, an operation and maintenance (O&M) facility; up to four permanent meteorological (MET) towers; temporary, episodic deployment of mobile Sonic Detection and Ranging (SoDAR) or Light Detection and Ranging (LiDAR) systems within identified disturbance areas (e.g., at MET tower locations); two storage sheds; and three temporary batch plants. New access roads would be constructed within the Project Site, and existing roads would be improved. The Project would operate year-round.

ES.2.2 Project Location

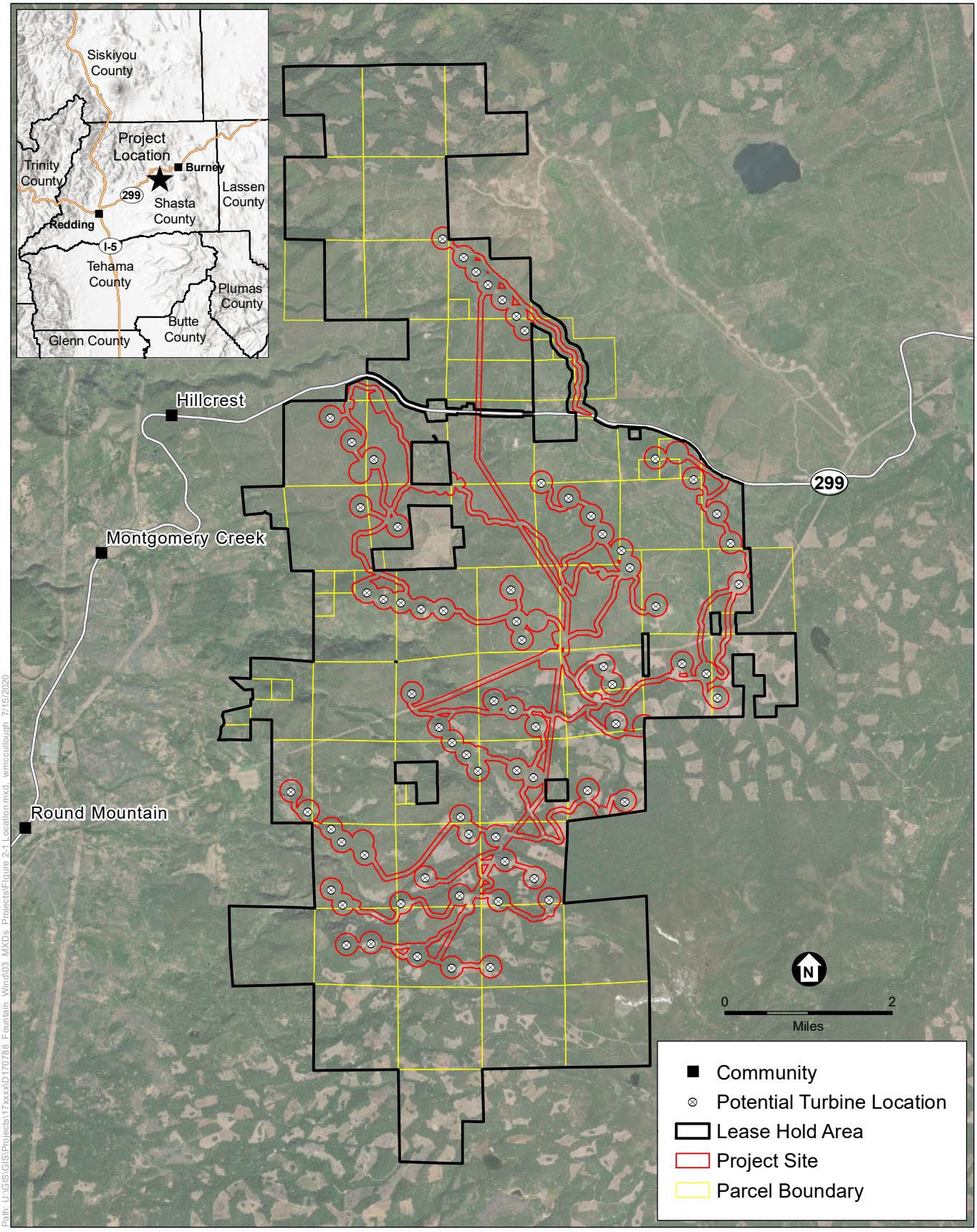
The approximately 4,464-acre Project Site is located within an approximately 29,500-acre area that comprises 76 Shasta County Assessor's parcels (APNs). The 76 APNs consist exclusively of private property operated as managed forest timberlands. The property is located approximately 1 mile west of the existing Hatchet Ridge Wind Project, 6 miles west of Burney, 35 miles northeast of Redding, immediately north and south of California State Route 299 (SR 299), and near the private recreational facility of Moose Camp[2] and other private inholdings. See **Figure ES-1**, *Project Location*. Other nearby communities include Montgomery Creek, Round Mountain, Wengler, and Big Bend. The Project Site is also within in a geographic area that is traditionally and culturally affiliated with the Pit River Tribe. Lassen National Forest lies to the southeast and Shasta-Trinity National Forest is to the north. Other surrounding lands are privately owned; many are used for timber harvesting purposes. Elevations in the area range from 3,000 to 6,000 feet.

Little Cow Creek and the south fork of Montgomery Creek cross the Project Site from east to west. Other small tributaries run through the valleys. Northern portions of the leasehold were affected by the 1992 Fountain Fire, as evidenced by burn scars. The Shasta County General Plan designates the Project Site as Timber (T); the zoning designations are Timber Production (TP) (approximately 4,457 acres) and Unclassified (U) (approximately 6 acres). Existing land uses within the Project Site consist exclusively of managed forest lands. Unpaved logging roads and transmission lines cross the Project Site.

ES.3 Purpose and Use of the Draft EIR

This Draft EIR is an informational document intended to disclose to the public and decision-makers the potential environmental impacts of the Project. This document assesses the direct, indirect and cumulative environmental impacts that could occur as a result of the Project and alternatives to the Project. All of the resource areas in the CEQA Guidelines Appendix G Checklist were studied: Aesthetics, Agriculture and Forestry Resources, Air Quality, Biological

[2] Moose Camp is an approximately 146-acre private recreational facility owned and operated by Moose Recreational Camp, Ltd., a California Non-Profit Mutual Benefit Corporation, for the benefit of its approximately 75 members and their families (Moose Recreational Camp, Ltd., 2012a, 2012b; Environmental Science Associates, 2019 [Letters P17, P23, P37, P43, P55]). In Moose Camp, 50 cabin residences are used year-round (Environmental Science Associates, 2019 [Letters P17, P23, P37, P43, P55]).



Fountain Wind Project

Figure ES-1
Project Location

Resources, Cultural Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Tribal Cultural Resources, Utilities and Service Systems, and Wildfire. The potential for the Project to result in communications interference is also examined.

The County will rely on this Draft EIR as it may be amended in response to agency and public input received following their review of this Draft EIR, along with other information in the formal record, in deciding whether to approve, approve with modifications, or disapprove the requested application. Other agencies with trustee responsibilities or permitting authority over the Project, including but not limited to the California Department of Forestry and Fire Protection (CAL FIRE), California Department of Fish and Wildlife (CDFW), California Public Utilities Commission (CPUC), and the Regional Water Resources Control Board (RWQCB), also may rely on this document in deciding whether to approve or issue other authorizations for the Project. See Table ES-1, *Summary of Permits and Approvals*, for additional details.

ES.4 Project Objectives

The Applicant seeks to build the Fountain Wind Project to meet the following objectives:

1. Develop, construct, and operate a commercial wind energy generation facility capable of generating up to 216 MW of wind energy.
2. Interconnect to the Northern California electrical grid (NP15).[3]
3. Locate the Project in close proximity to an existing transmission line with sufficient capacity to reduce impacts and costs associated with building new transmission infrastructure.
4. Assist California in meeting the renewable energy generation targets set in Senate Bill (SB) 100.[4]
5. Create temporary and permanent jobs in Shasta County and contribute to the County's tax base.
6. Obtain entitlements to construct and operate a commercially financeable wind energy project.
7. Support landowners through diversification of revenue streams.
8. Offset approximately 128,000 metric tons of carbon dioxide emissions generated by fossil fuels.
9. Provide emissions-free energy for approximately 100,000 households.[5]

[3] The California Independent System Operator (CAISO) manages the operation of California's power grid, including the generation and transmission of electricity by PG&E and the CAISO's other member utilities. The CAISO divides the state into three regions: NP15, SP15, and ZP26. NP15 corresponds to PG&E's electric service territory (CAISO, 2008; PG&E, 2014). An existing 230 kV line crosses the Project Site south of SR 299 (CEC, 2014). The Project would interconnect to the grid along this line.

[4] SB 100 was signed into law on September 10, 2018. This bill accelerates the state's renewable energy goals, requiring 60 percent of California's electricity portfolio to come from eligible renewable sources by 2030 and that all retail electricity be carbon-free by 2045.

[5] The California Public Utilities Commission (CPUC) reported in 2018 that "California households consume electric service at an average rate of 534 kWh per month in the summer months, and 459 kWh per month in the winter months" (CPUC, 2018). If California households consume an average of 496.5 kWh per month (or 5.958 MWh per year), then the Project's generation of 605,491 MWh of electricity per year could serve an estimated 101,627 households per year.

ES.5 Proposed Discretionary Approvals

A "discretionary" approval requires an exercise of judgment or deliberation by a public agency or body in deciding whether to approve, approve with modifications, or disapprove a particular activity. **Table ES-1** summarizes the discretionary approvals and, for informational purposes, some of the key ministerial approvals that may be required for site preparation, construction, operation, maintenance, and decommissioning of the Project.

TABLE ES-1
SUMMARY OF PERMITS AND APPROVALS

Agency	Permit/Approval
Federal	
Federal Aviation Administration (FAA)	Notice of Proposed Construction or Alteration; Determination of No Hazard.*
U.S. Army Corps of Engineers (USACE)	Clean Water Act Section 404 Nationwide Permit if jurisdictional waters of the U.S. could be affected by construction or operation of the Project.
U.S. Fish and Wildlife Service (USFWS)	Section 7 or Section 10 permits may be required if the Project results in take of a species listed under the federal Endangered Species Act (FESA).
State	
California Department of Forestry and Fire Protection (CAL FIRE)	Application for timberland conversion (Pub. Res. Code §4621 et seq.); approval of a timber harvesting plan (Pub. Res. Code §4582).
State and/or Regional Water Resources Control Board (SWRCB and/or RWQCB)	Construction Stormwater General Permit; Notice of Intent to Comply with Section 402 of the Clean Water Act, SWPPP and SPCC Plan; Industrial Stormwater General Permit; Approval of O&M SWPPP and SPCC Plan. Section 401 Certification if USACE determines jurisdictional waters of the U.S. would require a Clean Water Act Section 404 permit.
California Department of Fish and Wildlife (CDFW)	Streambed Alteration Agreement (Fish & Game Code §1600 et seq.); permit authorization if "take" of endangered, threatened, or candidate species could result incidental to an otherwise lawful activity (Fish & Game Code §2081).
California Department of Transportation	Oversize load permit(s) and variances for loads with a width over 15 feet and/or length over 135 feet. Encroachment Permit for utility line crossing state right-of-way.*
California Highway Patrol	Notification of Transportation of Oversize/Overweight Loads.*
California Public Utilities Commission	Approval of construction of switching station for transfer to PG&E (i.e., General Order 131-D).
Local	
Shasta County Air Quality Management District	Authority to Construct and/or Permit to Operate as needed.
Shasta County	Use Permit.
Shasta County Department of Resource Management, Environmental Health Division	Hazardous Materials Business Plan, septic system permit, well permit.*
Shasta County Building Division	Building and grading permits.*
Shasta County Hazardous Materials Program, Certified Unified Program Agency	Hazardous Materials Business Plan and Permit for handling hazardous materials above threshold quantities (includes hazardous waste management).*
Shasta County, Public Works Department	Encroachment Permit.*

NOTE: * Typically processed as ministerial permits

ES.6 Overview of Project Impacts and Mitigation

Section 3.1 in Chapter 3, *Environmental Analysis,* includes a summary of the environmental topics that were removed from consideration and the rationale for doing so. Briefly, resources or resource considerations were not carried forward for more detailed consideration because the resource is not present in the Project Area or because the Project would not result in an impact on the resource. Sections 3.2 through 3.18 provide an overview of the setting; analyze the potential direct, indirect and cumulative impacts of the Project and alternatives; and identify mitigation measures designed to reduce potential significant impacts below established thresholds. The Project would cause no impact, a less-than-significant impact (with or without mitigation), or a significant and unavoidable impact as noted below. See Section ES.7 for a comparison of the environmental impacts of the Project with those of the alternatives.

ES.6.1 Less-than-Significant Impacts / Less-Than-Significant Impacts with Implementation of Mitigation Measures

The Project would have a less-than-significant impact, or a less-than-significant impact with the implementation of recommended mitigation measures, for specific considerations within the following resource categories:

1. Aesthetics
2. Air Quality
3. Biological Resources
4. Communications Interference
5. Cultural and Tribal Cultural Resources
6. Energy
7. Forest Resources
8. Geology and Soils
9. Greenhouse Gas Emissions
10. Hazards and Hazardous Materials
11. Hydrology and Water Quality
12. Land Use and Planning
13. Noise and Vibration
14. Public Services
15. Transportation
16. Utilities and Service Systems
17. Wildfire

ES.6.2 Significant and Unavoidable Impacts

Section 15126.2(b) of the CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. The Project would have a significant and unavoidable impact regarding the following resource considerations:

1. **Aesthetics**: The Project would have a significant and unavoidable impact, both at the Project-specific level and cumulatively, with regard to its effect on a scenic vista and the existing visual character or quality of public views of the site and its surroundings from publicly accessible vantage points.
2. **Air Quality**: The Project would have a significant and unavoidable impact with regard to a cumulatively considerable net increase in emissions of particulate matter less than or equal to

10 microns in diameter (PM_{10}) in a region of non-attainment for PM_{10} state ambient air quality standards. Mitigation Measure 3.3-2c (Fugitive Dust Controls) is proposed, but would not reduce the potential impact below the established threshold.

3. **Biological Resources**: The Project would have a significant and unavoidable impact with regard to potential mortality and injury to raptors as a result of collisions with wind turbines and electrical transmission lines and mortality and injury to bats, including special-status species. These significant unavoidable impacts also would be cumulatively significant and unavoidable.

4. **Cultural and Tribal Cultural Resources**: The Project would have a significant and unavoidable impact with regard to changes in the significance of a tribal cultural resource. Mitigation Measure 3.6-1 (Archaeological Research Design) and Treatment Plan and Mitigation Measure 3.6-3 (Tribal Cultural Resources Interpretive and Use Program) are proposed, but would not reduce the potential impact below the established threshold.

ES.6.3 Irreversible Impacts

Section 15126.2(c) of the CEQA Guidelines defines an irreversible impact as an impact that uses nonrenewable resources during the initial and continuing phases of the project. Irreversible impacts also can result from damage caused by environmental accidents associated with a project. Irretrievable commitments of resources are evaluated to ensure that such consumption is justified.

Buildout of the Project would commit nonrenewable resources during Project construction and ongoing utility services during Project operations. During operations, some oil, gas, and other fossil fuels and nonrenewable resources would be consumed and irreversible commitments of small quantities of nonrenewable resources would occur as a result of long-term Project operations. However, once operational, the Project would result in a substantial net benefit with respect to nonrenewable resources as a result of the amount of renewable energy that would be generated. See Section 3.10, *Greenhouse Gas Emissions*, for details.

ES.6.4 Summary of Project Impacts and Mitigation Measures

Table ES-2 summarizes the environmental impacts of the Project and recommended mitigation measures that, if adopted, would avoid or substantially reduce potential significant impacts of the Project. The analysis of each impact is provided on a resource-by-resource basis in Chapter 3.

TABLE ES-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Aesthetics			
Impact 3.2-1: The Project would, unless mitigated, have a substantial adverse effect on a scenic vista or substantially degrade the character or visual quality of views from publicly accessible vantage points.	Potentially significant	**Mitigation Measure 3.2-1: Project Design to Reduce Aesthetic Impacts at KOP 1** When finalizing the design for the Project, the Applicant shall site turbines to avoid placing turbines within the viewshed of KOP 1, or to reduce the visibility of turbines from KOP 1. For example, if the turbines were to be moved further downslope they would be less visible, from KOP 1. When submitting site plans to the County of Shasta to be approved, the Applicant shall demonstrate to the County that the impacts from KOP 1 have been avoided or reduced. The turbines shall be painted in accordance with manufacturer's and Federal Aviation Administration marking requirements. Commercial messages and symbols shall not be used on turbine structures. When the site plans are presented to the County for approval, the Applicant also shall present the type of turbine selected to the County so that the County may ensure that no commercial messages are used on the turbines.	Significant and unavoidable
Impact 3.2-2: The Project could damage scenic resources within a state scenic highway.	Less than significant impact	No mitigation measures are required	
Impact 3.2-3: The Project could create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.	Less than significant impact	No mitigation measures are required	
Air Quality			
Impact 3.3-1: Construction, decommissioning, and site reclamation activities would generate pollutant emissions that could conflict or obstruct implementation of the applicable air quality plan.	Potentially significant	**Mitigation Measure 3.3-1a: Tier 4 Final Emission Standards for Off-road Construction Equipment.** The Applicant (and/or its construction contractor[s]) shall require that all diesel-fueled off-road construction equipment of more than 50 horsepower used at the Project Site during construction, decommissioning, and/or reclamation activities meet USEPA Tier 4 Final emission standards. A compliance log shall be maintained by the Applicant and made available to the Shasta County Department of Resource Management upon request. **Mitigation Measure 3.3-1b: Idling Restrictions and Fuel Use.** To ensure that idling time for on road vehicles with a gross vehicular weight rating of 10,000 pounds or greater does not exceed the five-minute limit established in Section 2485 of Title 13 California Code of Regulations, and that idling time for off-road engines does not exceed the five-minute limit established in Title 13 California Code of Regulations Section 2449(d)(3), the Applicant and/or its construction contractor(s) shall prepare and implement a written idling policy and distribute it to all equipment operators. Clear signage of these requirements shall be provided for construction workers at all access points to construction areas. The Applicant shall use CARB-certified alternative fueled (compressed natural gas [CNG], liquid propane gas [LPG], electric motors, or other CARB certified off-road technologies) engines in construction equipment where feasible.	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Air Quality (cont.)			
Impact 3.3-2a: Construction, decommissioning, and site activities would generate ROG emissions that could result in a cumulatively considerable net increase of ozone, for which the Project region is non-attainment of State ambient air quality standards.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.3-2b: Construction, decommissioning, and site reclamation activities would generate NO_x emissions that could result in a cumulatively considerable net increase of ozone, for which the Project region is non-attainment of State ambient air quality standards.	Potentially significant	**Mitigation Measure 3.3-2b:** Implement Mitigation Measures 3.3-1a (Tier 4 Final Emission Standards for Off-road Construction Equipment) and 3.3-1b (Idling Restrictions and Fuel Use).	Less than significant
Impact 3.3-2c: Construction, decommissioning, and site reclamation activities would generate PM_{10} emissions that would result in a cumulatively considerable net increase of PM_{10}, which the Project region is non-attainment of State ambient air quality standards.	Potentially significant	**Mitigation Measure 3.3-2c: Fugitive Dust Controls.** The following AQMD Standard Mitigation Measures for fugitive dust shall be implemented during the construction, decommissioning, and reclamation phases by the Applicant and/or its contractor(s): • Options to open burning of vegetative material on the Project Site shall be used by the Applicant unless otherwise deemed infeasible by the AQMD. Examples of suitable options are chipping, mulching, and conversion to biomass fuel. • The Applicant shall be responsible for ensuring that all adequate dust control measures are implemented in a timely and effective manner during all phases of Project development and construction. • All material excavated, stockpiled, or graded should be sufficiently watered to prevent fugitive dust from leaving property boundaries and causing a public nuisance or a violation of an ambient air standard. Watering should occur at least twice daily with complete site coverage, preferably in the mid-morning and after work is completed each day. • All areas (including unpaved roads) with vehicle traffic should be watered periodically or have dust palliatives applied for stabilization of dust emissions. • All onsite vehicles should be limited to a speed of 15 miles per hour on unpaved roads. • All land clearing, grading, earth moving, and excavation activities on the Project Site shall be suspended when winds are expected to exceed 20 miles per hour. • All inactive portions of the development site should be seeded and watered until suitable grass cover is established.	Significant and unavoidable

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Air Quality (cont.)			
Impact 3.3-2c (cont.)		• The Applicant shall be responsible for applying (according to manufacturer 's specifications) nontoxic soil stabilizers to all inactive construction areas (previously graded areas that remain inactive for 96 hours) in accordance with the Shasta County Grading Ordinance. • All trucks hauling dirt, sand, soil, or other loose material should be covered or should maintain at least 2 feet of freeboard (i.e., minimum vertical distance between top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114. This provision shall be enforced by local law enforcement agencies. • All material transported off site shall be either sufficiently watered or securely covered to prevent a public nuisance. • During initial grading, earth moving, or site preparation, the Applicant shall be required to construct a paved (or dust palliative-treated) apron, at least 100 feet in length, onto the Project Site from the adjacent paved Highway 299. • Paved streets adjacent to the development site should be swept or washed at the end of each day to remove excessive accumulations of silt and/or mud that may have accumulated as a result of activities on the development site. • Adjacent paved streets shall be swept at the end of each day if substantial volumes of soil materials have been carried onto adjacent public paved roads from the Project Site. • Wheel washers shall be installed where project vehicles and/or equipment enter and/or exit onto paved streets from unpaved roads. Vehicles and/or equipment shall be washed prior to each trip. • Prior to final occupancy, the applicant shall reestablish ground cover on the construction site through seeding and watering in accordance with the Shasta County Grading Ordinance.	
Impact 3.3-2d: Construction, decommissioning, and site reclamation activities would not result in cumulatively considerable net increases of criteria pollutants in other air district jurisdictions.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.3-3: Operation of the Project would generate pollutant emissions that would not result in a cumulatively considerable net increase of criteria pollutants, which the Project region is non-attainment of State ambient air quality standards.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.3-4: Project activities would generate emissions of toxic air contaminants, potentially exposing sensitive receptors to harmful pollutant concentrations.	Less than significant	No mitigation measures are required	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Air Quality (cont.)			
Impact 3.3-5: Project construction, decommissioning, site reclamation, and operation would not create objectionable odors adversely affecting a substantial number of people.	Less than significant	No mitigation measures are required	Less than significant
Biological Resources			
Impact 3.4-1: Construction of the Project could, unless mitigated, cause a significant impact to special- status plant species.	Potentially Significant	**Mitigation Measure 3.4-1: Avoid and Minimize Construction Impacts on Special-Status Plants** To prevent adverse impacts to special- status plants, the Project Applicant shall implement the following measures if construction activities are to occur in the area not yet surveyed, or if vegetation removal and ground disturbing construction activities have not been completed within 5 years of the completion of rare plant surveys: a) A qualified biologist shall conduct a pre-construction survey for special-status plant species with the potential to occur within the unsurveyed area, or other areas if 5 years have passed since completion of rare plant surveys; or as otherwise approved by CDFW. The survey shall follow the procedures outlined in the CDFW (2018) rare plant survey protocol. b) If special-status plants are found to be present, plant populations shall be avoided using an appropriate (e.g., 20-foot or greater) buffer for the subject population during construction. The buffer shall be staked, roped, and/or fenced off so as to be readily identifiable by construction workers as a buffer area to be avoided. c) Where special-status plant avoidance is not feasible, the applicant shall mitigate for the loss of plants through the implementation of the following: A qualified ecologist shall develop and implement a restoration and mitigation plan according to CDFW guidelines and in coordination with CDFW. At a minimum, the plan shall include collection of reproductive structures or plant salvage from affected plants, a full description of microhabitat conditions necessary for each affected species, seed germination requirements, restoration techniques for temporarily disturbed occurrences, assessments of potential transplant and enhancement sites, success and performance criteria (e.g., greater than 1:1 replacement of individual plants or the population area), include a minimum 3-year monitoring program, as well as measures to ensure long-term sustainability such as weeding or supplemental water. d) Survey results shall be provided to the Shasta County Department of Resource Management, Planning Division and CDFW at least 14 days in advance of the initiation of construction activities within the area(s) surveyed. The Shasta County Department of Resource Management, Planning Division shall, in coordination with CDFW, determine whether or not the survey(s) were conducted in accordance with CDFW plant survey protocol and measures b) and/or c) are to be implemented. Construction shall not begin in the surveyed area until the Shasta County Department of Resource Management, Planning Division has confirmed that the survey(s) were conducted in accordance with the protocol and, if necessary, that measures 3.4-1b and/or 3.4-1c have been implemented.	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Biological Resources (cont.)			
Impact 3.4-2: Construction of the Project could, unless mitigated, cause a significant impact on nesting bald and golden eagles.	Potentially significant	**Mitigation Measure 3.4-2: Avoid and minimize construction-related impacts to nesting eagles (January 1 to August 31).** To prevent adverse impacts to nesting eagles, the Project Applicant shall implement the following measures if construction activities are to occur during the nesting season: a) Conduct terrestrial preconstruction eagle nesting surveys of known previously active nest sites to determine whether eagles are actively nesting or maintaining territories within 2 miles of the Project construction boundary. Surveys will be designed and carried out by a qualified biologist with experience in the natural history and nesting behavior of eagles, following USFWS guidelines. Terrestrial surveys will include all suitable eagle nesting habitat within a 2-mile buffer surrounding the Project construction boundary, as accessible, and subsequent observations at known nests to assess territory occupancy and nesting activity by adult eagles. b) Results of preconstruction eagle nesting surveys will be reported to the Shasta County Department of Resource Management, Planning Division, USFWS, and CDFW by August 31 of the year in which the survey was conducted. The Shasta County Department of Resource Management, Planning Division shall, in coordination with resource agencies, determine whether or not the survey(s) were conducted in accordance with appropriate protocols and measures c) is to be implemented. Construction shall not begin in the surveyed area until the Shasta County Department of Resource Management, Planning Division has confirmed that the survey(s) were conducted in accordance with appropriate protocols and, if necessary, that measure 3.4-2c has been implemented. c) If surveys document active eagle nests within the 2-mile survey buffer, the Project Applicant will coordinate with the County, USFWS and CDFW to define and implement recommended protective measures. Typical measures for working within 2 miles of eagle nests are to establish construction buffers (e.g., with flagging, rope, signage, or other similar barriers) in accordance with USFWS recommendations (National Bald Eagle Management Guidelines, 2007; Golden Eagle, 2013) for specific activities (e.g., vehicular traffic, construction work, etc.); and may be adjusted downward based on site-specific conditions following coordination with the USFWS Migratory Bird Program and CDFW.	Less than significant
Impact 3.4-3: Operation of the Project could, unless mitigated, result in significant adverse impacts to or direct mortality of bald and golden eagles.	Potentially significant.	**Mitigation Measure 3.4-3a: Avoid and minimize operational impacts on avian and bat species.** The Project Applicant will avoid and minimize operational impacts on eagles, other raptors, other birds and bats by enacting the following mitigation measures: a) Discourage raptor use of immediate vicinity of wind turbine generators by taking steps to reduce prey species' numbers, such as minimizing creation of prey habitat such as rock piles. b) Follow APLIC (2006, 2012) guidance for all energized Project components to minimize electrocution or collision with transmission lines.	Significant and Unavoidable.

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Biological Resources (cont.)			
Impact 3.4-3 (cont.)		c) Follow Land-Based Wind Energy Guidelines (USFWS, 2012) for turbine design and best management practices that help to minimize eagle mortality and eliminate potential raptor perches; avoid guy wires on meteorological towers where possible. d) Prior to Project construction, the Applicant will coordinate with USFWS regarding potential impacts to eagles and demonstrate the Projects' compliance with the Bald and Golden Eagle Protection Act and the USFWS Eagle Conservation Plan Guidance (2013). e) All Project staff responsible for operations will be trained in reporting avian and bat wildlife fatalities, including those of bald and golden eagles, other raptors, and bats encountered during turbine maintenance and other regular activities on site. A protocol for project staff will be developed in coordination with CDFW and the County for appropriate handling and reporting fatalities. **Mitigation Measure 3.4-3b: Monitor avian and bat mortality rates during project operations.**[6] To accurately assess operational Project impacts on avian species, including bald eagle, golden eagle, other raptors, and bats, and ensure the effectiveness of avian protection measures, the applicant will design and implement a post-construction mortality monitoring (PCMM) study. The PCMM will include the following elements: a) The duration of PCMM monitoring to assess ongoing impacts of operation will include post-construction monitoring for eagles, other raptors, and bats. The PCMM monitoring will commence immediately following the beginning of commercial operation and continue for three years following the incorporation of all planned turbines and power generation. b) PCMM studies will be designed to meet a minimum overall detection probability for bald and golden eagles of 30 percent during the first three years of full operation. Additionally, the PCMM will include a mandatory incidental monitoring and reporting program for other raptors and bats for the life of the Project. c) Searcher efficiency trials and carcass persistence trials using large raptor carcasses or an appropriate, commercially available proxy will be implemented and used to calculate overall detection probabilities of eagle carcasses. Carcasses of other birds and bats will also be collected and reported. d) Monitoring will occur over all seasons of occupancy for the species being monitored.	

[6] Mitigation measure 3.4-3b encompasses more species than just eagles. This is to avoid redundancy within the document, and the measure is referred to as a means of reducing other impacts throughout the document.

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Biological Resources (cont.)			
Impact 3.4-3 (cont.)		e) Applicant will provide an annual report of PCMM findings to the Shasta County Department of Resource Management, Planning Division, CDFW, and the USFWS. If a bald or golden eagle, other raptors or bats are detected during PCMM, and detections indicate exceedance of the following thresholds, the Applicant and relevant agencies will develop a plan to mitigate the impacts per the *Land-Based Wind Energy Guidelines* (USFWS, 2012).[7] • Bald eagle – injury or mortality to one or more bald eagles in any given year. • Golden eagle – injury or mortality to one or more golden eagles in any given year. • Other raptors – injury or mortality to six or more individuals of any sensitive raptor species in any given year, except northern goshawk. For northern goshawk, injury or mortality to two or more individuals in any given year. • Bats – injury or mortality to three or more bats of a single species identified as Western Bat Working Group (WBWG) high priority (red) species (i.e., pallid bat, Townsend's bat, spotted bat, western red, or western mastiff) in any given year; or injury or mortality to six or more bats of a single species identified as WBWG medium priority (yellow) species (i.e., hoary bat or spotted bat), in any given year. The Applicant will implement minimization measures recommended by these agencies to limit mortality. Which may include operational modifications such as curtailment of turbine speed. The possible use of low-intensity ultraviolet light and ultrasonic deterrence systems to deter birds and bats from approaching rotating wind turbine blades may also be considered as warranted (AWWI, 2018). **Mitigation Measure 3.4-3c: Offset operational impacts on eagles through compensatory mitigation, if necessary.** a) If bald or golden eagle mortality occurs as a result of the Project, the Project Applicant will fund the retrofitting of electrical utility poles that pose a high risk of electrocution to eagles. Applicant will coordinate with the USFWS and follow the most current USFWS Eagle Conservation Plan Guidance (USFWS, 2013). If in coordination with USFWS an alternative compensatory mitigation measure is preferred to pole retrofitting, such alternative compensation measure (e.g., pole reframing or funding carcass removal from roadways) may be implemented.	

[7] Injury and mortality thresholds for bald eagle, golden eagle, and California spotted owl stated above were developed based on the low expectation for species mortality during project operations. For northern goshawk, this species is not listed and no California wind farm mortality has been identified in California. Because this species is unlikely to be encountered, a threshold of two individuals was adopted. For other raptors, the adopted threshold was based on the regional populations of Coopers hawk, sharp-shinned hawk, and northern harrier, which are fairly healthy. For most raptor species, mortality to migrating individuals is not anticipated. This assessment was based on focused baseline surveys of the Project area, monitoring findings from the Hatchet Ridge Wind Project, and coordination with raptor experts. For uncommon bat species with low population numbers, four WBWG high priority species are considered to have a low to moderate potential to occur and a threshold of three individuals per species was adopted based their rarity and low encounter numbers at the Hatchet Ridge Wind Project. For two WBWG medium species, a threshold of six bats was adopted based on the absence of habitat in the Project area (western mastiff bat) or the greater abundance of the species (hoary bat).

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Biological Resources (cont.)			
Impact 3.4-3 (cont.)		b) Any compensatory mitigation must occur within the same Eagle Management Unit as the Project, and must be completed within one year of any instance of documented take. c) Applicant will provide a report to the Shasta County Planning Department and USFWS documenting implementation of measures taken within one year of detection of the eagle take. d) Annually and after collection of 3 years of post-construction monitoring data, the Shasta County Department of Resource Management's will review the data and, in coordination with the Project Applicant, USFWS and CDFW, will determine which, if any, specific wind turbines generate disproportionately high levels of avian (including eagle) mortalities (based on evidence of statistically significant higher levels of mortality relative to other Project wind turbines). If specific wind turbines are found to result in disproportionately high avian mortalities based on collected data, the Project Applicant shall coordinate with the County to evaluate any feasible measures that can be implemented to reduce or avoid mortalities at those specific wind turbines. Furthermore, if mortalities involve eagles, the County will consider additional measures, including but not limited to carcass removal from roadways or funding for the acquisition of conservation easements on habitat that would provide nesting, foraging, or roosting bald and/or golden eagle habitat. e) If unauthorized take of a federal or state listed raptor occurs during project operation, the Project Applicant shall immediately notify the appropriate agency (CDFW and/or USFWS) by phone. The Applicant shall submit a written finding to the appropriate agency and the County within two calendar days that describes the date, time, location, species and, if possible, cause of unauthorized take. The Applicant shall notify the County within three calendar days of the receipt of any USFWS and/or CDFW required or recommended actions resulting from the unauthorized take, including whether an incidental take permit and/or additional requirements is deemed necessary by either agency.	
Impact 3.4-4: Decommissioning of the Project could result in adverse impacts to nesting bald and golden eagles.	Potentially significant	**Mitigation Measure 3.4-4:** Implement Mitigation Measure 3.4-2 (Avoid and minimize construction-related impacts to nesting eagles).	Less than significant
Impact 3.4-5: Construction, operation and decommissioning of the Project could result in adverse impacts to California spotted owls.	Less than significant	No mitigation measures are required.	Less than significant
Impact 3.4-6: Construction and decommissioning of the Project could result in adverse impacts on nesting raptors (other than goshawks).	Potentially significant	**Mitigation Measure 3.4-6: Avoid and minimize construction-related impacts on nesting raptors (March 1 to August 15)** a) Where feasible, tree and vegetation removal activities shall be avoided in potential raptor nesting habitat during the avian nesting season (March 1–August 15) during each year of construction.	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Biological Resources (cont.)			
Impact 3.4-6 (cont.)		b) If construction is planned to occur during the avian nesting season from March 1–August 15, pre-construction raptor nesting surveys shall be conducted by a qualified biologist to identify raptor nests within 500 feet of proposed work areas. A qualified biologist is defined as a person who is knowledgeable in the distribution, habitat, life history, and identification of Northern California birds, is familiar with the survey methods to locate and survey for active nests within the Project Site and can acquire any permits needed to survey for federally listed or state-listed birds, if such permits become necessary. c) Results of preconstruction raptor surveys will be reported to the Shasta County Department of Resource Management, Planning Division, USFWS, and CDFW by August 31 of the year in which the survey was conducted. The Shasta County Department of Resource Management, Planning Division shall, in coordination with resource agencies, determine whether or not the survey(s) were conducted in accordance with appropriate protocols and measure 3.4-6d is to be implemented. Construction shall not begin in the surveyed area until the Shasta County Department of Resource Management, Planning Division has confirmed that the survey(s) were conducted in accordance with appropriate protocols and, if necessary, that measure 3.4-6d has been implemented. d) If active raptor nests are found during pre-construction surveys, a 500-foot exclusion zone shall be established around the nest in which no work would be allowed until the young have successfully fledged or nesting activity has ceased. The determination of fledging or cessation of nesting shall be made by a qualified biologist with experience in monitoring raptor nests. Any sign of nest disturbances shall be reported to the Shasta County Department of Resource Management, CDFW and USFWS. In coordination with CDFW and/or USFWS, the County may modify the size of the exclusion zone depending on the raptor species and type of construction activity occurring near the nest.	
Impact 3.4-7: Construction and decommissioning of the Project could result in adverse impacts to nesting goshawks.	Potentially significant	**Mitigation Measure 3.4-7a:** Implement Mitigation Measure 3.4-6: Avoid and minimize construction-related impacts on nesting raptors (March 1 to August 15) **Mitigation Measure 3.4-7b: Avoid and minimize construction-related impacts to nesting goshawks (March 1 to August 15)** a) Prior to any disturbance of forest habitats that fit the nesting criteria of northern goshawks, the Applicant will conduct acoustic surveys for northern goshawk during their nesting season (March 1–August 31) following methods outlined by Woodbridge and Hargis (2006) to assure species is not nesting or using the territory for nesting. If nesting goshawks are found, the nests would be avoided with a suitable buffer distance (minimum 500 feet) in coordination with CDFW. b) Results of preconstruction goshawk surveys will be reported to the Shasta County Department of Resource Management, Planning Division and CDFW. The Shasta County Department of Resource Management, Planning Division shall, in coordination with resource agencies, determine whether or not the survey(s) were conducted in accordance with appropriate protocols. Construction shall not begin in the surveyed area until the Shasta County Department of Resource Management, Planning Division has confirmed that the survey(s) were conducted in accordance with appropriate protocols.	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Biological Resources (cont.)			
Impact 3.4-8: Operation of the Project could result in mortality and injury to raptors (including goshawk), as a result of collisions with wind turbines and electrical transmission lines.	Potentially significant	**Mitigation Measure 3.4-8:** Implement Mitigation Measure 3.4-3b (Monitor avian and bat mortality rates during project operations).	Significant and unavoidable
Impact 3.4-9: Operation of the proposed project could result in mortality and injury to waterfowl as a result of collisions with wind turbines and electrical transmission lines.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.4-10: Construction, operation, and decommissioning of the Project could have potential significant impacts on sandhill cranes during migratory movements in fall and spring, and could result in mortality of and injury to sandhill cranes.	Less than significant	No mitigation measures are required.	Less than significant
Impact 3.4-11: Construction and decommissioning of the Project could result in adverse impacts to nesting songbirds, potentially including special-status species.	Less than significant	No mitigation measures are required.	Less than significant
Impact 3.4-12: Site preparation and construction, operations and maintenance, and decommissioning and site restoration of the Project could result in habitat loss and water quality impacts on Pit roach, special-status amphibians and western pond turtle.	Potentially significant	**Mitigation Measure 3.4-12:** Implement Mitigation Measure 3.12-1 (Water Quality Best Management Practices during Activities in and near Water) and Mitigation Measure 3.4 16b (Avoid or Minimize Impacts to Wetlands and Other Waters)	Less than significant
Impact 3.4-13: Operation and maintenance of the Project could result in direct mortality and injury to bats, including special-status species.	Potentially significant	**Mitigation Measure 3.4-13:** Implement Mitigation Measure 3.4-3b (Monitor Avian and Bat Mortality Rates During Project Operations).	Significant and unavoidable
Impact 3.4-14: Site Preparation and Construction and Decommissioning and Site Restoration of the Project could result in temporary adverse impacts to special-status mammals.	Less than significant	No mitigation measures are required.	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Biological Resources (cont.)			
Impact 3.4-15: Site preparation and construction, operations and maintenance, and decommissioning and site restoration of the Project would result in adverse impacts to riparian habitat or other sensitive vegetation communities.	Potentially significant	**Mitigation Measure 3.4-15a:** To minimize the amount of riparian vegetation removed during construction. Implement Mitigation Measure 3.4-16b for wetlands (Avoid and minimize impacts to wetland and other waters). **Mitigation Measure 3.4-15b: Compensate for Impacts to Rocky Mountain Maple Riparian Scrub Habitat.** The Applicant shall implement a Reclamation and Revegetation Plan that includes detailed measures for the compensation, restoration, and/or enhancement of Rocky Mountain Maple Riparian Scrub Habitat on a per-acre basis. The standard for mitigation shall be no net loss. If restoration is selected as a method of compensatory mitigation, the Applicant shall prepare a riparian mitigation and monitoring plan as part of the Project's reclamation and revegetation plan and shall submit it to the County for review, determination of adequacy, and approval. Mitigation ratios shall be at a1:1 level. The Rocky Mountain Maple Riparian Scrub Habitat mitigation and monitoring plan shall be written by a qualified biologist and shall include the following elements, at minimum: a) goals of the plan and permitting requirements satisfied; b) Riparian habitat restoration activities and locations, including the restoration of temporarily affected riparian habitat to preconstruction conditions; c) monitoring and reporting requirements (including monitoring period), and criteria to measure mitigation success; and d) remedial measures, should mitigation efforts fall short of established targets. The County may consult with CDFW about the adequacy of the plan and may consult with other agencies, if the plan aims to fulfill multiple permitting and mitigation requirements.	Less than significant
Impact 3.4-16: Site preparation and construction, operations and maintenance, and decommissioning and site restoration of the Project could result in adverse impacts to wetlands and other waters.	Potentially significant	**Mitigation Measure 3.4-16a:** Implement Mitigation Measure 3.12-1 (Water Quality Best Management Practices during Activities in and near Water) **Mitigation Measure 3.4-16b: Avoid and Minimize Impacts to Wetlands and Other Waters.** The Applicant will avoid and minimize impacts on wetlands and other waters by implementing the following mitigation measures: a) Avoid direct and indirect impacts to wetlands and streams in final siting and design to the maximum extent feasible. b) Design stream crossings, including culverts, to pass a 100-year event without increasing average flow velocity or bed/bank scour potential. c) Monitor stream crossings in burn areas seasonally and maintain culverts and drains, since burned areas may experience sediment and debris loads that could result in clogged or blocked culverts.	Less than significant.

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Biological Resources (cont.)			
Impact 3.4-16 (cont.)		d) The Applicant shall also submit a site plan showing all aquatic resources and appropriate regulatory buffers or setbacks to Shasta County. e) The Applicant shall assign a qualified wetland scientist to mark all aquatic resources associated with the final project site plan. Temporary high visibility fencing, and signage may be used to help protect these areas. The qualified wetland scientist would also identify corresponding setbacks to aquatic resources, as required by Project permits. f) On a continuous basis, a qualified wetland scientist or biological monitor shall be assigned to visually inspect aquatic resources, and surrounding areas, for evidence of hydrologic loss in aquatic areas. g) Develop a Spill Prevention, Control, and Countermeasures (SPCC) Plan to minimize adverse impacts to wetlands. **Mitigation Measure 3.4-16c: Compensate for Impacts to Wetlands and other Waters.** The Applicant shall implement a Reclamation and Revegetation Plan that includes detailed measures for the compensation, restoration, and/or enhancement of wetlands and other waters on a wetland type per-acre basis. The standard for mitigation shall be no net loss. If restoration is selected as a method of compensatory mitigation, the Applicant shall prepare a wetland mitigation and monitoring plan as part of the Project's reclamation and revegetation plan and shall submit it to the County for review, determination of adequacy, and approval. Mitigation ratios shall be calculated following USACE wetland mitigation procedures and shall be based on the actual impact acreage of final design per as-built construction drawings and the results of the preconstruction surveys. After review and approval by the County and pertinent regulatory agencies, mitigation shall be carried out at a ratio no less than 1:1, or another ratio approved by the appropriate jurisdictional agency, whichever is higher. The wetland mitigation and monitoring plan shall be written by a qualified biologist and shall include the following elements, at minimum: a) goals of the plan and permitting requirements satisfied; b) wetland restoration activities and locations, including the restoration of temporarily affected wetlands and other waters to preconstruction conditions; c) monitoring and reporting requirements (including monitoring period), and criteria to measure mitigation success; and d) remedial measures, should mitigation efforts fall short of established targets. The County may consult with USACE about the adequacy of the plan and may consult with other agencies, if the plan aims to fulfill multiple permitting and mitigation requirements.	

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Biological Resources (cont.)			
Impact 3.4-17: Site preparation and construction, operations and maintenance, and decommissioning and site restoration of the Project would not result in adverse impacts to 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.	Less than Significant	No mitigation measures are required.	Less than significant
Impact 3.4-18: The Project could cause a cumulatively considerable contribution to a significant cumulative impact to avian and bat species from collisions with Project infrastructure.	Potential significant	No additional reasonable, feasible mitigation measures are available that, if implemented, would reduce the Project's contribution below the established level of significance.	Significant and Unavoidable
Communications Interference			
Impact 3.5-1: The Project could cause intermittent interference to or freezing of television reception at some residences in the service area of the stations that broadcast over the Project Site.	Potentially significant	**Mitigation Measure 3.5-1: Correct or mitigate conflicts with television signals.** Prior to issuance of a construction permit from the County, the Applicant shall send notifications, via certified mail or other means that documents receipt, to all property owners of residences within the service area of the stations that broadcast over the Project site notifying them of the potential for interference with "over-the-air" television signals received by antenna. The notification shall provide contact information and instructions so that recipients may file a complaint with the Shasta County Department of Resource Management, Planning Division if interference occurs. In the event that the County receives a verified complaint regarding television broadcast interference that is attributable to this Project, the Applicant will resolve receiver interference through coordination with property owners. Verification shall include a letter or report from a qualified third party supporting the conclusion that interference is attributable to the Project. The Applicant shall not be required to provide qualifying residents with better reception than they had before the construction and operation of the Project.	Less than significant
Impact 3.5-2: The Project would not interfere with existing navigational systems operated by the FAA or the U.S. military.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.5-3: None of the Project turbines would obstruct or prevent known point-to-point microwave relay station transmissions; however, interference could occur due to turbine location adjustments or currently unknown transmissions.	Potentially Significant	**Mitigation Measure 3.5-3: Correct or mitigate conflicts with microwave signals.** Prior to issuance of a construction permit from the County, the Applicant shall notify, via certified mail or other means that documents receipt, all owners of frequency-based communication stations and towers within 2 miles of the Project Site. The notification shall provide the locations of all turbines and shall provide contact information and instructions so that recipients may file a complaint with the Shasta County Department of Resource Management, Planning Division if interference occurs.	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Communications Interference (cont.)			
Impact 3.5-3 (cont.)		In the event that the County receives a verified complaint regarding microwave transmission interference that is attributable to this Project, the Applicant will resolve receiver interference through coordination with owners of frequency-based communication stations and towers. Verification shall include a letter or report from a qualified third party supporting the conclusion that interference is attributable to the Project. Possible actions include the Applicant being responsible for installation of high-performance antennas at nearby microwave sites, if required. The Applicant shall not be required to provide qualifying owners with better signals than they had before the construction and operation of the Project.	
Cultural and Tribal Cultural Resources			
Impact 3.6-1: The Project could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.	Potentially Significant	**Mitigation Measure 3.6-1: Archaeological Research Design and Treatment Plan.** Prior to receiving a County grading permit for the Project, the applicant shall: 1. Relocate Project components to a location that would not potentially impact the known historical resource. 2. If relocation is documented to the satisfaction of the County as infeasible (where "feasible" means "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors" as defined in CEQA Guidelines Section 15364) and the historical resource would potentially be impacted by the Project, design and implement an Archaeological Research Design and Treatment Plan (ARDTP). The investigation would be completed under the methods and research design outlined in an ARDTP to be prepared in accordance with the California Resources Agency's Guidelines for Archeological Research Designs (California Resources Agency, 1991). A qualified archaeologist (defined as one meeting the Secretary of the Interior's Professional Qualification Standards for archaeology) shall prepare the ARDTP in consultation with the culturally affiliated Native American tribe(s). The ARDTP shall address, at a minimum, the following: the establishment of Environmentally Sensitive Areas; treatment and recovery of important data contained within the portions of the historical resource located within and adjacent to the Project Site; construction worker cultural resources sensitivity training; compensated archaeological and Native American monitoring; inadvertent discovery protocols; and provisions for curation or reburial of recovered materials. The ARDTP shall include the specific methods that will be employed (e.g., the length and depth of excavation, the type of equipment utilized, the percent of area investigated). The ARDTP shall identify how the proposed investigation would preserve any significant historical information obtained and identify the scientific/historic research questions applicable to the resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The results of the investigation shall be documented in a technical report that provides a full artifact catalog, analysis of items collected, results of any special studies conducted, and interpretations of the resource within a	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Cultural and Tribal Cultural Resources (cont.)			
Impact 3.6-1 (cont.)		regional and local context. All technical documents shall be placed on file at the North Central Information Center of the California Historical Resources Information System. The results report shall include recommendations for archaeological and Native American monitoring in Environmentally Sensitive Areas and the protocol to follow should additional cultural materials be identified during construction activities.	
Impact 3.6-2: The Project could disturb human remains, including those interred outside of formal cemeteries.	Potentially significant	**Mitigation Measure 3.6-2: Inadvertent Discovery of Human Remains.** In the event human remains are uncovered during ground-disturbing activities (including construction, operations and maintenance, and decommissioning), the Project proponent or its contractor shall immediately halt work within a 100-foot radius, contact the Shasta County Coroner to evaluate the remains within 48 hours, and follow the procedures and protocols pursuant to Section 15064.5(e)(1) of the CEQA Guidelines. Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then identify the person thought to be the most likely descendent of the deceased Native American. The most likely descendent will make recommendations for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.	Less than significant
Impact 3.6-3: The Project would cause a substantial adverse change in the significance of a tribal cultural resource.	Potentially Significant	**Mitigation Measure 3.6-3a:** Implement Mitigation Measure 3.6-1: Archeological Research Design and Treatment Plan **Mitigation Measure 3.6-3b: Coordination with the Pit River Tribe during Project Development.** Shasta County and the Applicant will facilitate a preconstruction meeting and field visit with the Pit River Tribe through the Tribe's chairperson and the Pit River Environmental Office to discuss "tribal cultural resources" as defined in Public Resources Code Section 21074 in the Project Site and identify ways to minimize impacts on these locations during construction. The site visit will focus on viewing the location of the Project facilities, describing Project construction and operation activities, and identifying potential cultural significant features. **Mitigation Measure 3.6-3c: Detailed Recordation of Features Considered Culturally Significant to the Pit River Tribe.** The Applicant shall retain a professional ethnographic consultant to undertake a detailed recordation of any locations considered important to the Pit River Tribe. The recordation will commence prior to construction and will include photographic documentation of pre- and post-construction conditions of any identified culturally sensitive location. The information gathered as a result of field, interview, and research tasks will be compiled into a report that will be transmitted to the Pit River Tribe. Detailed recordation of any ethnographic location in this manner will create a photographic and written record of the cultural resource prior to construction of the Project, resulting in partial compensation for Project impacts.	Significant and unavoidable

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Cultural and Tribal Cultural Resources (cont.)			
Impact 3.6-3 (cont.)		**Mitigation Measure 3.6-3d: Cultural Resources Monitoring Program with the Pit River Tribe during Construction.** The Applicant shall offer and provide the opportunity for cultural resource monitors from the Pit River Tribe to monitor initial ground disturbing construction activities in areas identified by the Tribe as culturally sensitive. Monitors will have the authority to ensure that cultural site(s) discovered during the archeological survey and/or inadvertent discoveries in the Project Site are avoided or that impacts on such localities are mitigated to the extent feasible, including but not limited to, avoidance or data recovery (as outlined in Mitigation Measure 3.6-1. Archaeological Research Design and Treatment Plan). The Pit River Environmental Office should coordinate with the appropriate Achumawi bands (Itsatawi and Madesi) to assign monitors. If the offer is accepted, the Applicant shall provide compensation commensurate with market rates based on the qualifications and experience of the cultural monitor(s). Prior to tendering an offer to the Tribe the Applicant shall provide a copy of the offer to the County for review, including but not limited to the proposed number of monitors to be employed, proposed construction schedule/hours during which monitors would be present on site, proposed level(s) of compensation, and other relevant details of the proposed cultural monitoring program.	
Energy			
Impact 3.7-1: Project construction, operation and maintenance, and decommissioning and site reclamation could result in the wasteful, inefficient, or unnecessary consumption or use of energy.	Less than significant	No mitigation measures are required	Less than significant
Forestry Resources			
Impact 3.8-1: The Project could result in the loss of forest land or conversion of forest land to non-forest use	Less than significant	No mitigation measures are required	Less than significant
Geology and Soils			
Impact 3.9-1: The Project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.9-2: The Project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.	Less than significant	No mitigation measures are required	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Geology and Soils (cont.)			
Impact 3.9-3: The Project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.9-4: The Project could result in substantial soil erosion or the loss of topsoil.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.9-5: The Project could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.9-6: The Project could be located on expansive or corrosive soil, as defined in California Building Code Section 1803.5.3, creating substantial direct or indirect risks to life or property.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.9-7: The Project could have soils incapable of adequately supporting the use of a septic tank.	Less than significant	No mitigation measures are required	Less than significant
Greenhouse Gas Emissions			
Impact 3.10-1: The Project would generate GHG emissions, directly and indirectly.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.10-2: The Project could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.	Less than significant	No mitigation measures are required	Less than significant
Hazards and Hazardous Materials			
Impact 3.11-1: The Project could create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials or wastes.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.11-2: The Project could 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.	Less than significant	No mitigation measures are required	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Hazards and Hazardous Materials (cont.)			
Impact 3.11-3: During normal operation, equipment failure or an extreme event could lead to turbine failure, resulting in a potential hazard.	Potentially significant	**Mitigation Measure 3.11-3: Mandatory Setbacks.** A minimum wind turbine setback of two times the total tip height shall be maintained from the exterior Project boundaries where the Project Site is adjacent to existing parcels of record that contain an off-site residence.	Less than significant
Impact 3.11-4: During normal operation, weather conditions could lead to ice shed from turbine blades, resulting in a potential hazard.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.11-5: During normal operations, applications of certain pesticides could result in a potential hazard.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.11-6: During normal operations, alternating changes in light intensity could occur when turbine blades are rotating and result in an adverse health effect.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.11-7: The Project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Potentially significant	**Mitigation Measure 3.11-7:** Implement the Traffic Management Plan that would be required by Mitigation Measure 3.14-3.	Less than significant
Hydrology and Water Quality			
Impact 3.12-1: The Project would, unless mitigated, violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality during construction and decommissioning.	Potentially significant	**Mitigation Measure 3.12-1: Water Quality Best Management Practices during Activities in and near Water.** To avoid and/or minimize potential impacts on water quality (and jurisdictional waters) during construction- and decommissioning-related project activities that would be conducted near (i.e., within 50 feet), in, or over waterways, the project contractor shall implement the following standard construction BMPs to prevent releases of hazardous materials and to avoid other potential environmental impacts: 1. In-stream construction shall be scheduled during the summer low-flow season to minimize impacts on aquatic resources. If instream construction takes place during higher flow seasons, the following measures shall be implemented: a. Minimize mechanized equipment use below top of bank of streams; b. Perform activities in accordance with all permit conditions and best practices; and c. Have environmental monitors on-site to monitor instream construction to ensure compliance with permit conditions and best practices.	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Hydrology and Water Quality (cont.)			
Impact 3.12-1 (cont.)		2. All construction material, wastes, debris, sediment, rubbish, trash, etc., shall be removed from the Project Site daily during construction and decommissioning, and thoroughly at the completion of each of these phases. Debris shall be transported to an authorized upland disposal area. 3. Consistent with the Project's Hazardous Materials Business Plan (HMBP) and Spill Prevention Control and Countermeasures Plan (SPCC), construction workers shall receive training prior to construction/decommissioning and protective measures shall be implemented to prevent accidental discharges of oils, gasoline, or other hazardous materials to jurisdictional waters during fueling, cleaning, and maintenance of equipment, as outlined in the Project's HMBP. Equipment used to perform construction work on the Project Site shall be maintained in accordance with manufacturers' protocols, and, except in the case of failure or breakdown, equipment maintenance shall be performed off-site. Crews shall check heavy equipment daily for leaks; if a leak is discovered, it shall be immediately contained and use of the equipment shall be suspended until repaired. The source of the leak shall be identified, material shall be cleaned up, and the cleaning materials shall be collected and properly disposed. 4. Vehicles and equipment shall be serviced off-site, or, if on-site service is necessary, in a designated location a minimum distance of 100 feet from drainage channels and other waterways. Fueling locations shall be inspected after fueling to document that no spills have occurred. Any spills shall be cleaned up immediately.	
Impact 3.12-2: Blasting, if it occurs, could substantially degrade groundwater quality.	Potentially significant	**Mitigation Measure 3.12-2: Best Management Practices for Blasting.** All activities related to blasting shall follow Best Management Practices (BMPs) to prevent contamination of groundwater including preparing, reviewing and following an approved blasting plan; proper drilling, explosive handing and loading procedures; observing the entire blasting procedures; evaluating blasting performance; and handling and storage of blasted rock. 1) ***Blasting Plan.*** Prior to conducting the first blast on the Project Site, the Applicant shall prepare and submit a detailed blasting plan to the Shasta County Department of Resource Management and the Shasta County Sheriff's Department. The blasting plan shall contain a complete description of how explosives will be safely transported and used at the site; evacuation, security and fire prevention procedures; blasting equipment list; and procedures for notification of nearby receptors. The blasting plan shall explain how the Applicant will comply with the requirements of 30 C.F.R. §§816.61 through 816.68 regarding the use of explosives to be consistent with the technical requirements of the statute. Procedures for notification shall include, but not be limited to, the following: a. At least 30 days before initiation of blasting, the operator shall notify, in writing, all residents or owners of dwellings or other structures located within 0.5-mile of the permit area describing how to request and submit a pre-blasting survey. Notification shall include posting a written notice within the Project Site, and on the County's public website describing how to obtain and submit a pre-blasting survey.	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Hydrology and Water Quality (cont.)			
Impact 3.12-2 (cont.)		b. A resident or owner of a dwelling or structure within 0.5-mile of any part of the permit area may request a pre-blasting survey. This request shall be made, in writing, directly to the operator or to the regulatory authority, who shall promptly notify the operator. The operator shall promptly conduct a pre-blasting survey of the dwelling or structure and promptly prepare a written report of the survey detailing the results. c. The operator shall determine the condition of the dwelling or structure and shall document any pre-blasting damage and other physical factors that could reasonably be affected by the blasting. Structures such as pipelines, cables, transmission lines, and cisterns, wells, and other water systems warrant special attention; however, the assessment of these structures may be limited to surface conditions and other readily available data. d. Prior to finalizing the blasting plan, the County or designated operator shall consult with jurisdictional authorities tasked with protecting waters of the state and implement avoidance and minimization measures, as required by CDFW, USACE, and regional water quality (Section 401) regulatory permits prepared for the Project. Such protective measures shall be included in the blasting plan and/or incorporated by reference. 2) ***Loading practices.*** The following blast hole loading practices to minimize environmental effects shall be followed: a) Drilling logs shall be maintained by the driller and communicated directly to the blaster. The logs shall indicate depths and lengths of voids, cavities, and fault zones or other weak zones encountered as well as groundwater conditions. b) Explosive products shall be managed on-site so that they are either used in the borehole, returned to the delivery vehicle, or placed in secure containers for off-site disposal. c) Spillage around the borehole shall either be placed in the borehole or cleaned up and returned to an appropriate vehicle for handling or placement in secured containers for off-site disposal. d) Loaded explosives shall be detonated as soon as possible and shall not be left in the blast holes overnight, unless weather or other documented safety concerns reasonably dictate that detonation should be postponed. e) Loading equipment shall be cleaned in an area where wastewater can be properly contained and handled in a manner that prevents release of contaminants to the environment. f) Explosives shall be loaded to maintain good continuity in the column load to promote complete detonation. Industry accepted loading practices for priming, stemming, decking and column rise shall be attended to. 3) ***Explosive Selection.*** To reduce the potential for groundwater contamination when explosives are used, explosive products shall be selected that (a) are appropriate for site conditions and safe blast execution, and (b) have the appropriate water resistance for the site conditions present to minimize the potential for hazardous effect of the product upon groundwater.	

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Hydrology and Water Quality (cont.)			
Impact 3.12-2 (cont.)		4) **Prevention of Misfires.** Appropriate practices shall be developed and implemented to prevent misfires. 5) **Blast Rock Pile Management.** To reduce the potential for contamination, the interaction of blasted rock piles and stormwater shall be managed to prevent contamination of water supply wells or surface water.	
Impact 3.12-3: The Project could decrease groundwater supplies or interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.12-4: The Project would, unless mitigated, substantially increase siltation of waterways or provide substantial additional sources of polluted runoff during construction and decommissioning.	Potentially significant	**Mitigation Measure 3.12-4:** Implement the water quality best management practices during activities in and near water that would be required by Mitigation Measure 3.12-1.	Less than significant impact
Impact 3.12-5: The Project would, unless mitigated, conflict with implementation of the Central Valley Basin Plan.	Potentially significant	**Mitigation Measure 3.12-5a.** Implement the water quality best management practices during activities in and near water that would be required by Mitigation Measure 3.12-1. **Mitigation Measure 3.12-5b:** Implement the best management practices for blasting that would be required by Mitigation Measure 3.12-2.	Less than significant impact
Noise and Vibration			
Impact 3.13-1: Operation of the Project could result in the generation of a substantial permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the Shasta County General Plan or the applicable standards of other agencies.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.13-2: Construction, decommissioning, and site reclamation of the Project could result in the generation of a substantial temporary increase in ambient noise levels on and near the Project Site in excess of standards established in the Shasta County General Plan or the applicable standards of other agencies.	Potentially Significant	**Mitigation Measure 3.13-2: Noise-Reducing Construction Practices.** The Project Applicant shall ensure that the following measures are implemented during construction, decommissioning, and site reclamation activities to avoid and minimize construction noise effects on sensitive receptors: a) Construction vehicle routes shall be located at the most distant point feasible from noise-sensitive receptors. b) All heavy trucks shall be properly maintained and equipped with noise-control (e.g., muffler) devices, in accordance with manufacturers' specifications, at each work site during Project construction, decommissioning, and site reclamation to minimize heavy truck traffic noise effects on sensitive receptors.	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Noise and Vibration (cont.)			
Impact 3.13-2 (cont.)		c) Haul trucks and delivery trucks shall prioritize use of the east access road, if available, over the west access road, and shall avoid use of the west access road during nighttime hours. d) Helicopter use shall be limited to a period of 2 weeks or less such that receptors are not impacted for a substantial period of time. e) Limit construction operations located within 2,500 feet of residences to daytime hours only. f) Residences within 2,000 feet of helicopter activity shall be notified of the timeline of proposed operations at least 2 weeks` prior to line stringing operations. g) Nighttime (10 p.m. to 7 a.m.) helicopter use and blasting shall be prohibited.	
Impact 3.13-3: Construction, decommissioning, and site reclamation of the Project could generate groundborne vibration.	Potentially significant	**Mitigation Measure 3.13-3: Charge Weight Limits on Blasting Activities.** The Project Applicant shall ensure that blasting contractors restrict charge weight per delay such that a performance standard of less than 0.3 in/sec PPV would result at any structures in the vicinity of the blasting area. This performance standard shall be established as a condition of contract and implemented by a licensed blasting contractor in possession of a Federal Explosives License/Permit, issued by the Bureau of Alcohol, Tobacco, and Firearm.	Less than significant
Transportation			
Impact 3.14-1: The Project could conflict with a program plan, ordinance or policy addressing the circulation system.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.14-2: The Project could conflict or be inconsistent with CEQA Guidelines Section 15064.3(b).	Less than significant	No mitigation measures are required	Less than significant
Impact 3.14-3: The Project would, unless mitigated, substantially increase safety hazards.	Potentially significant	**Mitigation Measure 3.14-3: Traffic Management Plan.** Prior to the issuance of construction or building permits and prior to the removal of materials from the Project Site during decommissioning, the Applicant shall: 1. Prepare and submit a Traffic Control Plan to Shasta County Public Works Department and the Caltrans offices for District 2, as appropriate, for approval. The Traffic Control Plan must be prepared in accordance with both the Caltrans Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and must include, but not be limited to, the following: a. A plan for communicating construction/decommissioning plans with Caltrans, emergency service providers, and residents located in the vicinity of the Project Site. b. An access and circulation plan for use by emergency vehicles when lane closures and/or detours are in effect. If lane closures occur, provide advance notice to local fire departments and sheriff's department to ensure that alternative evacuation and emergency routes are designed to maintain response times.	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Transportation (cont.)			
Impact 3.14-3 (cont.)		c. Timing of deliveries to/removals from the Project Site of heavy equipment and building materials; d. Directing vehicles, pedestrians, and bicyclists on SR 299 through the construction zone with a flag person; e. Providing detours to route vehicular traffic, bicyclists, and pedestrians around lane or shoulder closures, if they occur; f. Providing adequate parking for construction trucks, equipment, and workers in the designated staging areas within the Project Site; g. Placing temporary signage, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction/decommissioning traffic, and the placement of traffic cones to provide temporary left-turn lanes into Project driveways as needed;[8] h. Preserving access to existing ingress/egress points for all adjacent property at all times; and, i. Specifying both construction/decommissioning-related vehicle travel and oversize/overweight vehicle haul routes. 2. Obtain all necessary encroachment permits for the work within the road right-of-way or use of oversized/overweight vehicles that will utilize county maintained roads, which may require California Highway Patrol or a pilot car escort. Copies of the approved traffic plan and issued permits shall be submitted to the Shasta County Public Works Department and Caltrans. 3. Consult with the Shasta County Public Works Department and Caltrans to identify any substantial construction activities on SR 299 that may overlap with construction of the Project (e.g., Caltrans SR 299 resurfacing project from Milepost 60.0 to 67.8). Coordinate with the contractor(s) of any identified project(s) to ensure that overlapping construction activities do not cause unnecessary delays on SR 299 or preclude the ability of large vehicles to access the Project Site.	
Impact 3.14-4: The Project would, unless mitigated, result in inadequate emergency access.	Potentially Significant	**Mitigation Measure 3.14-4:** Implement the Traffic Management Plan that would be required by Mitigation Measure 3.14-3 (Traffic Management Plan).	Less than significant

[8] A left-turn lane warrant analysis was conducted for the three Project driveways, which is provided in Appendix H. The analysis found that left-turn lanes would be warranted during Project construction at all three Project driveways during the a.m. peak hour.

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Utilities and Service Systems			
Impact 3.15-1: The Project would have sufficient water supplies available to serve the Project for the reasonable and foreseeable future development during normal, dry, and multiple dry years.	Less than significant	No mitigation measures are required	Less than significant
Impact 3.15-2: The Project could result in a determination by a wastewater treatment provider that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments	Less than significant	No mitigation measures are required	Less than significant
Impact 3.15-3: The Project could generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	Less than significant	No mitigation measures are required	Less than significant
Wildfire			
Impact 3.16-1: The Project would, unless mitigated, substantially impair an adopted emergency response plan or emergency evacuation plan.	Potentially significant	**Mitigation Measure 3.16-1a:** Implement Mitigation Measure 3.14-3 (Traffic Management Plan) **Mitigation Measure 3.16-1b: Pre-Construction Coordination with CAL FIRE** Prior to construction, the Applicant shall provide GIS files or other maps of the Project layout to CAL FIRE to facilitate aerial fire-fighting planning. The Applicant shall notify CAL FIRE of any changes to the Project layout or any maintenance that would require the use of helicopters or the use of equipment not previously identified on maps provided to CAL FIRE that could present a new, previously unidentified vertical obstacle to aerial firefighting.	Less than significant
Impact 3.16-2: The Project would, unless mitigated, exacerbate wildfire risks and expose people to pollutant concentrations or a significant risk of loss, injury or death from a wildfire or the uncontrolled spread of a wildfire.	Potentially significant	**Mitigation Measure 3.16-2a: Fire Safety.** The Applicant and/or its contractors shall prepare and implement a Project-specific Fire Prevention Plan (FPP) to prevent an exacerbation of wildfire risk during both the Project construction and operation and maintenance phases. Prior to construction, the Applicant shall contact and consult with the Shasta Trinity Unit of CAL FIRE and the Shasta County Fire Department to determine the appropriate amounts of fire equipment to be carried on the vehicles and appropriate prevention measures to be taken. The Applicant shall submit verification of its consultation with the appropriate fire departments to Shasta County. The Applicant shall submit a draft FPP to the Shasta County Project Manager for approval when the building permit application is submitted. The County shall have an opportunity to make comments on and revisions to the FPP, which the Applicant shall incorporate into a revised FPP for approval. The Applicant shall make the approved FPP available to all construction crew members prior to construction of the Project. The FPP shall list fire safety measures including fire prevention and extinguishment procedures, as well as specific emergency response and evacuation measures that would be followed during emergency situations; examples are listed	Less than significant

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Wildfire (cont.)			
Impact 3.16-2 (cont.)		below. The FPP also shall provide fire-related rules for smoking, storage and parking areas, usage of spark arrestors on construction equipment, and fire-suppression tools and equipment. The FPP shall include or require, but not be limited to, the following: • Prior to construction, the Project applicant shall designate primary and alternate Fire Coordinators such that a Fire Coordinator is present at all times during Project construction. The Fire Coordinator shall be responsible for ensuring that crews have sufficient fire suppression equipment, communication equipment, shall lead and coordinate fire patrols, ensure that the required clearances are followed onsite, and ensure that all crew members receive training on the FPP and its components. • For vehicles within control of the contractor, the contractor shall require vehicle drivers to conduct a visual inspection of the vehicle for potential sparking risks prior to operation of the vehicle. This inspection should include, but not be limited to a check of tire pressure and an inspection for chains or other vehicle components that could drag while driving. For subcontractors or vendors where vehicles are not within the control of the contractor, the contractor or Applicant shall develop a standard brochure to send to vendors that shall provide educational materials about fire risks associated with vehicles and shall provide an inspection checklist. • The Applicant and/or its contractors shall have water tanks, water trucks, or portable water backpacks (where space or access for a water truck or water tank is limited) sited/available in the study area for fire protection. • During construction of the Project the Applicant and/or its contractors shall implement ongoing fire patrols during construction hours and for 1 hour after the end of daily construction and hotwork. • All construction crews and inspectors shall be provided with radio and/or cellular telephone access that is operational within the Project Site to allow communications with other vehicles and construction crews. All fires shall be reported immediately upon detection. • Require that all internal combustion engines, stationary and mobile, be equipped with spark arresters in good working order. • Require that light trucks and cars with factory-installed mufflers be used only on roads where the roadway is cleared of vegetation. • Require that equipment parking areas and small stationary engine sites are cleared of all extraneous flammable material. • Include a fire conditions monitoring program to monitor meteorological data during construction and operation. • Include a monitoring and inspection protocol for turbines and electrical infrastructure. • Include protocol for disabling re-closers and de-energizing portions of the electrical collection and transmission systems	

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Wildfire (cont.)			
Impact 3.16-2 (cont.)		• Prohibit smoking in wildland areas, with smoking limited to paved areas or areas cleared of all vegetation. • All construction vehicles shall have fire suppression equipment. • The Applicant shall ensure that all construction workers receive training on the implementation of the FPP including how to conduct a fire patrol, proper use of fire-fighting equipment and procedures to be followed in the event of a fire, vegetation clearance and equipment usage requirements, turbine, and electrical equipment inspections. • As construction may occur simultaneously at several locations, each construction site shall be equipped with fire extinguishers and fire-fighting equipment sufficient to extinguish small fires. • The Applicant shall enforce a requirement that construction personnel park any vehicles within roads, road shoulders, graveled areas, and/or cleared areas (i.e., away from dry vegetation) wherever such surfaces are present at the construction site. • The Applicant and its contractor shall cease all non-emergency work during Red Flag Warning events. • The Applicant shall coordinate the finalization of road improvements (i.e. frequency of grading and vegetation clearance) with CAL FIRE and other emergency responders to ensure that sufficient ingress and egress exists onsite. • Prior to the initiation of construction, a designated inspector from the County shall inspect the Project Site to ensure that sufficient fire suppression equipment is present onsite, that the required vegetation clearances have been cleared, that a crew member training program has been created, that construction vehicles are equipped with fire suppression equipment, that spark arrestors are installed on construction equipment, that a fire conditions monitoring program has been developed, that a monitoring and inspection protocol has been developed, that a disabling and re-closing protocol has been developed, and that CAL FIRE was appropriately consulted regarding road improvements and ingress and egress. • During construction, the Applicant shall submit a weekly FPP compliance report that demonstrates the following: fire patrols have been conducted following construction, any new construction workers have received training on the implementation of the FPP, that non-emergency work is being halted appropriately during Red Flag Warnings, and that sufficient fire suppression equipment is present onsite. Successful implementation of Mitigation Measure 3.16-2a (Fire Safety) would be demonstrated by the development of an FPP in consultation with local fire authorities which is documented and submitted to Shasta County for review, any revisions, and final approval. Additionally, successful implementation of Mitigation Measure 3.16-2a would require that the Applicant and its contractor comply with all components of the FPP, that ignition from Project construction activities is promptly reported to the fire department(s) with jurisdiction, and that when it is safe to do so, any Project-caused ignition is suppressed immediately.	

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Wildfire (cont.)			
Impact 3.16-2 (cont.)		**Mitigation Measure 3.16-2b: Nacelle Fire Risk Reduction.** Turbines shall be equipped with fire detection and prevention technology compatible with the manufacturer's operating requirements and will be maintained in good working order throughout the life of the Project. Turbines with electrical equipment in the nacelle shall have safety devices to detect electrical arc and smoke that use the best available technology for fire detection and suppression within turbines. The turbine design shall include the following components: 1. Early fire detection and warning systems; 2. Automatic switch-off and complete disconnection from the power supply system; and 3. Automatic fire extinguishing systems in the nacelle of each wind turbine. 4. Additionally, turbines shall include lightning protection equipment such as grounding equipment, and a lightning measurement system. Should any of these devices report an out-of-range condition, the device shall command a shutdown of the turbine and disengage it from the electrical collection system, and send a notice through the SCADA. The entire turbine shall be protected by current-limiting switchgear installed at the base of the tower. In the event of a lightning strike, an electrical inspection shall be conducted on the affected turbine to identify and address any damage to the turbine or electrical system that could result in subsequent fire risk. **Mitigation Measure 3.16-2c: Emergency Response Plan.** Prior to the submission of the building permit application, the Applicant shall prepare an emergency response plan to be reviewed and approved by Shasta County Planning, CAL FIRE, and the Shasta County Fire Department. Following approval of the plan, the Applicant and/or its contractors shall implement the requirements in the plan during all phases of construction and operation, as applicable. The emergency response plan shall describe the likely types of potential accidents or emergencies involving fire that could occur during both construction and operation, and shall include response protocols for each scenario. The plan shall include key contact information and a description of key processes, in the event of an emergency in order to alert relevant responders of the emergency, and how to control the emergency. The plan shall include crew member training in response, suppression, and evacuation. The training shall be coordinated by the designated Fire Coordinators. Prior to construction, the Applicant shall submit to the County a compliance report demonstrating that all crew members have been trained. As new construction crews or operation workers are brought onsite, the Applicant shall submit additional compliance reports demonstrating that they have been received training on the emergency response plan.	

TABLE ES-2 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Levels of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Wildfire (cont.)			
Impact 3.16-3: The Project would require the installation and maintenance of Project-related infrastructure (such as roads and power lines) that may exacerbate fire risk, and the installation and maintenance of fire suppression infrastructure (such as vegetation clearances and emergency water sources) that may result in temporary or ongoing impacts to the environment.	Less than significant	No mitigation measures are required	
Impact 3.16-4: The Project would, unless mitigated, expose people or structures to significant risks, including adverse water quality effects or downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	Potentially Significant	**Mitigation Measure 3.16-4:** Implement the Fire Safety measures that would be required by Mitigation Measure 3.16-2a (Fire Safety); implement the Nacelle Fire Risk Reduction measures that would be required by Mitigation Measure 3.16-2b; and implement the Emergency Response Plan that would be required by Mitigation Measure 3.16-2c.	Less than significant

ES.7 Overview of Alternatives to the Project

CEQA requires a lead agency to analyze a reasonable range of alternatives to the project that could feasibly attain the basic objectives of the project while substantially reducing or eliminating significant environmental effects. CEQA also requires an EIR to evaluate a "no project" alternative to allow decision-makers to compare impacts of approving a project with the impacts of not approving it. The alternatives development process, alternatives eliminated from further consideration, and alternatives considered in the EIR are described in greater detail in Chapter 2, *Description of Project and Alternatives*.

ES.7.1 Alternatives Eliminated from Further Consideration

Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce any significant environmental effects (CEQA Guidelines §15126.6[c]). Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, also do not need to be considered (CEQA Guidelines §15126[f][2]). The following potential alternatives were eliminated from further consideration in the EIR because they failed to meet most of the Project objectives, were infeasible, or did not avoid or substantially reduce any significant environmental effects:

1. **Off-site Alternatives:** The County initially considered a variety of potential off-site alternatives, including replacing the current proposal with an off-shore wind facility or with an on-shore facility far from the proposed site. See Section 2.5.2.1, *Off-site Alternatives*.
2. **Repowering Alternative:** The County initially considered a repowering alternative focused on one or more existing wind facilities, potentially including the Dillon, Tule Wind, Phoenix Wind, Manzana Wind, Mountain View III, and/or Shiloh projects. See Section 2.5.2.2, *Repowering Alternative*.
3. **Alternative Technologies:** The County initially considered alternative technologies, including hydroelectric power, cogeneration, and solar. See Section 2.5.2.3, *Alternative Technologies*.
4. **Alternative Approaches:** The County initially considered alternative approaches, including conservation and demand side management, other distributed energy resources, and improving the efficiency of existing energy infrastructure. See Section 2.5.2.4, *Alternative Approaches.*

ES.7.2 Alternatives Considered in the EIR

The reasonable range of alternatives analyzed in this Draft EIR is summarized below. Three alternatives to the Project are considered in detail. These alternatives were selected for more detailed consideration through the screening process described in greater detail in Section 2.5.1, *Alternatives Development and Screening.*

E.7.2.1 No Project Alternative

Under the No Project Alternative, Use Permit No. UP 16-007 would not be issued and the proposed Project would not be developed. None of the proposed wind turbines or associated transformers, associated infrastructure, or ancillary facilities would be constructed, operated and

maintained, or decommissioned on the Project Site. FAA-required safety lighting would not be installed. The proposed overhead and underground electrical collector system and communications lines would not be developed; and the onsite collector substation, switching station, and operation and maintenance (O&M) facility would not be constructed. Foundations would not be excavated, laydown areas would not be cleared, no new access roads would be constructed, and no existing roads would be improved. No groundwater well, water storage tank, or septic system would be installed onsite, and no construction-related or other refuse would be removed from the site. No electric power would be needed at the Project site, or delivered to the regional grid from the Project site. Existing stormwater drainage patterns on the site would not be affected. No materials delivery-related or other construction trucks, equipment, or additional vehicle trips would be made to, from, or within the site relative to baseline conditions. None of the proposed up to 400 construction workers and none of the up to 12 full-time employees would travel to or be employed on the Project Site; decommissioning and site restoration phase workers similarly would not be present. Instead, it is assumed that the land within the Project boundary would continue to be managed for timber production. See Section 2.5.3.1, *No Project Alternative*.

E.7.2.2 Alternative 1: South of SR 299

Under Alternative 1, the Project would be constructed, operated and maintained, and ultimately decommissioned as proposed south of SR 299, and none of the up to seven turbines proposed to the north of SR 299 (turbine numbers A01 through A07) or related infrastructure would be developed. The Alternative 1 Site would consist of the approximately 4,086 acres located south of SR 299, while the approximately 378 acres of the Project Site located north of SR 299 would continue to be managed for timber production. Each of Alternative 1's up to 65 turbines could be up to 679 feet above ground level at the top of the blade (the same as the Project) and would have a generating capacity of 3 to 5.7 MW (also the same as the Project). Overall, Alternative 1 would have a total nameplate generating capacity of up to 195 MW.

Scoping comments suggested that the County consider a reduced-Project alternative (i.e., one with fewer turbines and/or a more concentrated placement of turbines) and a modified Project alternative that would relocate the proposed turbines to the south relative to the existing proposal. Alternative 1 responds to these suggestions. Relative to the screening criteria outlined in Section 2.5.1, *Alternatives Development and Screening*, the County preliminarily has determined that Alternative 1 would be reasonable and feasible even if it would impede to some degree the attainment of the Project objectives relating to generating capacity, carbon dioxide emissions offset, and the number of households that could be served with clean energy if the Project were approved. Alternative 1 has been designed to avoid all Project impacts north of SR 299 and to lessen any significant effects of the Project to aesthetics, avian and other wildlife species and to Tribal Cultural Resources, including to birds traditionally important to the Pit River culture (e.g., eagles, eagle nests, and osprey) and audible and physical disruption of an area identified by Native Americans as culturally significant. See Section 2.5.3.2, *Alternative 1, South of SR 299*.

E.7.2.3 Alternative 2: Increased Setbacks

Under Alternative 2, proposed setbacks would be increased relative to the Project to preclude turbine construction within three times the height of the turbine (i.e., within 2,037 feet) of a residential property line and within 1.5 times the height of the turbine (i.e., within 1,018.5 feet) of State Route 299, any other publicly-maintained public highway or street, and of Supan Road or Terry Mill Road. These setback distances would be among the most protective of public health and safety in the State based on a comparison of setback requirements included in county ordinances in California for large wind projects as compiled by WINDExchange, a resource of the Wind Energy Technologies Office of the U.S. Department of Energy (DOE, 2020). Implementation of these setbacks would preclude construction of proposed turbines M03, D05, and B01 based on the residential property line setback, and would preclude turbine KO2 based on the roadway setback. Related infrastructure and work areas for these turbines (including temporary turbine construction areas, access roads and crane roads) would not be needed. The remaining turbines, infrastructure and other improvements would be the same as proposed for the Project. Each of Alternative 2's up to 68 turbines could be up to 679 feet above ground level at the top of the blade (the same as the Project) and would have a generating capacity of 3 to 5.7 MW (also the same as the Project). Overall, Alternative 2 would have a total nameplate generating capacity of up to 204 MW.

Scoping comments suggested that the County consider a Project alternative that would remove turbines farther from Moose Camp, and expressed concerns about noise, vibration, and safety. Alternative 2 has been designed to respond to these suggestions. Relative to the screening criteria outlined in Section 2.5.1, *Alternatives Development and Screening*, the County preliminarily has determined that Alternative 2 would be reasonable and feasible even if it would impede to some degree the attainment of the Project objectives relating to generating capacity, carbon dioxide emissions offset, and the number of households that could be served with clean energy if the Project were approved.

E.7.2.4 Comparison of Alternatives

Draft EIR Chapter 4, *Comparison of Alternatives*, compares the potential environmental impacts of the Project to those of the No Project Alternative, Alternative 1, and Alternative 2. **Table ES-3** summarizes impacts of the Project, Alternative 1, *South of SR 299*, and Alternative 2, *Increased Setbacks*. The No Project Alternative would avoid all impacts of the Project and instead would result in the environmental benefits and consequences that reasonably would be expected to occur based on the site's current timber production-related General Plan and zoning. Pursuant to regulations implementing the California Timberland Productivity Act (Government Code §51100 et seq.; 14 Cal. Code Regs. §897[a]), there is a legal presumption that "timber harvesting is expected to and will occur on such lands." The regulations further specify that timber harvesting on such lands "shall not be presumed to have a Significant Adverse Impact on the Environment" (14 Cal. Code Regs. §898). Therefore, the No Project Alternative, including anticipated timber harvesting, is not presumed to result in a significant adverse individual or cumulative effects. CAL FIRE would review any future timber harvesting proposal to evaluate any potential Project-specific, site-specific environmental impacts. Table ES-3 summarizes impacts of Alternative 1, *South of SR 299*, and Alternative 2, *Increased Setbacks*, as they compare to those of the Project.

TABLE ES-3
SUMMARY OF IMPACTS OF THE PROJECT AND ALTERNATIVES

EIR Section	Resource Area	Project	Alternative 1, South of SR 299	Alternative 2, Increased Setbacks
3.2	Aesthetics	Impact 3.2-1: The Project, in particular the form, color, movement, and nighttime lighting of the proposed turbines, would have a substantial adverse effect by substantially reducing visual character, visual quality, and the quality of scenic vistas for tourists, recreationists, or residents. While the implementation of recommended Mitigation Measure 3.2-1 would reduce the potential significance of impacts, impacts would not be reduced below established thresholds of significance (Significant and Unavoidable). The Project would result in a less than significant impact relating not only to the potential to damage to scenic resources within a state scenic highway (Impact 3.2-2), but also to the potential to create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area (Impact 3.2-3). (Less than Significant Impact)	Under Alternative 1, the up-to-seven turbines north of SR 99 (turbine numbers A01 through A07) would not be constructed, resulting in incrementally fewer obstructions in the visual landscape and incrementally fewer safety lights. Depending on the specific viewing location, this alternative could reduce aesthetic impacts; however, from certain locations, clustering of turbines south of SR 299 could reduce the coherence between the Hatchet Ridge project and the proposed Project, creating an appearance of multiple separate wind energy generation projects encroaching in the foothills. Any increase or decrease in the aesthetic impacts created by Alternative 1 would not be significant. Therefore, depending on the viewing location, Alternative 1 could either slightly increase or reduce aesthetic impacts. Impacts would be substantially similar to the Project impact conclusions and mitigation requirements would remain the same. **Equal to the Project**	Under Alternative 2, proposed setbacks would be increased relative to the Project to preclude turbine construction within three times the height of the turbine (i.e., within 2,037 feet) of a residential property line and within 1.5 times the height of the turbine (i.e., within 1,018.5 feet) of State Route 299, any other publicly-maintained public highway or street, and of two private roads (Supan Road and Terry Mill Road). This would result in four of the Project turbines (M03, D05, B01 and K02) not being constructed. The resulting spacing of the turbine strings could reduce from key observation points 1, 2, and 3 the visibility and visual impact of turbines from SR 299 and regarding views from KOPs near SR 299. Although this alternative would reduce the overall visual impact of the wind energy development compared to the Project, impact conclusions and mitigation requirements would remain the same. **Less than the Project**
3.3	Air Quality	Impact 3.3-2c: Construction, decommissioning, and site reclamation activities would generate PM_{10} emissions that would result in a cumulatively considerable net increase of PM_{10}, for which the Project region is non-attainment of California Ambient Air Quality Standards (CAAQS). The implementation of recommended Mitigation Measure 3.3-2c would reduce the severity of the impact, but not below established threshold of significance. (Significant and Unavoidable) Impact 3.3-1, Impact 3.3-2b: Construction, decommissioning, and site reclamation activities would generate NO_x and other emissions that could obstruct implementation of the Northern Sacramento Valley Planning Area 2018 Plan to attain the ozone CAAQS by resulting in a violation of an ozone air quality standard, and thereby would be inconsistent with the intent of the 2018 Plan and result in a cumulatively considerable net increase in regional ozone emissions. The implementation of recommended Mitigation Measures 3.3-1a and 3.3-1b would reduce the potential significance of these impacts below established thresholds. (Less than Significant with Mitigation Incorporated) The Project would result in various less than significant impacts, including with respect to its construction, decommissioning, and site reclamation activities and the generation of ROG emissions that could result in a cumulatively considerable net increase of ozone (Impact 3.3-2a); its operation, which would generate pollutant emissions that would not result in a cumulatively considerable net increase of criteria pollutants (Impact 3.3-2d and 3.3-3); its emission of Toxic Air Contaminants (Impact 3.3-4); and its potential to create objectionable odors (Impact 3.3-5). (Less than Significant Impact)	Under Alternative 1, construction activities, including timber harvesting, would generate fewer vehicle trip and equipment emissions than the number estimated for the Project because up-to-seven fewer turbines and related infrastructure would be constructed. Similarly, the decommissioning and site reclamation phase also would generate fewer vehicle trip and equipment emissions than the amounts estimated for the Project because fewer turbines and related infrastructure would be developed and the size of the area to be reclaimed would be smaller than what was identified for the Project. Although the impacts would be reduced relative to the Project, the impact conclusions and mitigation requirements would remain the same. **Less than the Project**	Under Alternative 2, construction activities, including timber harvesting, would generate fewer vehicle trip and equipment emissions than the number estimated for the Project because up-to-four fewer turbines and related infrastructure would be constructed. Similarly, the decommissioning and site reclamation phase would generate fewer vehicle trip and equipment emissions than the amounts estimated for the Project because fewer turbines and related infrastructure would be developed and the size of the area to be reclaimed would be smaller than for the Project. Although the impacts would be reduced relative to the Project, the impact conclusions and mitigation requirements would remain the same. **Less than the Project**
3.4	Biological Resources	Operation of the Project would result in significant unavoidable Project-specific and cumulative impacts -potentially including mortality and injury- to eagles and other raptors (including goshawk) as well as to bats, including special-status bat species, via collision with power lines or operating wind turbine generators, or electrocution from energized components. See Impact 3.4-3, Impact 3.4-8, Impact 3.4-13, and Impact 3.4-18. Mitigation measures including monitoring and potential adaptive operational techniques are identified at the Project-specific level; however, even with mitigation incorporated, remaining impacts would be Significant and Unavoidable. Because no additional reasonable, feasible mitigation measures are available to address cumulative impacts that, if implemented, would reduce the Project's contribution below the established level of significance. Therefore, cumulative impacts would remain Significant and Unavoidable. Mitigation measures have been identified, the implementation of which would reduce other Project impacts below established thresholds. This is true with respect to: Impact 3.4-1 (potential construction impacts to special- status plant species within an unsurveyed 800-acre area of the Project Site), Impact 3.4-2 (construction impacts on nesting bald and golden eagles –although the likelihood of eagles nesting within the Project Site is low, construction noise and activity could result in nesting disruption or abandonment if activities occur during the nesting season and active nests are located in the vicinity), Impact 3.4-4 (decommissioning impacts to nesting bald and golden eagles similar to those described for the construction in Impact 3.4-3), Impact 3.4-6 (construction and decommissioning impacts to nesting raptors other than goshawks due to noise, vegetation removal, and increased activities during the construction and decommissioning), Impact 3.4-7 (construction and decommissioning impacts to nesting goshawks due to noise, vegetation removal, and increased activities	Under Alternative 1, the Project Site would be 4,086 acres resulting in 378 acres of less Project-related disturbance and seven (9.7 percent) fewer turbines than the Project. This would result in a similar percentage reduction in bird and bat collision-related impacts. Collisions resulting in eagle, other sensitive raptors, and bats would continue to be significant and unavoidable, but likely reduced by approximately 10 percent compared to the Project. Alternative 1 would require less Rocky Mountain Maple Riparian Scrub (a sensitive vegetation community) habitat removal. An estimated 31.3 fewer acres of this habitat would be removed, resulting in a 27 percent reduction in the impact area. As for the Project, the impacts related to removal of this habitat would be less than significant with mitigation incorporated. In other respects, Alternative 1 would reduce impacts relative to the Project generally commensurate with the reduction in disturbance and number of turbines. Although the impacts would be reduced relative to the Project, the impact conclusions and mitigation requirements would remain the same. **Less than the Project**	Alternative 2 is anticipated to result in 102 fewer acres of temporary disturbance and 49 fewer acres of permanent disturbance than the Project. Alternative 2 also would result in the construction and operation of four (5.5 percent) fewer turbines than the Project. This would result in a similar percentage reduction in bird and bat collision related impacts. Collisions resulting in eagle, other sensitive raptors, and bats would continue to be significant and unavoidable, but likely reduced by approximately 5.5 percent compared to the Project. Alternative 2 would require approximately 1.7 acres less removal of Rocky Mountain Maple Riparian Scrub habitat. As for the Project, the impacts related to removal of this habitat would be less than significant with mitigation incorporated. In other respects, Alternative 2 reduce impacts relative to the Project generally commensurate with the reduction in disturbance. Although the impacts would be reduced relative to the Project, the impact conclusions and mitigation requirements would remain the same. **Less than the Project**

TABLE ES-3 (CONTINUED)
SUMMARY OF IMPACTS OF THE PROJECT AND ALTERNATIVES

EIR Section	Resource Area	Project	Alternative 1, South of SR 299	Alternative 2, Increased Setbacks
3.4 (cont.)	Biological Resources	during the construction and decommissioning), Impact 3.4-12 (habitat loss and water quality impacts on Pit roach, special-status amphibians and western pond turtle), Impact 3.4-15 (Project impacts to riparian habitat or other sensitive vegetation communities, including removal of up to 107.2 acres of sensitive Rocky Mountain Maple Riparian Scrub habitat), and Impact 3.4-16 (Project impacts to wetlands and other waters, including permanent impacts on 2.22 acres of wetlands and 1.2 acres of other waters; temporary impacts on 1.48 acres of wetlands and 0.6 acres of other waters; and impacts resulting from the construction of or improvement to 32 stream crossings, including crossings of perennial, ephemeral, intermittent and unvegetated ditch type streams. In other respects, Project impacts would be less than significant, and no mitigation measures would be required. This is true with respect to Impact 3.4-5 (Project impacts to California spotted owls – although California spotted owl use of the area is expected to be low based on Project Site surveys and the results of Hatchet Ridge Wind post construction monitoring efforts, 995 acres of the Project Site was identified as being suitable [moderate or high quality] habitat for California spotted owls and potential nesting disruption could result from project noise, vegetation clearing, and increased activities during the construction and decommissioning phases), Impact 3.4-9 (collision-related impacts to waterfowl during operation), Impact 3.4-10 (Project impacts on sandhill cranes during migratory movements in fall and spring), Impact 3.4-11 (construction and decommissioning impacts to nesting songbirds, potentially including special-status species). Impact 3.4-14 (temporary adverse impacts to special-status mammals during site preparation and construction, and during decommissioning and site restoration activities), and Impact 3.4-17 (impacts to 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).		
3.5	Communications Interference	The Project could cause intermittent interference to or freezing of television reception at some residences in the service area of the stations that broadcast over the Project Site (Impact 3.5-1) and or interference with point-to-point microwave relay station transmissions due to turbine location adjustments or currently unknown transmissions. The implementation of recommended Mitigation Measures 3.5-1 and 3.5-3 would reduce the potential significance of these impacts below established thresholds. (Less than Significant with Mitigation Incorporated) The Project also would result in a less-than-significant impact related to potential interfere with existing navigational systems operated by the FAA or the U.S. military (Impact 3.5-2). (Less than Significant Impact)	All of the turbine locations under Alternative 1 would be at least as far away from land mobile/public safety radio transmitter stations, earth satellite stations, AM broadcast facilities, television broadcast facilities, aircraft navigation beacons, and microwave and cellular communication facilities as for the Project. Therefore, the potential impacts on television reception (Impact 3.5-1), aircraft navigation (Impact 3.5-2), and microwave and cellular communication (Impact 3.5-3) would be the same as described for the Project. It is possible that Alternative 1 could slightly reduce the potential for unforeseen microwave communication interference because the turbines north of SR 299 would not be constructed (turbines A01, A02, and A03 are some of the closest to known microwave paths, as identified in Appendix D; however, evaluation of these turbines did not indicate interfere with the Fresnel zones of these paths, and so these turbines are not expected to cause interference. Therefore, the impact conclusions and mitigation requirements would be the same as for the Project. **Equal to the Project**	All of the turbine locations Under Alternative 2 would be at least as far away from land mobile/public safety radio transmitter stations, earth satellite stations, AM broadcast facilities, television broadcast facilities, aircraft navigation beacons, and microwave and cellular communication facilities as described for the Project. Therefore, the potential impacts on television reception (Impact 3.5-1), aircraft navigation (Impact 3.5-2), and microwave and cellular communication (Impact 3.5-3) would be the same as described for the Project, although there may be a small reduction in the potential for unforeseen microwave communication interference because several turbines would not be constructed (turbine D05 is one of the closest to known microwave paths, as identified in Appendix D; however, evaluation of this turbine did not indicate that it would interfere with the Fresnel zones of these paths and so is not expected to cause interference). Therefore, the impact conclusions and mitigation requirements would be the same as for the Project. **Equal to the Project**
3.6	Cultural and Tribal Cultural Resources	Impact 3.6-3: There is a prehistoric archaeological site in the Project Site that, for the purposes of CEQA, is considered a tribal cultural resource. In addition, Native American tribes have identified tribal cultural resources in the Project Site. The Project would cause a substantial adverse change in the significance of a tribal cultural resource if such a resource were disturbed or damaged. The implementation of recommended Mitigation Measures 3.6-1 and 3.6-3 would reduce the severity of the impact, but not below established thresholds (Significant and Unavoidable) Impact 3.6-1: The Project could cause a substantial adverse change pursuant to CEQA Guidelines Section 15064.5 due to disturbance of a historical resource, for example, during grading and excavation associated with construction, trenching, or the soil borings that would be collected to an approximately 50-foot depth to ensure that the proposed turbine foundations would be stable. The implementation of recommended Mitigation Measure 3.6-1 would reduce the potential significance below established thresholds. (Less than Significant with Mitigation Incorporated) Impact 3.6-2: Given the prehistoric archaeological sensitivity of the Project Site, the possibility of encountering human remains cannot be discounted. Project-related disturbance of human remains would be a significant impact and could occur if, for example, grading, excavation, or soil borings associated with construction of facilities and infrastructure. The implementation of recommended Mitigation Measure 3.6-2 would reduce the potential significance below established thresholds. (Less than Significant with Mitigation Incorporated).	Under Alternative 1, no turbines would be erected north of SR 299. Thus, Alternative 1 would avoid all impacts to cultural and tribal cultural resources north of SR 299, if any such resources exist. There would be an overall reduced acreage of temporary and permanent disturbance, limited to a footprint defined in a smaller area with fewer turbines compared to the Project. The prehistoric archaeological site in the Project Site would not be avoided. Although impacts would be reduced relative to the Project, the impact conclusions and mitigation requirements would remain the same. **Less than the Project**	Under Alternative 2, the prehistoric archaeological site identified within the Project Site would not be avoided; however, the overall reduction in the number of turbines would reduce both temporary (construction-related) and permanent disturbance compared to the Project. Alternative 2 would require implementation of the same protective measures and mitigation as the Project. Although impacts would be reduced relative to the Project, impact conclusions and mitigation requirements would remain the same under Alternative 2. **Less than the Project**

TABLE ES-3 (CONTINUED)
SUMMARY OF IMPACTS OF THE PROJECT AND ALTERNATIVES

EIR Section	Resource Area	Project	Alternative 1, South of SR 299	Alternative 2, Increased Setbacks
3.7	Energy	Impact 3.7-1: Project construction, operation and maintenance, decommissioning and site reclamation could result in the wasteful, inefficient, or unnecessary consumption or use of energy associated with equipment and vehicle fuel use, although there are no unusual Project characteristics that would cause the such use to be less energy-efficient compared with other similar projects elsewhere in the state. The Project's use of electricity during operation and maintenance would be greatly offset by the generation of electricity from the Project. Accordingly, the Project's electricity demand also would not constitute a wasteful, inefficient, or unnecessary use of energy. (Less than Significant Impact) The Project would provide a new source of renewable energy supporting SB 100 and the State's energy goals, and would result in a substantial beneficial impact relating to renewable energy generation, the use of which to serve demand would be prioritized over gas-fired plants and non-renewable sources. (Beneficial Effect)	Under Alternative 1, incrementally less fuel would be required to construct, operate, maintain, and decommission a wind energy development on the Project Site because up-to-seven fewer turbines and related infrastructure would be developed. Alternative 1 would have a total nameplate generating capacity of up to 195 MW, which equates to approximately 21 MW less nameplate generating capacity as the Project. This output would more than offset the amount of electricity needed to operate and maintain Alternative 1, but would not result in as substantial a benefit as the Project due to the reduced overall capacity. Although the impacts and overall benefit of Alternative 1 would be reduced relative to the Project, the impact conclusion would remain the same, and no mitigation measures would be required. **Greater than the Project**	Alternative 2 would preclude the construction of four wind turbines, as compared to the Project, resulting in the loss of approximately 12 MW to 22.8 MW of generating capacity based on generation potential per turbine. Under Alternative 2, the number of workers and durations of construction, operation and maintenance, and decommissioning and site restoration would be incrementally less than for the Project, resulting in slightly reduced fuel use. Electricity needed during operation and maintenance would more than offset the amount of electricity needed to operate and maintain Alternative 2, but would not result in as substantial a benefit as the Project due to the reduced overall capacity. Although the impacts and overall benefit of Alternative 2 would be reduced relative to the Project, the impact conclusions would remain the same, and no mitigation measures would be required. **Greater than the Project**
3.8	Forest Resources	Impact 3.3-1: The Project would result in the temporary disturbance of up to 1,384 acres of timberland during construction and the permanent conversion of up to 713 acres of timberland to developed power generation facilities uses (i.e., to the loss of forest land or conversion of forest land to non-forest use). This would result in a reduction of less than 0.05 percent of the commercial forest lands in Shasta County. (Less than Significant Impact)	Alternative 1 would adversely affect incrementally less timberland than the Project because the approximately 378 acres of the Project Site located north of SR 299 would continue to be managed for timber production. This elimination of 378 acres of the Project Site from development would reduce temporary impacts to commercial forest lands from 1,384 acres to 1,259 acres and would reduce permanent impacts from 713 acres to 652.5 acres. Although the impacts of Alternative 1 would be slightly reduced relative to the Project, the impact conclusion would remain the same, and no mitigation measures would be required. **Less than the Project**	Alternative 2 would reduce temporary impacts to commercial forest lands from 1,384 acres to 1,282 acres relative to the Project and would reduce permanent impacts from 713 acres to 664 acres. Although the impacts of Alternative 2 would be slightly reduced relative to the Project, the impact conclusion would remain the same, and no mitigation measures would be required. **Less than the Project**
3.9	Geology and Soils	The Project would cause less-than-significant impacts to geology, soils and paleontological resources, including the risk of loss, injury, or death involving strong seismic ground shaking (Impact 3.9-1), seismic-related ground failure (including liquefaction) (Impact 3.9-2), and landslides (Impact 3.9-3). It also would result in less-than-significant impacts resulting in substantial soil erosion or the loss of topsoil (Impact 3.9-4) or unstable geologic units or soils that potentially could result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse (Impact 3.9-5). Further, the Project would cause less-than-significant impacts relating to the creation of substantial direct or indirect risks to life or property due to its location on expansive or corrosive soil (Impact 3.9-6) and the adequacy of onsite soils to support the proposed septic tank (Impact 3.9-7). (Less than Significant Impact)	Alternative 1 would result in an incremental reduction in soil disturbance (and erosion potential) relative to the Project due to the fact that up-to-seven fewer turbines and related infrastructure would be developed, and fewer onsite road miles would be needed to develop and serve Alternative 1. A septic system would be developed just as for the Project. Although the impacts of Alternative 1 would be slightly reduced relative to the Project, the impact conclusions would remain the same, and no mitigation measures would be required. **Less than the Project**	Alternative 2 would result in an incremental reduction in soil disturbance (and erosion potential) relative to the Project due to the fact that four fewer turbines and related infrastructure would be developed, and fewer onsite road miles would be needed to develop and serve Alternative 2. A septic system would be developed just as for the Project. Although the impacts of Alternative 2 would be slightly reduced relative to the Project, the impact conclusions would remain the same, and no mitigation measures would be required. **Less than the Project**
3.10	Greenhouse Gas Emissions	The Project also would have a less than significant impact relating to its potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. The Project would directly support the 40 percent reduction in GHG emissions by 2030 target under the 2017 Scoping Plan Update and goal of SB 100 for increasing California's procurement of electricity from renewable sources to 100 percent by 2045; Executive Order B-55-18 and the new statewide goal of achieving carbon neutrality (zero-net GHG emissions) by 2045 and maintaining net negative emissions thereafter; the 2018 Regional Transportation Plan & Sustainable Communities Strategy for the Shasta Region; and the Forest Carbon Plan. (Impact 3.10-2). The Project would result in a less-than-significant impact relating to the generation, directly and indirectly, of GHG emissions such as CO_2, methane, nitrous oxide and SF_6. After accounting for the annualized construction and decommissioning, and annual operational emissions of 809 MT CO2e per year, and the loss of carbon sequestration capacity during the Project's operational timeframe, the Project would provide a potential reduction of 225,131 MT CO2e per year. Overall, this would be a beneficial impact. (Impact 3.10-1)	Alternative 1 would generate incrementally fewer GHG emissions than the Project and would offset incrementally fewer MT CO2e per year because it would have a total nameplate generating capacity that would be approximately 21 MW less than the Project due to the reduction in the number of turbines. There would be no change relative to the Project with respect to plan consistency. The impacts of Alternative 1 would be slightly reduced relative to the Project; the beneficial effect of Alternative 1 also would be reduced. Nonetheless, the impact conclusions would remain the same, and no mitigation measures would be required. **Greater than the Project**	Alternative 2 would generate incrementally fewer GHG emissions than the Project and would offset incrementally fewer MT CO2e per year because it would have a total nameplate generating capacity that would be 12 to 22.8 MW less than the Project due to the reduction in the number of turbines. There would be no change relative to the Project with respect to plan consistency. The impacts of Alternative 2 would be slightly reduced relative to the Project; the beneficial effect of Alternative 2 also would be reduced. Nonetheless, the impact conclusions would remain the same, and no mitigation measures would be required. **Greater than the Project**

TABLE ES-3 (CONTINUED)
SUMMARY OF IMPACTS OF THE PROJECT AND ALTERNATIVES

EIR Section	Resource Area	Project	Alternative 1, South of SR 299	Alternative 2, Increased Setbacks
3.11	Hazards and Hazardous Materials	During normal operation, equipment failure or an extreme event could lead to turbine failure, resulting in a potential hazard (Impact 3.11-3). The Project also could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Impact 3.11-7). The implementation of recommended Mitigation Measure 3.11-3 and Mitigation Measure 3.11-7, respectively, would reduce the potential significance of each impact below established thresholds. (Less than Significant with Mitigation Incorporated) The Project would have a less-than-significant impact from the potential to create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials or wastes (Impact 3.11-1), reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (Impact 3.11-2), potential hazards from ice shed from turbine blades (Impact 3.11-4), applications of certain pesticides (Impact 3.11-5), and from the alternating changes in light intensity that could occur when turbine blades are rotating (Impact 3.11-6).	Alternative 1 would result in substantially the same impact as the Project relating to equipment or turbine failure and to potential impairment of or interference with an evacuation plan. the same mitigation requirements would apply. Alternative 1 would result in incremental reductions in the less-than-significant impacts that would be caused by the Project due to the up-to-seven fewer turbines that would be constructed, operated and ultimately decommissioned. As a result, Alternative 1 would cause an incremental reduction in the amount of hazardous materials or waste, incrementally fewer turbine blades that could shed ice, and incrementally less vegetation that would be subject to pesticide application. The turbines that would be installed under Alternative 1 would cause substantially the same shadow flicker as the Project in light of the locations of potential receptors. Even with these incremental changes in impact levels, the impact conclusions would remain the same. **Less than the Project**	Alternative 2 would differ from the Project by precluding the construction, operation and maintenance of turbines within three times the height of the turbine from a residential property line and would require setbacks of 1.5 times the height of the turbine from public and private roads. Because Project turbines (M03, D05, B01 and K02 not be constructed, Alternative 2 would result in a less than significant impact relative to whether, during normal operation, equipment failure or an extreme event could lead to a turbine failure resulting in a blade throw. Under Alternative 2, Mitigation Measure 3.11-3 (Mandatory Setbacks) would not be required. Given the greater distance between proposed turbines and potential visual receptors, the less than significant impact of the Project relating to shadow flicker would be even more remote under Alternative 2. Remaining impacts would be incrementally reduced, or substantially the same as the Project. **Less than the Project**
3.12	Hydrology and Water Quality	The Project would, unless mitigated, violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality during construction and decommissioning (Impact 3.12-1); substantially degrade groundwater quality from blasting, if it occurs (Impact 3.12-2); substantially increase siltation of waterways or provide substantial additional sources of polluted runoff during construction and decommissioning (Impact 3.12-4); and conflict with implementation of the Central Valley Basin Plan (Impact 3.12-5). The implementation of recommended mitigation measures would reduce the potential significance of each of these potential significant impacts below established thresholds. (Less than Significant with Mitigation Incorporated) The Project would result in a less-than-significant impact relating to the potential to decrease groundwater supplies or interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin (Impact 3.12-3).	Alternative 1 would avoid all impacts to Little Hatchet Creek and most disturbance-related impacts to the main stem of Hatchet Creek. There would be an overall reduction in temporary and permanent disturbance due to the fewer number of turbines compared to the Project. Although the impacts of Alternative 1 would be reduced relative to the Project, the impact conclusions would remain the same, and the same mitigation measures would be required. **Less than the Project**	Given the location of the Project turbines that would not be constructed under Alternative 2, Alternative 2 would result in substantially similar impacts to hydrology and water quality as the Project. The same impact conclusions would be reached, and the same mitigation measures would be required. **Equal to the Project**
3.13	Noise and Vibration	The Project could result in the generation of a substantial temporary increase in ambient noise levels (Impact 3.13-2) on and near the Project Site in excess of standards if construction activities were required during nighttime hours or during helicopter use. The implementation of recommended Mitigation Measure 3.13-2 would reduce the potential significance of this potential significant impact below established thresholds. The Project also could result in significant impacts due to groundborne vibration from blasting. The implementation of Mitigation Measure 3.13-3 would reduce impacts to below established thresholds. (Less than Significant with Mitigation Incorporated) The Project would have a less-than-significant impact from operational noise due to the generation of a substantial permanent increase in ambient noise levels in the vicinity of the Project (Impact 3.13-1).	Because the Project turbines that would not be constructed under Alternative 1 would be located over 5,000 feet from the nearest receptor (LT-3) and, thus, would contribute substantially less to noise and vibration impacts, the impacts of Alternative 1 would be substantially the same as those of the Project, the impact conclusions would be the same, and the same mitigation requirement would apply. **Equal to the Project**	Under Alternative 2, proposed setbacks would be increased relative to the Project to preclude turbine construction within 2,037 feet of a residential property line and within 1,018.5 feet of SR 299, any other publicly-maintained public highway or street, and of Supan Road or Terry Mill Road. Implementation of these setbacks would remove turbines M03, D05, and B01 based on the residential property line setback, and would remove turbine KO2 based on the roadway setback. The effect of eliminating these turbines, in particular turbine D05, would reduce the operational and construction-related noise levels at receptor location R-4 compared to those identified for the Project. Although this impact would be incrementally reduced relative to the Project, the impact conclusions would be the same and the same mitigation requirements would apply. **Less than the Project**
3.14	Transportation	The Project would, unless mitigated, substantially increase safety hazards to the public and inhibit emergency access due to the proposed use of oversize vehicles, which could limit motorists' views on roadways and obstruct the driving area (Impact 3.14-3, Impact 3.14-4). The implementation of recommended Mitigation Measure 3.14-3 would reduce these potential significant impacts to a less-than-significant level. (Less than Significant with Mitigation Incorporated) The Project would result in less-than-significant impacts relating to its potential to conflict with a program plan, ordinance or policy addressing the circulation system (Impact 3.14-1) and its potential to conflict or be inconsistent with CEQA Guidelines Section 15064.3(b) regarding vehicle miles traveled (VMT) as the appropriate focus of transportation analyses toward reducing related GHG emissions (Impact 3.14-2).	Alternative 1 would require incrementally fewer oversized loads to deliver/remove heavy construction equipment and wind turbine components due to the reduction by up to seven turbines relative to the Project. Further, Alternative 1 would incrementally further reduce the Project's less-than-significant VMT impact because incrementally fewer vehicle trips by pick-up trucks, haul trucks, and worker vehicles due to the possibility of an incremental reduction in construction and decommissioning schedules resulting from a need for less work to occur during those timeframes. Although the impacts of Alternative 1 would be reduced relative to the Project, the impact conclusions would remain the same and the same mitigation measure would be required. **Less than the Project**	Alternative 2 would require incrementally fewer oversized loads to deliver/remove heavy construction equipment and wind turbine components due to the reduction by four turbines relative to the Project. Further, Alternative 2 would incrementally further reduce the Project's less-than-significant VMT impact because it would require fewer vehicle trips due to the possibility of an incremental reduction in construction and decommissioning schedules resulting from a need for less work to occur during those timeframes. Although the impacts of Alternative 2 would be reduced relative to the Project, the impact conclusions would remain the same and the same mitigation measure would be required. **Less than the Project**

TABLE ES-3 (CONTINUED)
SUMMARY OF IMPACTS OF THE PROJECT AND ALTERNATIVES

EIR Section	Resource Area	Project	Alternative 1, South of SR 299	Alternative 2, Increased Setbacks
3.15	Utilities and Service Systems	The Project would have a less-than-significant impact on utilities and service systems relating to the sufficiency of water supplies available to serve the Project (Impact 3.15-1), the adequacy of a wastewater treatment provider's capacity to serve the Project's projected demand (Impact 3.15-2), and the Project's potential to generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals (Impact 3.15-3). (Less than Significant Impact*)*	Alternative 1 would incrementally reduce water, wastewater and solid waste needs commensurate with the reduction in development and ground disturbance associated with up-to-seven fewer turbines and related infrastructure such as would be needed for the collector system, access roads, and lay-down areas relative to the Project. Storm water drainage infrastructure or improvements would not be required north of SR 299. Although the impacts of Alternative 1 would be reduced relative to the Project, the impact conclusions would remain the same. **Less than the Project**	Alternative 2 would incrementally reduce water, wastewater and solid waste needs commensurate with the reduction in development and ground disturbance associated with the development of four fewer turbines and related infrastructure. Although the impacts of Alternative 2 would be reduced relative to the Project, the impact conclusions would remain the same. **Less than the Project**
3.16	Wildfire	The Project would, unless mitigated, substantially impair an adopted emergency response plan or emergency evacuation plan (Impact 3.16-1); exacerbate wildfire risks and expose Project occupants to pollutant concentrations or a significant risk of loss, injury or death from a wildfire or the uncontrolled spread of a wildfire (Impact 3.14-2); and expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes (Impact 3.16-4). The implementation of recommended Mitigation Measure 3.16-1; Mitigation Measures 3.16-2a, 3.16-2b and 3.16-2c; and Mitigation Measure 3.16-4 would reduce these potential significant impacts to a less-than-significant level. (Less than Significant with Mitigation Incorporated) The Project also would have a less-than-significant impact resulting from the proposed installation and maintenance of infrastructure such as roads, fuel breaks, emergency water sources, power lines or other utilities because such infrastructure could exacerbate fire risk (Impact 3.16-3). (Less than Significant Impact*)*	Alternative 1 would incrementally reduce the construction, operations and maintenance, and decommissioning footprint, restricting it to the portion of the Project Site that is located south of SR 299. This would have the effect of incrementally reducing the potential for a wind project-related ignition during all phases of the Project. Further, under Alternative 1, the portion of the Project Site north of SR 299 would remain under timber management and production, which could decrease the risk of wildland fire because that portion of the Project Site would be harvested and thinned, preventing excessive fuel build up in the area of the Project Site north of SR 299. Although the impacts of Alternative 1 would be reduced relative to the Project, the impact conclusions would remain the same and the same mitigation requirements would apply. **Less than the Project**	Alternative 2 would reduce the number of turbines by four relative to the Project, and so would incrementally reduce potential ignition sources from turbines, vehicles and equipment during construction, operation and decommissioning relative to the Project. Additionally, increasing the setbacks of the turbines from residential properties would provide some additional protection to surrounding communities by increasing the area between residences and the turbines in the event that a turbine fire were to occur. Although Alternative 2 would reduce impacts to wildland fire slightly, impact conclusions would be the same and the same mitigation requirements would apply. **Less than the Project**

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ES.8 Environmentally Superior Alternative

The CEQA Guidelines define the environmentally superior alternative as that alternative with the least adverse impacts to the project area and its surrounding environment. The No Project Alternative is considered the environmentally superior alternative for CEQA purposes because it would avoid all impacts of the Project. However, the No Project Alternative would fail to meet the basic objectives of the Project, including, but not limited to: locating a commercially financeable wind energy project with the capacity to provide up to 216 MW to the northern California grid (NP15) in close proximity to an existing PG&E transmission line (see Section 2.3, *Project Objectives*). Since the environmentally superior alternative is the No Project Alternative, the EIR also must identify an environmentally superior alternative from among the other alternatives.

Determining an environmentally superior alternative can be difficult because of the many factors that must be balanced. For example, Alternative 2 could be preferred because, relative to the Project, it would further remove wind project infrastructure from residential property lines and from all roads, not just public ones. Slightly fewer roads and less below-ground and above-ground infrastructure would be constructed, operated and maintained, and decommissioned and removed from the Project Site. Similarly, Project could be preferred because, relative to either Alternative 1 or Alternative 2, it would generate the greatest amount of renewable energy, and so would offset the most metric tons of carbon dioxide emissions generated by fossil fuels and provide greater assistance to the State toward meeting the renewable energy generation targets set in SB 100. Additional information received in or developed during the agency and public review period for the Draft EIR or during the Project approval process that could affect the balancing of the respective benefits and consequences of the alternatives. Accordingly, it would be premature to designate an Environmentally Superior Alternative at this stage. An Environmentally Superior Alternative will be identified in the Final EIR.

ES.9 Areas of Controversy

Any of the environmental issues considered during scoping or in this Draft EIR could become an issue of controversy. Preliminarily, the County has identified areas of controversy as including the issues and questions raised in agency and public comments received during scoping; all comments received during the scoping period are included in the Project Scoping Report, which is included as Appendix J to this Draft EIR. Issues identified as potential areas of controversy relate to: Aesthetics, Forestry Resources, Air Quality, Biological Resources, Communications Interference, Cultural and Tribal Cultural Resources, Economic and Social Impacts, Energy, Geology and Soils, Greenhouse Gas Emissions and Climate Change, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise and Vibration, Public Health, Public Services, Recreation, Transportation, Utilities and Service Systems, and Wildfire. More specifically, scoping input expressed potential controversy particularly regarding daytime and nighttime views of the Project, and potential impacts on avian species and all manner of flora and fauna; headwaters, surface waters, and other sources of drinking water in the affected area; public health; and tribal cultural resources. The County also received input during scoping

regarding the identification of alternatives to the Project and considerations to be evaluated as part of the cumulative scenario.

ES.10 Issues to be Resolved

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which include the choice among alternatives and whether or how to mitigate significant impacts. The following major issues are to be resolved:

- Determine whether the EIR adequately describes the environmental impacts of the Project;
- Choose among alternatives;
- Determine whether the recommended mitigation measures should be adopted or modified; and
- Determine whether or not additional mitigation measures need to be applied to the Project.

ES.11 References

California Energy Commission (CEC), 2014. Energy Infrastructure Map of Northern California. May 21, 2014.

California Independent System Operator (CAISO), 2008. California (CAISO) Electric Regions. February 2008.

California Public Utilities Commission (CPUC), 2018. Delivery, Consumption & Prices for Utility Service within California. Available online: https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/About_Us/Organization/Divisions/Policy_and_Planning/PPD_Work/PPD_Work_Products_(2014_forward)/California%20Regions%20Final.pdf. January 18, 2018.

Pacific Gas & Electric Company (PG&E), 2014. Service Area Map. Available online: https://www.pge.com/tariffs/tm2/pdf/ELEC_MAPS_Service_Area_Map.pdf. Effective December 17, 2014.

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