Executive Summary

Introduction

This summary is provided in accordance with Section 15123 of the California Environmental Quality Act (CEQA) Guidelines (State CEQA Guidelines). As stated in State CEQA Guidelines Section 15123(a), "an environmental impact report (EIR) shall contain a brief summary of the proposed actions and its consequences. The language of the summary should be as clear and simple as reasonably practical." As required by the State CEQA Guidelines, this section includes:

1. a summary description of the project;
2. a synopsis of environmental impacts and recommended mitigation measures;
3. identification of the alternatives evaluated and of the environmentally superior alternative; and
4. a discussion of the areas of controversy associated with the project.

Summary Description of the Project

Sacramento Municipal Utility District (SMUD) is proposing the Solano 4 Wind Project (project). The project would involve:

- decommissioning of existing wind turbine generators (WTGs);
- construction of new, more technologically advanced WTGs, an associated electrical collection system, and access roads, along with minor upgrades to the existing Russel Substation; and
- operation and maintenance of the new WTGs.

Project Objectives

SMUD's objectives for the project include the following:

- Contribute to a diversified energy portfolio that will aid in the continued improvement of air quality in the Sacramento Valley Air Basin by decreasing reliance on fossil fuel combustion for the generation of electricity, and reduce SMUD's exposure to price volatility associated with electricity and natural gas.
- Assist SMUD in achieving the Board of Directors' directive of using dependable renewable resources to meet SMUD's renewable portfolio standards (RPS) obligations. This goal is consistent with Senate Bill 100, which was enacted in 2018.

- Develop an economically feasible wind project that will deliver a reliable supply of up to 91 MW of electrical capacity at the point of interconnection with the grid managed by the California Independent System Operator (CAISO).

- Accommodate the long-term viability of agricultural use within the Montezuma Hills.

Project Location

The project site is located within the Solano County Wind Resource Area (WRA) in southern Solano County. The WRA lies north of the confluence of the Sacramento and San Joaquin rivers and southwest of the city of Rio Vista.

The project site comprises two geographically distinct areas owned by SMUD, Solano 4 East and Solano 4 West, and the collection and home run lines, which total 2,549 acres. State Route (SR) 12 provides regional access to the project area. Montezuma Hills Road and Birds Landing Road provide local access to Solano 4 East, while Collinsville Road and Shiloh Road provide local access to Solano 4 West.

Project Characteristics

With the Solano 4 Wind Project, SMUD would construct up to 22 new WTGs: up to 10 in Solano 4 East and up to 12 in Solano 4 West. The project would have a net energy production capacity of up to 91 MW, resulting in a net increase in capacity at the Solano Wind Project from the existing 230 MW to 306 MW. Individual WTGs would have a maximum height of 492 to 590 feet (150 to 180 meters) and a maximum rotor diameter of 446 to 492 feet (136 to 150 meters). Associated access roads and collection lines would be installed to support the new WTGs.

For additional project details, see Chapter 2, “Project Description.”

Potential Approvals and Permits Required

Elements of the project could be subject to permitting and/or approval authority of other agencies. As the lead agency pursuant to CEQA, SMUD is responsible for considering the adequacy of the EIR and determining whether the project should be approved. Other permits that may be required from other agencies are listed below.

Federal

- **Federal Aviation Administration:** Notice of proposed construction or alteration

- **U.S. Army Corps of Engineers:** Clean Water Act Section 404 permit

- **State Historic Preservation Office:** Section 106 of the National Historic Preservation Act consultation

- **U.S. Fish and Wildlife Service:** Biological opinion or consultation and a Special purpose utility permit

State

- **State Water Resources Control Board:** Clean Water Act Section 402, construction stormwater permit
- **San Francisco Bay Regional Water Quality Control Board:** Clean Water Act Section 401, water quality certification
- **California Department of Fish and Wildlife:** Streambed alteration agreement
- **California Department of Transportation:** Haul truck and overload permit

Local

- **Solano County Department of Resource Management:** Encroachment permit

Environmental Impacts and Recommended Mitigation Measures

Table ES-1, at the end of this chapter, provides a summary of the environmental impacts of the project, the level of significance of each impact before mitigation, recommended mitigation measures, and the level of significance of each impact after implementation of mitigation measures.

Summary of Alternatives

Alternatives evaluated in this draft EIR include:

- No Project Alternative: The project would not be constructed on the project site.
- Reduced Turbine Height Alternative: A total of 27 WTGs would be placed on the property (13 at Solano 4 east and 14 at Solano 4 west) in a configuration similar to that of the proposed project. Total capacity for the Reduced Turbine Alternative would be 62 MW compared to the 91 MW for the proposed project.

For a more thorough discussion of project alternatives, see Chapter 6, “Alternatives.”

Environmentally Superior Alternative

CEQA calls for the identification of an environmentally superior alternative in an EIR, and further states that, “if the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives” (Section 15126.6). In this case the proposed project is the environmentally superior alternative.

Areas of Controversy

In accordance with Public Resources Code (PRC) Section 21092 and California Code of Regulations Title 14, Section 15082, SMUD issued a notice of preparation (NOP) on January 9, 2019, to inform agencies and the general public that an EIR was being prepared and to invite comments on the scope and content of the document (Appendix A). SMUD accepted comments on the scope of the EIR between January 9 and February 8, 2019. A noticed scoping meeting for the EIR occurred on January 22, 2019.

Based on the comments received during the NOP comment period, the major areas of controversy associated with the project include:

- Potential for unknown tribal resources
- Water quality and construction activity
- Emissions from heavy trucks hauling components
- Impacts to special status species
- Dust from recycled concrete used in paving roads
- Night lighting and use of strobes
- Microclimate effects

Areas of controversy that fall within the scope of CEQA are addressed in this draft EIR. Issues that fall outside the scope of CEQA are not evaluated in this draft EIR; however, SMUD will continue to respond to these issues through the project planning process.

All of the substantive environmental issues raised in the NOP comment letters have been addressed or otherwise considered during preparation of this draft EIR.

Significant and Unavoidable Impacts

Sections 3.1 through 3.11 of this draft EIR describe the potential environmental impacts of the project and recommend various mitigation measures to reduce impacts, to the extent feasible. Chapter 4, “Cumulative Impacts,” determines whether the incremental effects of this project would be significant when viewed in connection with the effects of past projects, other current projects, and probable future projects. After implementation of the recommended mitigation measures, project implementation would result in the following significant and unavoidable impacts:

Air Quality

- Construction emissions of criteria air pollutants and ozone precursors (significant and unavoidable)

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.1 Aesthetics			
Impact 3.1-1: Project impacts on scenic vistas and potential for substantial degradation of existing visual character or quality of public views of the site and surroundings, including those within the viewshed of a state or locally designated scenic highway. Project decommissioning, construction, and eventual decommissioning activities would be visible to motorists, recreationists, and residents near the project site; however, these changes in views would be temporary. Placement and operation of WTGs under the Solano 4 Project reduces the number of WTGs operating onsite but places taller WTGs in replacement. Views would remain of a utility scale wind energy facility and any permanent change in views would be incremental. Under either condition WTGs are the dominant visual feature. The greatest visual change would be seen from Collinsville and West Sherman Island. Therefore, the project would not result in a substantial degradation of visual character. This impact would be **less than significant**.	LTS	**Mitigation Measure 3.1-1a: Design the Project to Avoid Aesthetic Impacts**. SMUD or its contractor shall consider topography when siting wind turbines and shall avoid major modifications to natural landforms or other characteristic parts of the landscape. The turbines shall be clustered or grouped to break up overly long lines of turbines. The turbines shall be similar in shape and size. Each WTG shall be painted a uniform white or light-grey color, "RAL 7035" or similar, per manufacturer's requirements. To minimize the structures' reflectivity, the paint used shall have a gloss level that does not exceed 30 percent, or 60–70 gloss units,1 as calculated by the manufacturer. The surfaces of all other structures (e.g., meteorology towers) shall be given low-reflectivity finishes with neutral colors to minimize the contrast of the structures with their backdrops. Fewer, larger turbines shall be preferred over more, smaller turbines. Commercial messages and symbols shall be prohibited on wind turbines. Collection and home run lines shall be underground; no overhead transmission lines shall be used. To minimize ground disturbance, to the extent feasible, existing roadways shall be used to access turbine pads. All construction-related areas shall be kept clean and tidy, with construction materials and equipment stored in the construction staging and laydown areas and/or generally away from public view. SMUD or its contractor shall remove	LTS

[1] Gloss units is a measurement scale based on a highly polished reference black glass standard with a refractive index of 100 gloss units at the specified angle of measurement. A measurement of 70 gloss units represents a low-gloss condition.

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		construction debris promptly at intervals of 2 weeks or less, at any one location. **Mitigation Measure 3.1-1b: Implement Operational Measures to Reduce Aesthetic Impacts.** Wind turbines shall be kept clean and in good repair. Nacelle covers and rotor nose cones shall always be maintained in place and undamaged. Inoperative turbines shall be repaired, replaced, or removed as quickly as feasible because a turbine that is broken or disabled will create a health and safety hazard and disrupt the visual experience of the casual observer. SMUD or its contractor shall remove derelict WTGs and derelict parts and pieces. Similarly, operations and maintenance areas shall be kept clean and tidy, with all equipment, parts, and supplies stored in areas that are screened from view and/or are generally not visible to the general public. Grading and landscape treatment around tower foundations shall match the conditions of surrounding landscape and habitat to recreate a pleasing visual environment.	
Impact 3.1-2: Creation of new sources of substantial light or glare that would adversely affect day or nighttime views in the area. Project construction and operation would introduce permanent sources of light and glare, mainly to comply with FAA safety lighting requirements. Therefore, this impact would be **significant.**	S	**Mitigation Measure 3.1-2: Use Technology to Reduce Night Sky Impacts**. To reduce the potential for visual impacts associated with lighting, lighting for the turbine doorways shall be limited to the illumination required for safety of personnel and security of project infrastructure. To minimize the effect of light pollution in the surrounding area, all lighting shall be motion-activated and downcast. To minimize night sky impacts from hazard navigation lighting associated with wind facilities, ADLS technology will be employed as described in the FAA Determination of No Hazard. ADLS is a radar-based obstacle avoidance system that activates obstruction lighting and audio signals only when an aircraft is close to an obstruction on which an ADLS unit is mounted, such as a wind turbine	LTS

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Impact 3.1-3: Shadow flicker effects. The project would not result in substantial shadow flicker. This impact would be **less than significant.**	LTS	No mitigation is required.	LTS
3.2 Air Quality			
Impact 3.2-1: Project construction activities would emit NO_X and PM_{10} at levels that could exceed YSAQMD and BAAQMD daily emissions thresholds for these pollutants. Construction would occur over a 17 to 20-month period, with several construction phases occurring simultaneously at several points. In addition, given the size and characteristics of the project, which would involve substantial grading activity, fugitive dust emissions would contribute to an exceedance of these thresholds and could violate applicable air quality standards. This impact would be **significant**.	S	**Mitigation Measure 3.2-1: Reduce construction-related exhaust and dust emissions.** The construction contractor shall prepare a fugitive dust control plan for the project's construction phases. Before the start of construction, the plan shall be submitted to YSAQMD and BAAQMD for review and approval. The fugitive dust control plan shall include but not be limited to the following measures for all construction phases to reduce fugitive dust emissions and emissions of PM and NO_X exhaust: <u>Fugitive Dust Control Plan</u> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent (at least two times per day). Moisture content can be verified by lab samples or moisture probe. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 miles per hour. • All roadways, driveways, and wind turbine generator foundations and work areas to be paved or graveled shall be completed as soon as possible. These areas	SU

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		shall be paved or graveled as soon as possible after grading unless seeding or soil binders are used. No recycled concrete will be utilized on the roadways. • Idling times shall be minimized either by shutting equipment off when not in use or by reducing the maximum idling time to 2 minutes. Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition before operation. • A publicly visible sign shall be posted identifying the name and telephone number of the person to contact at SMUD regarding dust complaints. This person shall respond and take corrective action within 48 hours. The air districts' phone numbers shall also be visible to ensure compliance with applicable regulations. • All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 miles per hour. • Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. • The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the surface area disturbed at any one time. • All trucks and equipment, including their tires, shall be washed off before leaving the site.	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		• Site access areas shall be covered with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel to a distance of 100 feet from the paved road. • Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than 1 percent. • The project shall develop a plan demonstrating that off-road equipment exceeding 50 horsepower) to be used in the construction project (owned, leased, and subcontractor vehicles) would achieve project-wide, fleet-average emissions reductions of 20 percent for NO_X and 45 percent for PM, compared to the most recent ARB fleet average. Acceptable options for reducing emissions include the use of late-model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as they become available. • Low-VOC (i.e., ROG) coatings shall be used beyond local requirements (Regulation 8, Rule 3, “Architectural Coatings”). • All construction equipment, diesel trucks, and generators shall be equipped with best available control technology for reduction of NO_X and PM emissions. • All contractors shall use equipment that meets ARB’s most recent certification standard for off-road heavy-duty diesel engines (BAAQMD 2017:Tables 8-2 and 8-3).	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.2-2: Potential for conflict with or obstruction of implementation of the applicable air quality plan. Implementing the proposed project would not conflict with or obstruct implementation of any YSAQMD or BAAQMD air quality attainment plans. For this reason, this impact would be **less than significant**.	LTS	No mitigation is required.	LTS
3.3 Biological Resources			
Impact 3.3-1: Temporary and permanent construction impacts on special-status amphibians and reptiles. Special-status amphibians or reptiles could be killed or injured by construction equipment or personnel, should they be present on the project site during construction. This impact would be **potentially significant.**	PS	**Mitigation Measure 3.3-1a: Avoid and minimize impacts on California tiger salamander**. SMUD will implement the following measures to avoid and minimize potential construction impacts on California tiger salamander: • A qualified California tiger salamander biologist (defined as an individual with 3 years of experience conducting surveys for California tiger salamander and habitat in the project region) will be present on-site to conduct monitoring during project construction and decommissioning activities that disturb surface soils within 250 feet of drainages or any other aquatic features identified as suitable for California tiger salamander (AECOM 2018b). • To the extent possible, SMUD will confine all project-related parking, storage areas, laydown sites, equipment storage, and any other surface-disturbing activities to previously disturbed areas. • All steep-walled holes or trenches that are 1 foot deep or greater and located within 250 feet of aquatic habitat that is suitable for CTS will have at least one escape ramp constructed of earthen fill or wooden planks. All such holes or trenches will be completely covered before sunset of each workday using boards or metal plates that are placed flush to the ground, and will be inspected before the start of daily construction activities.	LTS

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		• To prevent inadvertent entrapment of California tiger salamanders during project construction, maintenance, and decommissioning, all construction pipes, culverts, conduits, and other similar structures stored on-site overnight will be inspected before the structure is buried. Plastic monofilament netting will not be used for sediment control because it could pose an entrapment hazard to California tiger salamanders and other wildlife. **Mitigation Measure 3.3-1b: Develop and implement a worker environmental awareness program.** Before the start of any construction activity, SMUD will develop a worker environmental awareness program that will be provided to all personnel working on the project site during construction and operation. Training materials and briefings will include but not be limited to the following elements: • A discussion of applicable requirements established by the following laws and regulations, consequences of noncompliance, and the specific conditions of permits obtained for the project from regulatory agencies (USACE, the RWQCB, USFWS, and CDFW) under these laws and regulations: o the federal ESA and CESA; o the Bald and Golden Eagle Protection Act; o the Migratory Bird Treaty Act; o the Clean Water Act; o Sections 3503, 3503.5, 3511, 3513, 3800(a), 4150, 4700, 5050, 5515, and 1602 of the California Fish and Game Code; o California Code of Regulations Title 14, Sections 30.10 and 251.1; o the Porter-Cologne Water Quality Control Act; o Sections 5004 and 7201 of the CDFA Code; and	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		○ California Coastal Act. • Information about workers' responsibilities with regard to California tiger salamander, an overview of the species' appearance and habitat, and a description of the measures being taken to reduce potential effects on the species during project construction. • Identification and values of the special-status plant and wildlife species to be protected by the project; identification of important wildlife habitat and sensitive natural communities to be protected; and identification of special-status species, life history descriptions, habitat requirements during various life stages, and the species' protected status. • Fire protection measures, measures to avoid introduction and minimize the spread of invasive weeds during construction and operation; procedures for managing trash and food waste to prevent attracting corvids or nuisance wildlife to the site; and procedures for preventing and containing spills of hazardous substances. SMUD will conduct the worker-training program for new employees coming on the project site before the start of any construction, maintenance, or decommissioning activity that would disturb surface soils. SMUD will ensure that all personnel working on-site receive the training, including construction contractors and personnel who will operate and maintain project facilities. The training program will be recorded and subsequently shown to any project personnel who are unable to attend the initial training program. If a California tiger salamander, alive or dead, is encountered (i.e., observed, killed, or otherwise taken) at any location on the project site during the project's lifetime, SMUD will notify USFWS and CDFW on the same day as the detection. Project personnel will not move the	

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		salamander encountered unless instructed to do so by USFWS and CDFW. If instructed to move the California tiger salamander by USFWS, a USFWS-approved and permitted biologist will carefully relocate the salamander by hand to a suitable, nearby active burrow system (e.g., for Botta pocket gopher or California ground squirrel) outside the area where project activities could injure or kill the animal. (The USFWS-approved and permitted biologist will be an individual with a Section 10[a][1][A] handler's permit for California tiger salamander.) The qualified biologist will monitor the rescued California tiger salamander until it enters the burrow. In addition to the measures described above, SMUD will implement the following measures, listed after Impact 3.3-13 below, to protect water quality and drainages during construction: • Mitigation Measure 3.3-13a, "Avoid and Minimize Impacts on Wetlands and Other Waters of the United States" • Mitigation Measure 3.3-13b, "Avoid and Minimize Potential Effects on Waters of the United States Associated with Installation of Access Road Culvert Crossings" • Mitigation Measure 3.3-13c, "Comply with Section 1602 Streambed Alteration Agreement" • Mitigation Measure 3.3-13d, "Avoid and Minimize Potential Effects on Waters of the United States from Horizontal Directional Drilling"	
Impact 3.3-2: Construction impacts on nesting birds (nonraptors). Project construction could affect avian nesting success if active nests would be directly affected or if construction activity would disturb nest sites, thereby reducing adults' nest	PS	**Mitigation Measure 3.3-2: Avoid impacts on nesting birds.** In addition to Mitigation Measure 3.3-1b, "Develop and Implement a Worker Environmental Awareness Program," and measures for biological monitors, SMUD will	LTS

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attentiveness and productivity. This impact would be **potentially significant.**		implement the following measures to avoid directly or indirectly affecting nesting birds during project construction: • SMUD will conduct preconstruction nesting bird surveys to locate all active nests of special-status birds and birds protected under the MBTA and California Fish and Game Code Sections 3503 and 3503.5. No more than one week before any construction activities occur during the nesting season (February 1–August 31), including vegetation removal if necessary, a qualified biologist shall conduct nesting bird surveys to identify any nests within 100 feet of proposed work areas. The qualified biologist is defined as an individual knowledgeable about the distribution, habitat, life history, and identification of Northern California birds, and with 3 years of experience in nest searching for birds that may be present in the project area. • If nests are detected during the preconstruction surveys, a 100-foot exclusion zone will be established around the nest in which no work will be allowed until the young have successfully fledged or nesting activity has ceased. The qualified biologist will make the determination of fledging or cessation of nesting. In consultation with a qualified avian biologist, USFWS, and CDFW, the size of the exclusion zone may be modified depending on the species and the type of construction activity and associated disturbance anticipated near the nest.	
Impact 3.3-3: Loss of foraging and nesting habitat for resident and migratory birds (nonraptors). Project construction would result in permanent and temporary impacts on foraging and nesting habitat for resident and migratory birds. Because the permanent loss of foraging and nesting habitat caused by the project would be small, and because the habitat	LTS	No mitigation is required.	LTS

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
types that would be permanently lost are abundant in the project area, this impact would be **less than significant.**			
Impact 3.3-4: Construction impacts on raptor nesting activity. Project construction could affect raptor nesting success if active nests would be directly affected or if construction activity would disturb nest sites, thereby reducing adults' nest attentiveness and nest productivity. This impact would be **potentially significant.**	PS	**Mitigation Measure 3.3-4a: Avoid and minimize impacts on nesting raptors.** SMUD will implement the following measures to avoid and minimize impacts on nesting raptors: • If construction activities are scheduled to occur during the breeding season (February 1–August 31), SMUD will conduct preconstruction surveys in all potential suitable raptor nesting habitat within 0.25 mile of proposed construction areas, including trees, shrubs, grasslands, and wetland vegetation. A qualified wildlife biologist shall determine the timing of preconstruction surveys based on the time of year and habitats that are present, and shall conduct the surveys no more than 30 days before construction. The 30-day survey period allows flexibility in order for surveys to be conducted when the likelihood of nest detection is maximized (e.g., during courtship, nest building, or when feeding young). SMUD will maintain no-disturbance buffers around active raptor nests during the breeding season, or until it is determined the young have fledged. The no-disturbance zone shall include a 500-foot buffer around all raptor nests (including owls) and a 0.25-mile buffer for any active Swainson's hawk nests. ○ No-disturbance buffer sizes for non-special-status species raptors may be increased or decreased by a qualified biologist based on the sensitivity of the species of raptor, or based on site conditions that affect disturbance, such as the type of work, vegetation structure or density, and the line of sight	LTS

		between construction work and the nest to nesting raptors. ○ No-disturbance buffer sizes for special-status raptor species may be increased or decreased by the qualified biologist in consultation with USFWS and CDFW as appropriate. ○ Buffers will not apply to construction-related traffic using existing roads that are not limited to project-specific use (e.g., county roads, highways, farm roads). ○ If no nests are observed during the preconstruction survey but nesting occurs after the start of construction, it will be assumed that the individuals are acclimated to the level of ongoing disturbance. • SMUD will clearly identify the locations of no-disturbance buffers (e.g., 250 feet, 500 feet, or 0.25 mile) on maps that will be made available to construction crews. • Before and during construction, a qualified biologist shall identify all active nest setback areas on construction drawings, and if appropriate, shall flag or fence the setback areas. • If construction is scheduled to occur during the non-nesting season, then no nesting bird surveys are required before construction activity begins, except provisions for surveys for burrowing owls outside the nesting season (September 1–January 31), as specified below in Mitigation Measure 3.3-4b. **Mitigation Measure 3.3-4b: Avoid and minimize impacts on burrowing owls.** To avoid and minimize impacts on burrowing owls, SMUD will implement the following guidelines adapted from the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFG 2012): • SMUD will have preconstruction burrowing owl surveys conducted in all areas that may provide suitable nesting habitat according to CDFW (CDFG 2012) guidelines. A qualified wildlife biologist shall conduct take avoidance	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		surveys, including documentation of burrows and burrowing owls, in all suitable burrowing owl habitat within 500 feet of proposed construction. The take avoidance surveys, consisting of up to four visits, shall be initiated within 30 days of and completed at least 14 days before construction is initiated at a given location. In areas with burrows or refuge that could potentially support burrowing owls, a clearance visit shall be conducted within 24 hours of construction, including when construction work is reinitiated after a lapse of two or more weeks. • SMUD will avoid disturbing active western burrowing owl nests and occupied nesting burrows. o In accordance with standard CDFW mitigation guidelines, SMUD and its construction contractor will avoid disturbance at occupied burrows in accordance with the following seasonal distance buffers for low, medium, and high levels of disturbance (CDFG 2012): ▪ April 1 – August 15: 200 m (low), 500 m (medium), and 500 m (high) ▪ August 16 – October 15: 200 m (low), 200 m (medium), and 500 m (high) ▪ October 16 – March 31: 50 m (low), 100 m (medium), and 500 m (high) o These distances may be increased or decreased if, as determined by a qualified biologist, a different distance is required to ensure construction activities will not adversely affect occupied burrows or disrupt breeding behavior. • If a qualified biologist, in consultation with CDFW, determines that construction could adversely affect occupied burrows during the September 1–January 31 nonbreeding season, the qualified biologist shall implement passive relocation using one-way doors, in	

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		accordance with guidelines prepared by the California Burrowing Owl Consortium (CDFG 2012) and through coordination with CDFW.	
Impact 3.3-5: Removal and modification of raptor nesting, foraging, and roosting habitat during construction. Project construction would result in permanent and temporary impacts on raptor nesting and foraging habitat. This impact on nesting habitat would be **less than significant** while the impact on foraging habitat would be **potentially significant.**	LTS and PS	**Mitigation Measure 3.3-5: Acquire off-site mitigation to replace lost raptor foraging habitat**. SMUD will implement the following compensatory mitigation to offset net impacts on foraging habitat for breeding Swainson's hawks and other raptor species. Based on Swainson's hawk nest locations documented in recent years, no permanent project impacts on foraging habitat will occur within 1 mile of an active Swainson's hawk. Depending on whether the 150m WTG option or the 136m WTG option is selected, 25.38 acres or 30.49 acres of suitable Swainson's hawk foraging habitat will be required to mitigate this loss. SMUD will mitigate the loss of Swainson's hawk foraging habitat in accordance with CDFW recommendations (DFG 1994) by providing mitigation lands as follows: • Foraging habitat permanently lost within 5 miles of an active Swainson's hawk nest tree but more than 1 mile from the nest tree (either 25.38 acres or 30.49 acres, depending on the WTG option selected) will be replaced with 0.75 acre of mitigation land for each acre of foraging habitat permanently lost because of project construction (0.75:1 ratio). All mitigation lands protected under this requirement shall be protected in a form acceptable to CDFW (e.g., through fee title acquisition or conservation easement) on agricultural lands or other suitable habitats that provide foraging habitat for Swainson's hawk. • Management authorization holders/project sponsors will provide for management of the mitigation lands in perpetuity by funding a management endowment.	LTS

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.3-6: Construction impacts on bald and golden eagle nesting activity. Project construction activities could affect eagle nesting success if they would disturb nest sites, thereby reducing adults' nest attentiveness and nest productivity. This impact would be **potentially significant**.	PS	**Mitigation Measure 3.3-6: Avoid and minimize impacts on nesting eagles.** SMUD will implement the following measures to avoid and minimize impacts on nesting eagles: • Ground-based surveys will be conducted to assess the status of all previously documented eagle nest locations (CNDDB or other reliable sources) within the 2-mile buffer of the project area, and will follow guidance set forth in USFWS (2013) for ground-based surveys to determine occupancy, including the following site-specific recommendations: o Two 4-hour observations shall be conducted at each nest (multiple nests may be observed simultaneously), one in late January and the other in late February, to determine whether territories are occupied by adult eagles and identify nesting activity where possible. o If an active nest is located, no further ground monitoring is required. However, if nesting behavior is observed within 2 miles of the project buffer and a nest site is not located, an aerial inspection of the area shall be conducted. o The results of the surveys shall be documented in a report and submitted to USFWS and CDFW no later than August of the breeding season in which the survey was conducted (e.g., August 2020 for winter/spring 2020 surveys). SMUD will implement the following avoidance buffer distances for bald eagle and golden eagle (respectively) for the indicated construction activity, assuming a direct line of sight between the construction activity and the active nest:	LTS

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		• *Human foot traffic:* 400 meters/800 meters • *Pass-through vehicular traffic:* 200 meters/400 meters • *Any other construction work except the types described below:* 800 meters/1,600 meters • *Blasting:* 1,600 meters for both species • *Helicopter flight:* 1,600 meters (horizontal and vertical) for both species Active eagle nests and associated buffers will be indicated in construction drawings for the project and will be discussed in the worker environmental awareness program training for construction workers (Mitigation Measure 3.3-1b)	
Impact 3.3-7: Removal and modification of golden eagle foraging habitat during construction Project construction would result in temporary and permanent impacts on golden eagle foraging habitat, resulting in decreased prey availability. This impact would be **potentially significant.**	PS	**Mitigation Measure 3.3-7: Implement Mitigation Measure 3.3-5.** SMUD will implement Mitigation Measure 3.3-5, "Acquire Off-site Mitigation to Replace Disturbed Raptor Foraging Habitat," listed above.	LTS
Impact 3.3-8: Construction impacts on bats and bat habitat. Project construction would result in temporary disturbance of foraging bats and loss of foraging habitat. This impact would be **less than significant**	LTS	No mitigation is required.	LTS
Impact 3.3-9: Injury to and mortality of raptors, other birds, and bats from project operation. Project operation could result in injury to and mortality of bats and birds, including eagles and other special-status birds, as a result of collisions with wind turbine generators. This impact would be **potentially significant**. .	PS	**Mitigation Measure 3.3-9a: Avoid and minimize operational impacts on birds and bats.** SMUD will design and operate the project to minimize potential operational impacts on birds and bats by adhering to impact avoidance and minimization measures, including those described the *SMUD Solano Wind Bird and Bat Conservation Strategies* (SMUD 2013), and SMUD's Eagle Conservation Plan (SMUD 2014). These measures include the following:	LTS

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		• Maintain a landscape that does not encourage bird or bat occurrence by conducting regular rotational agricultural activities to keep rodent prey populations to relatively low levels. In addition, implement a prey management program to reduce the availability of rabbits, ground squirrels, and other prey that could attract eagles and other raptors. • Adhere to the general guidelines for turbine and WTG tower design and operation to minimize bird and bat mortality: o Use turbines and WTG tower designs lacking potential raptor perches that may encourage bird activity near the moving rotors. o Use turbines with rotor tips at least 25 meters, preferably 30 meters, above the ground. • Avoid guy wires on meteorological towers. • Select WTG sites using the following guidelines designed to minimize the extent of potential avian and bat mortality: o Minimize the density of WTGs on the landscape and avoid placing WTGs close together in long strings, which creates barriers to movement by restricting the available space for birds and bats to negotiate through a WTG field. o Establish setbacks from roads, residences, and wetlands and other unique habitats where birds and bats are more likely to congregate. o Where possible, avoid steep slopes, canyons, saddles, and other high-risk topographic features. **Mitigation Measure 3.3-9b: Conduct bird and bat mortality monitoring.** To assess operational impacts on birds and bats and inform potential adaptive management and mitigation approaches,	

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		SMUD will conduct 1 year of postconstruction mortality monitoring in the project area, as follows: • Qualified biologists shall monitor bird and bat mortality annually throughout the project area in accordance with the requirements set forth below, which incorporate guidelines described in SMUD's Solano BBCS (SMUD 2013), SMUD's *Final Eagle Conservation Plan* (SMUD 2014), and the *California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development* (CEC and DFG 2007). The monitoring shall be conducted so that sufficient information is available to allow evaluation of WTG design characteristics and location effects that contribute to mortality, including information about the species, number, location, and distance of dead birds relative to WTG locations; availability of raptor prey species; and cause of bird and bat mortalities. • Monitoring will be conducted for 1 year at all turbines in the Solano 4 Wind Project area after the first delivery of power, and will include but not be limited to the following methods unless otherwise determined appropriate by SMUD: ○ The standard search radius will be 100 meters to account for terrain and WTG height. ○ A sufficient number of "road and pad" searches will be conducted to 150 meters to determine the proportion of carcasses falling outside of the standard (100-meter) search radius. ○ Searcher efficiency trials will be conducted for four seasons and will be sufficient to analyze differences in carcass size (small/medium/large) and vegetative cover.	

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		○ Data will be analyzed using procedures described by the California Energy Commission and CDFW (CEC and CDFG 2007), or newer approaches (e.g., General Estimator [Dalthorp et al. 2018], the Evidence of Absence model [Dalthorp et al. 2017]). The data analysis will address adjusted fatality rates annually, seasonally, and by species. An annual report will be prepared each year and a final report will be prepared after the 1-year monitoring period. ○ If a carcass with a band is found in the project area, SMUD will promptly report the banding information to USFWS's Bird Banding Laboratory. SMUD will coordinate with the laboratory to include any information provided by USFWS that is pertinent to avian mortality at the project site, if any, in the annual monitoring reports. • After postconstruction monitoring data have been obtained, SMUD will review the data. In consultation with USFWS and CDFW, SMUD will determine which specific WTGs, if any, generate disproportionately high levels of avian mortalities (based on evidence of statistically significant higher levels of mortality relative to other WTGs), and whether adaptive management measures are needed to reduce or avoid mortalities at those specific WTGs. • If unauthorized take of a federally listed or state-listed endangered or threatened avian or bat species occurs during project operation, SMUD will notify the appropriate agency (USFWS and/or CDFW) within 48 hours of the discovery, and will submit written documentation of the take to the appropriate agency within 2 calendar days. The documentation will describe the date, time, location, species, and if possible, cause of unauthorized take. SMUD will implement any actions required or	

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		recommended by USFWS and/or CDFW as a result of the unauthorized take. SMUD will design and conduct postconstruction mortality monitoring in a way that ensures at least a 50 percent chance of detecting mortality of large raptors (including golden eagle and Swainson's hawk) caused by a collision with a project WTG. Modeling tools such as the Evidence of Absence model (Dalthorp et al. 2017) can be used to design studies with such an objective in mind. This may require adjusting the radius of the search area around the WTGs, the proportion of WTGs searched, or other standard parameters set forth above. After postconstruction monitoring activities, incidental monitoring of the project area will continue through reporting of incidental fatalities or injured birds by on-site staff to the Avian Reporting System (see Mitigation Measure 3.3-9h, "Implement Adaptive Management to Address Disproportionate Mortality of Special-Status Birds or Bats," below). SMUD will also continue to report incidental fatalities or injured birds in compliance with its USFWS Special Purpose Utility Permit (Permit #MB98730A). **Mitigation Measure 3.3-9d: Implement a training program for construction and project personnel.** SMUD will implement a training program so that on-site staff will have a thorough understanding of eagle mortality issues and corresponding protocols. The training program focuses on staff members with direct and indirect implementation responsibilities, including managers, supervisors, engineers, and on-site field crews. The training program will include the following elements: • introduction and description of eagle mortality issues; • description of SMUD's environmental stewardship policy (SMUD Board Policy SD-7);	

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		• description of avian resources in the project area and the species most susceptible to collision mortality or injury; • discussion of federal and state regulations that protect birds, legal implications, and the need for compliance; • protocols for recording/reporting avian incident data and procedures for carcass collection and injured wildlife; and • responsibilities of staff members to implement the BBCS. **Mitigation Measure 3.3-9e: Provide funding for raptor recovery and rehabilitation.** SMUD will contribute $5,000 each year for the duration of project operation to the University of California, Davis, California Raptor Center (UC Davis Raptor Center) or its successors for rehabilitation of injured avian species, including eagles and other raptors. The UC Davis Raptor Center is authorized by USFWS and CDFW to rehabilitate injured and orphaned raptors. The UC Davis Raptor Center successfully returns approximately 60 percent of the sick, injured, and orphaned birds it receives to the wild each year (UC Davis California Raptor Center 2019). **Mitigation Measure 3.3-9f: Reduce vehicle collision risks to wildlife.** SMUD's operators will enforce a speed limit of 15 miles per hour on all roads on the project site to minimize the risk of collisions with small mammals and other wildlife, thereby reducing the number of roadkills, a potential food source that could attract eagles and increase their risk of vehicle collisions. **Mitigation Measure 3.3-9g: Secure an eagle incidental take permit for Solano 4 Wind from USFWS and implement permit conditions**. SMUD will compensate for the loss of any golden or bald eagles injured or killed as a result of project operation by complying with the conditions described in SMUD's Eagle	

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		Take Permit. Compensatory mitigation for eagle fatalities may include paying for the retrofitting of electrical utility poles that present a high risk of electrocution to eagles, as prescribed in the *Eagle Conservation Plan Guidance*, Appendix G (USFWS 2013). The performance standard for this compensatory mitigation would be to implement sufficient measures (e.g., electric utility retrofits) to offset all eagle fatalities directly attributable to project operation and resulting in permanent removal of an eagle from the wild, whether detected during structured postconstruction mortality monitoring surveys or detected incidentally. For each instance of project-related injury or mortality that removes a bird from the population, 32 utility poles shall be retrofitted. This is based on a resource equivalency analysis performed in accordance with USFWS guidelines (USFWS 2013:Appendix G) and assumes that each retrofitted pole would result in 10 years of avoided loss because of electrocution. The resource equivalency analysis also assumes that the take of one eagle and the associated compensatory mitigation will occur during the same year. Certain utility poles may be eligible for "reframing" (as opposed to retrofitting) to avoid electrocution, which USFWS assumes will result in 30 years of avoided loss rather than 10 years. The reframing of 14 eligible utility poles is sufficient to offset take of a single eagle, according to the resource equivalency analysis. Compensatory mitigation for the loss of each eagle shall be completed within 1 year of each instance of documented take. Retrofitted poles must be considered "high-risk" for electrocution (per USFWS 2013:Appendix G). For instances of bald eagle take, retrofitted poles must be located in areas where both species occur and within the Pacific Flyway north of 40 degrees North latitude. For instances of golden eagle take, retrofitted poles must be located within the Pacific Flyway. These areas represent the USFWS-	

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		designated "Eagle Management Units" at the project site for bald eagles and golden eagles, respectively (USFWS 2016). SMUD will comply with the federal eagle incidental take permit that will be secured for the project. Any mitigation completed toward fulfillment of the eagle take permit requirements will be counted toward the mitigation requirements described above. If mitigation requirements specified in the USFWS eagle take permit differ from those described above, the USFWS permit requirements shall prevail. **Mitigation Measure 3.3-9h: Implement adaptive management to address disproportionate mortality of special-status birds or bats.** SMUD will implement adaptive management strategies if postconstruction mortality monitoring studies determine that project operation is resulting in disproportionate mortality of one or more avian or bat species. The goal of the adaptive management strategies is to avoid a local population of avian or bat species dropping below self-sustaining levels. In accordance with the Solano BBCS (SMUD 2014), a determination to implement adaptive management based on "disproportionate mortality" will consider the factors listed below. • Number of annual fatalities per turbine • Disproportionate representation of a particular species • Comparison to other wind energy facilities As part of the annual survey and monitoring program described in Mitigation Measure 3.3-3b above, SMUD will analyze information related to these factors. Through this process of data collection, analysis, and consideration of these factors, disproportionate mortality at individual WTGs will be analyzed.	

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation

		A project-related fatality of one or more federal- or California-listed species or one or more California Fully Protected Species would trigger consultation with USFWS and/or CDFW, and implementation of the adaptive management and compensatory mitigation measures described below. If avian or bat mortality resulting from operation of the Solano 4 Wind Project exceeds the maximum estimated fatality rates described in Tables 3.3-11 and 3.3-12 for special-status birds or bats as well as common species, SMUD will develop and implement a comprehensive set of biologically based, reasonable, and feasible management and/or mitigation measures for responding to the fatality threshold exceedance, along with a timeline for implementation. SMUD will consult the USFWS and CDFW in development of the adaptive management and compensatory mitigation strategies for special-status birds and bats. Potential adaptive management actions to be considered include but are not limited to the following:
		• *Implement avian or bat detection/deterrent systems.* This involves testing and implementing systems that detect birds and bats and taking actions designed to reduce the probability of a collision (e.g., informed WTG curtailment, utter deterrents designed to warn or frighten birds and bats from operating WTGs), including:
		  ○ DT Bird/DT Bat Systems
		  ○ IdentiFlight Eagle Detection System
		• *Implement passive avian or bat deterrents.* This involves testing and implementing deterrents designed to warn or frighten birds and bats from operating WTGs, including:
		  ○ improved blade marking (compatible with Solano County visual guidelines) such as variations in paint color and color patterns;	

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		○ blade designs that produce bird warning "whistles" (without upsetting blade integrity or exceeding ambient noise limits); and ○ ultrasonic devices that infuse the blade-swept area with high-frequency sounds that alert or frighten bats. • *Reduce on-site hazards.* Additional techniques for reducing on-site hazards, including possible operational adjustments, should be discussed if mortality rates substantially exceed study estimates. This could include making adjustments to cut-in speed or changes during migratory periods, if such actions are demonstrated to be effective as avoidance and minimization techniques. • *Reduce off-site hazards.* This can include installing safety features, such as anti-perching devices on poles or anti-electrocution retrofits and diverters on power lines, outside the project area (with concurrence from landowners and Pacific Gas and Electric Company or their successors) to discourage bird use. This should take advantage of Avian Power Line Interaction Committee guidelines and use hazard reduction techniques identified in SMUD's avian protection plan. • *Implement operational minimization protocols (curtailment) during high-risk periods for bats.* High-risk periods include nighttime when wind speeds are low, spring and autumn migration periods, and certain weather conditions such as before and after storms (Arnett et al. 2011), Standard curtailment protocols can reduce bat fatalities by up to 93 percent, and feathering turbine blades can reduce bat fatalities by an average of 35 percent. Refined curtailment approaches such as the predictive algorithm-based curtailment approach developed by Korner-Nievergelt et al. (2013 in Sutter 2018) and Behr et al. (2017 in Sutter 2018), and activity-	

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		based curtailment strategies based on bat detection (Sutter 2018) have also been shown to substantially reduce bat mortality. • Contribute to ongoing conservation efforts. Examples include acquisition of additional conservation property (or easements) that provide habitat for species affected by project operations, and additional direct contributions to habitat restoration organizations or facilities such as the UC Davis Raptor Center	
Impact 3.3-10: Loss of special-status plants and their habitat. Project construction activities could degrade or destroy special-status plants and their habitat. However, because no special-status plants are present on the project site, this impact would be **less than significant.**	LTS	No mitigation is required.	LTS
Impact 3.3-11: Loss of or direct impacts on riparian habitat. Project construction activities could degrade or destroy special-status plants and their habitat. However, because no special-status plants are present on the project site, this impact would be **less than significant**.	LTS	No mitigation is required.	LTS
Impact 3.3-12: Indirect impacts on riparian habitat Project construction and operation could indirectly affect riparian habitat by altering existing topography and hydrology, causing fugitive dust to accumulate on vegetation, and potentially contributing to the introduction and spread of nonnative invasive plant species. This impact would be **potentially significant**.	PS	**Mitigation Measure 3.3-12a: Avoid indirect impacts on riparian habitat.** SMUD will avoid and minimize indirect impacts on riparian habitat by implementing the following mitigation measures: • Mitigation Measure 3.5-1, "Prepare and Implement a SWPPP and Associated BMPs," listed in Section 3.5, "Geology, Soils, Paleontological Resources, and Mineral Resources"	LTS

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		• Mitigation Measure 3.7-1b, "Establish and Implement an Environmental Training Program," listed in Section 3.7, "Hazards and Hazardous Materials" • Mitigation Measure 3.7-1c, "Prepare and Implement a Hazardous Substance Control and Emergency Response Plan," listed in Section 3.7, "Hazards and Hazardous Materials" • Mitigation Measure 3.7-1d, "Prepare and Implement a Spill Prevention, Control, and Countermeasures Plan," listed in Section 3.7, "Hazards and Hazardous Materials" In addition, SMUD will implement the following measures: • Before any construction activity, SMUD will assign a qualified biologist to identify the locations of riparian habitat and corresponding setbacks required by project permits, for avoidance. Identification of riparian habitat for avoidance will be in addition to and distinguished from any required construction boundary fencing or flagging. Setback requirements will be identified as appropriate (e.g., 100-foot setback) on project maps to comply with requirements specified in 404, 401, or 1602 permit conditions. **Mitigation Measure 3.3-12b: Comply with Section 1600 streambed alteration agreement and CWA Sections 401 and 404 or the state's Porter-Cologne Act**. SMUD will obtain all necessary permits under Section 1602 of the California Fish and Game Code (Lake and Streambed Alteration Agreement) and Sections 401 and 404 of the CWA or the state's Porter-Cologne Act and will implement all conditions and requirements of these state and federal permits obtained for the project.	

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		Mitigation Measure 3.3-12c: Develop a reclamation and revegetation plan. Before project construction, SMUD will develop and implement a reclamation and revegetation plan to restore sites disturbed by construction, and to reclaim abandoned access roads that will be restored to agricultural uses. The plan will describe reclamation and revegetation efforts to be conducted during project construction, both to stabilize the site and to return temporarily affected areas to pre-project conditions or restore abandoned roads to agricultural uses. The goals of the reclamation and restoration plan will be to: • avoid the introduction and spread of invasive weeds, • develop vegetative cover in disturbed areas to prevent erosion, and • restore abandoned roads to agricultural uses (livestock grazing and dryland farming). The reclamation and restoration plan will be consistent with the goals and objectives described in SMUD's *Land Management Plan for the Solano Wind Farm* (Althouse and Meade 2018) or subsequent updates to that plan. The targets for percent vegetative cover and percent non-native species composition will be based on pre-project baseline surveys in areas that will be subject to disturbance. Monitoring to assess success (i.e., achieving the target pre-project vegetative cover and species composition) will occur for a period of 2 years. If the success criteria are not met at the end of 2 years, adaptive management measures for weed and erosion control, as described in SMUD's Land Management Plan (Althouse and Meade 2018), will be implemented. The reclamation and revegetation plan will be developed and implemented to reclaim existing vegetation communities and agricultural land uses in the project area to the maximum extent feasible. Reclamation and revegetation of temporarily disturbed sites immediately after the completion of construction activities will help protect against indirect effects on riparian habitat by stabilizing soil and reducing the potential for invasion by nonnative invasive and noxious weeds.	

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		The plan will include, at a minimum, the following provisions: • Reclamation of all areas disturbed by project construction, including temporary disturbance areas around construction sites, laydown/staging areas, temporary access roads, and the home run collection lines. Pest species listed by CDFA as List A or B, listed by the California Invasive Plant Council as Moderate or High, and/or targeted by the Solano Weed Management Area for eradication in Solano County shall not be used. A qualified biologist with demonstrated experience with the land cover types to be revegetated will have oversight for the selection of reclamation species. • Revegetation of areas of temporary disturbance as soon as construction is complete to reduce erosion and inhibit the establishment of invasive weeds. • A description of proven available revegetation techniques and procedures (such as hydroseeding, drill seeding, and broadcast seeding, adapted to local conditions) on all disturbed areas. • Salvage of topsoil in all areas subject to grading or excavation. Topsoil will be removed, stockpiled on-site, and returned to the original site (reclaimed) or used in habitat reclamation activities elsewhere on the site. • Monitoring of revegetated and reclaimed habitat for a minimum of 2 years or until herbaceous cover meets or exceeds preproject conditions. Success criteria are defined as minimum thresholds for herbaceous vegetative cover, and maximum thresholds for noxious weeds, based on preproject (baseline) conditions for each habitat type to be revegetated (e.g., grazed annual grassland, farmland). • Weed control measures, which may include cultural, mechanical, and/or chemical methods. Any application of	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		herbicides shall be in compliance with all federal and state laws and regulations and implemented by a licensed qualified applicator. Herbicides shall not be applied during or within 72 hours of a scheduled rain event. In riparian areas and near streams and wetlands, only water-safe herbicides shall be used. Herbicides shall not be applied when wind velocities exceed 6 miles per hour. • Adaptive management measures and a remedial planting plan. Remedial measures (e.g., additional planting, weeding, or erosion control) will be taken during the monitoring period if necessary to ensure success of the revegetation or reclamation effort. • Maintenance, monitoring, and reporting procedures. If the revegetation/reclamation fails to meet the established performance criteria for vegetative cover within the maintenance and monitoring period, monitoring of remedial planting shall extend beyond the initial period until the criteria are met, unless otherwise approved by the permitting agencies. If elements of the revegetated/reclaimed area(s) meet their success criteria before the end of 2 years of monitoring, they may be eliminated from future monitoring with approval from the permitting agencies. **Mitigation Measure 3.3-12d: Conduct worker awareness training.** SMUD will implement Mitigation Measure 3.3-1b, "Develop and Implement a Worker Environmental Awareness Program," to include specific information regarding riparian habitat that occurs on the project site and that would be identified for avoidance. Training will be conducted before the start of construction. The training will include information about the locations and extent of riparian habitat, methods of resource avoidance, permit conditions, and possible fines for	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		violating permit conditions and federal and/or state environmental laws. The training will also include guidance on methods to avoid the introduction and spread of invasive plant species.	
Impact 3.3-13: Loss and degradation of federally protected waters of the United States. Project construction for installation of wind turbine generators and associated infrastructure would result in the loss and degradation of federally protected wetlands and other waters of the United States. Federally protected waters could also be disturbed indirectly by activities associated with staging areas and laydown of project components. This impact would be **potentially significant**.	PS	**Mitigation Measure 3.3-13a: Avoid and minimize impacts on wetlands and other waters of the United States.** SMUD will avoid and minimize impacts on wetlands and other waters of the United States by implementing the following mitigation measures: • Mitigation Measure 3.3-12c, "Develop a Reclamation and Revegetation Plan" • Mitigation Measure 3.5-1a, "Prepare and Implement a SWPPP and Associated BMPs," listed in Section 3.5, " Geology, Soils, Paleontological Resources, and Mineral Resources" • Mitigation Measure 3.7-1b, "Establish and Implement an Environmental Training Program," listed in Section 3.7, "Hazards and Hazardous Materials" • Mitigation Measure 3.7-1c, "Prepare and Implement a Hazardous Substance Control and Emergency Response Plan," listed in Section 3.7, "Hazards and Hazardous Materials" • Mitigation Measure 3.7-1d, "Prepare and Implement a Spill Prevention, Control, and Countermeasures Plan," listed in Section 3.7, "Hazards and Hazardous Materials" SMUD will obtain and implement the terms of all necessary permits under Section 1602 of the California Fish and Game Code (Lake and Streambed Alteration Agreement) and CWA Sections 401 and 404, and will comply with the conditions and requirements of all other federal and state	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		permits obtained for the project. In addition, SMUD will implement the following measures: • SMUD will identify corresponding setback requirements as appropriate (e.g., 100-foot setback) on project maps to comply with setback requirements described in permit conditions. Any required setback will be shown on project construction drawings and plans (e.g., grading and improvement plans). Construction activities and project components will be located at least 100 feet from aquatic resources wherever feasible. • Before the start of any construction activity, SMUD will assign a qualified biologist to identify the locations of wetlands and other waters and their corresponding setbacks (if applicable) as required by project permits, for avoidance. Identification of wetlands and other waters for avoidance will be in addition to and distinguished from any required construction boundary fencing or flagging. **Mitigation Measure 3.3-13b: Avoid and minimize potential effects on waters of the United States from installation of access road culvert crossings.** SMUD will comply with the following mitigation measures to minimize potential effects on waters of the United States caused by installation of culvert crossings to allow vehicular access across waters: • Before project construction, SMUD will design culvert crossings to maintain hydrological connectivity while allowing vehicular access across aquatic features. A hydrology study of the proposed culvert location(s) will be conducted to analyze existing drainage conditions and calculate appropriate culvert size(s). • Before project construction, the contractor will obtain a grading permit from Solano County. During construction, the contractor will comply with all terms and conditions of	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		the permit, including any supplemental conditions if applicable, and with the provisions of Chapter 31 of the Solano County Code, "Grading, Drainage, Land Leveling, and Erosion Control Ordinance." All grading work will be performed in accordance with good design and construction practice. SMUD will supply a bond if requested by Solano County. • The contractor for culvert installation shall adhere to the following general design principles and standards, which shall serve as minimum guidelines for grading and erosion control work performed pursuant to the project's grading permit: o All work shall be done in a manner that will minimize soil erosion. o Existing natural vegetation shall be retained and preserved wherever possible and practical. o Increased potential for erosion by removal of vegetation shall be limited by minimizing the area and time of vegetation removal to the extent practical. Exposure of barren soils shall be limited by completing work before the onset of the rainy season, to ensure that the soil is stabilized and vegetation is established in advance of the rainy season (October 15–April 15). o Facilities shall be constructed to retain sediment produced on-site. Sediment basins, sediment traps, and similar required measures shall be installed before any clearing or grading activities, and shall be maintained throughout any such operations until removal is authorized. o Seeding, mulching, and other suitable stabilization measures shall be used to protect exposed erodible areas in advance of the rainy season.	

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		○ Provisions shall be made to mitigate any increased runoff caused by altered soil conditions during and after construction. ○ Neither cut nor fill slopes shall be steeper than two parts horizontal to one part vertical (2:1) unless a geological or engineering analysis indicates that steeper slopes are safe and appropriate erosion control measures are specified. ○ Cleared vegetation and excavated materials shall be disposed of in a manner that reduces the risk of erosion, and in conformance with the provisions of the approved grading permit. Topsoil shall be conserved for use in revegetation of disturbed areas whenever possible or practical. ○ Every effort shall be made to preserve existing channels and watercourses. No work shall be performed within a channel or watercourse unless no reasonable alternative is available. If such work is performed, it shall be limited to the minimum amount necessary. ○ All fill material shall not include organic, frozen, or other deleterious materials. No rock or similar irreducible material greater than 12 inches in any dimension shall be included in fills. ○ All fill supporting a structure shall be compacted to 90 percent of maximum density as determined by ASTM D 1557, modified proctor, in lifts not exceeding 12 inches in depth. **Mitigation Measure 3.3-13c: Comply with Section 1602 streambed alteration agreement for construction activities in jurisdictional areas.** Before construction, SMUD will submit a notification of streambed alteration to CDFW under Section 1602 of the Fish	

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		and Game Code. If CDFW concludes that the project will result in adverse impacts to fish and wildlife resources, it will provide a proposed Streambed Alteration Agreement, which must obtain reasonable conditions. SMUD will implement all reasonable permit conditions, including requirements for compensatory mitigation (if any). Where feasible, the compensatory mitigation requirement may be combined with those for other mitigation measures or mitigation required for the CWA Section 404 and 401 permits. These conditions may include the following measures: • Pre-construction Measures: Before any construction activities begin, a qualified wetland biologist will identify and flag the boundaries of all wetlands in the project area. Appropriate barriers (straw bales, silt, fences, etc.) will be installed near sensitive resources to prevent sedimentation outside the work areas. During construction, wetlands will be treated as exclusion areas and activities within them will be strictly limited to those pertaining to this permit application. • SWPPP: The construction contractor shall prepare and implement a SWPPP and associated BMPs. • Hazardous Substance Control Plan. SMUD shall prepare and implement a construction-specific hazardous substance control and emergency response plan for quick, safe cleanup of accidental spills. • Buffer from Drainages. All staging and stockpile areas will be adjacent to the proposed road crossings, but away from sensitive areas. A minimum buffer of 100 feet from drainages would be used for refueling and storage. • Worker Education: Prior to construction, Environmental Awareness Training will be provided to all construction workers. This will consist of tailgate environmental training sessions conducted by a qualified biologist for the purpose of informing all personnel about the	

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		wetlands and intermittent streams in the project area and the importance of spill prevention, emergency response measures, and proper implementation of BMPs. Any sensitive species in the project region will also be discussed. Personnel will be trained on the locations of sensitive areas and species as well as rules and methods for avoiding these resources. They will also be briefed on all permit conditions as well as the potential disciplinary actions that could result from violations of state or federal laws. • Construction Monitoring. A qualified biologist will be on site during grading and construction activities to ensure protection of biological and other resources. • Erosion Control: Erosion control and slope stabilization best management practices will be implemented. These practices may include installation of orange construction fencing, silt fencing, hay wattles, hay bales and other protective measures to avoid impacts to unvegetated areas. **Mitigation Measure 3.3-13d: Avoid and minimize potential effects on waters of the United States from horizontal directional drilling.** SMUD will implement the following mitigation measures to avoid and minimize potential effects on aquatic resources from horizontal directional drilling underneath drainage and swale features during installation of the underground home run collection lines: • SMUD will provide notification regarding the HDD to CDFW as part of the streambed alteration agreement application. SMUD will assign a qualified biological monitor with previous HDD monitoring experience and knowledge of the environmental sensitivities of the project area to monitor all HDD activities. The monitor	

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		shall be on-site for the duration of HDD activities and shall provide brief reports of daily activities to CDFW. • SMUD's biologist shall conduct on-site briefings for all HDD workers to ensure that all field personnel understand the locations of aquatic resources and their responsibility for timely reporting of frac-outs. • Barriers (e.g., straw bales, sedimentation fences) shall be erected between the bore site and all nearby aquatic resources before drilling to prevent any material from reaching aquatic resource areas. The distance between the bore site and aquatic resource areas shall be compliant with requirements for protective setback boundaries as specified the CDFW permit. • If the biological monitor suspects a potential frac-out that is not yet visible at the surface (e.g., loss of bentonite slurry in the drill pit but no frac-out at the surface), the HDD contractor shall immediately cease HDD activities and implement measures to reduce the potential for a frac-out (e.g., increase the density of the drilling mud or reduce the pressure of the drill). The contractor shall then be allowed to continue HDD activities. • The HDD contractor shall keep necessary response equipment and supplies (e.g., vacuum truck, straw bales, sediment fencing, sand bags) on-site during HDD operations so that they are readily available in the event of a frac-out. • SMUD shall prepare a frac-out contingency plan. In the event a frac-out is detected, the HDD contractor shall implement the following measures to reduce or minimize effects on the affected aquatic resource: o All work shall stop until the frac-out has been contained and cleaned up.	

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		○ The frac-out area shall be isolated with straw bales, sandbags, or silt fencing to surround and contain the drilling mud; cleanup shall be performed using a vacuum truck supported by construction workers on foot using hand tools, as necessary. (To avoid affecting the stream bed and banks, mechanized equipment shall not be used to scoop or scrape up frac-out materials.) ○ If a frac-out occurs, SMUD shall notify the appropriate jurisdictional agency (USACE, the Central Valley RWQCB, and/or CDFW) by telephone and in writing (email is acceptable) within 24 hours. The required notification shall describe the frac-out and cleanup measures implemented. If a frac-out occurs and, based on consultation with appropriate agencies, is considered to have negatively affected waters of the United States, SMUD will implement appropriate measures to restore the area to pre-HDD conditions in consultation with the permitting agencies. **Mitigation Measure 3.3-13e: Conduct worker awareness training.** SMUD will implement Mitigation Measure 3.3-1b, "Develop and Implement a Worker Environmental Awareness Program," to include specific information regarding wetlands and other waters that occur on the project site and that either will be affected or have been identified for avoidance. Training will be conducted before the start of construction and will include information about the locations and extent of wetlands and other waters, methods of resource avoidance, permit conditions, and possible fines for violating permit conditions and federal and/or state environmental laws.	

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		Mitigation Measure 3.3-13f: Restore temporarily affected waters of the United States. SMUD will require the construction contractor to restore temporarily disturbed wetlands and other waters of the United States by returning them to preconstruction conditions after construction in accordance with the project's reclamation and restoration plan (Mitigation Measure 3.3-12c). SMUD will comply with all conditions and requirements of federal and state permits obtained for the project. **Mitigation Measure 3.3-13g: Compensate for loss of waters of the United States.** The acreage and function of all wetlands and other waters lost as a result of project implementation will be replaced and restored on a "no-net-loss" basis. SMUD will compensate for the loss of aquatic resources by purchasing credits from a USACE-approved mitigation bank; purchasing in-lieu fee credits; or restoring, preserving, creating, or enhancing similar habitats at another USACE-approved mitigation area as determined during CWA Section 404 and Section 401 permitting. The minimum wetland compensation ratio to achieve no net loss of the functions and services of wetlands and other waters will be at least 1:1. Final ratios will be determined during the permitting process.	
Impact 3.3-14. Adverse effects on migratory corridors or nursery sites. Project construction and operation could adversely affect migratory corridors or nursery sites. Because no migratory corridors or nursery sites are present on the project site, this impact would be **less than significant.**	LTS	No mitigation is required.	LTS
3.4 Archaeological, Historical, and Tribal Cultural Resources			
Impact 3.4-1: Impacts on unique archaeological resources. Previous investigations resulted in the documentation of four	PS	**Mitigation Measure 3.4-1a: Avoid or conduct subsurface testing and/or monitoring during construction in areas**	LTS

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
archaeological resources, a ranch complex, and the potential Montezuma Hills Rural Historic Landscape. These resources have been evaluated for the NRHP and CRHR but do not appear to be eligible; therefore, they are not considered unique archaeological resources. However, project-related ground-disturbing activities could result in the discovery of or damage to as-yet undiscovered archaeological resources as defined in Section 15064.5 of the State CEQA Guidelines. This impact would be **potentially significant.**		**with high potential for the presence of buried archaeological sites.** The construction contractor shall avoid conducting ground-disturbing activities in the few locations within the direct APE that have high or the highest potential for buried archaeological sites. If these areas cannot be avoided and project-related ground disturbance in those areas would be sufficiently deep that they could encounter buried archaeological resources, then additional actions may be necessary to mitigate any impacts on as-yet unidentified buried resources. These minimization efforts could include conducting subsurface testing before project construction and/or monitoring during the construction period. **Mitigation Measure 3.4-1b: Worker awareness training.** Prior to the start of construction, SMUD shall provide worker awareness training to the construction contractor and SMUD's project superintendent regarding the potential for cultural and tribal cultural resources that could be encountered during ground disturbance, the regulatory protections afforded to such finds, and the procedures to follow in the event of discovery of a previously unknown resource, including notifying SMUD representatives. SMUD shall invite representatives of UAIC to periodically inspect the active areas of the project, including any soil piles, trenches, or other disturbed areas. UAIC shall be notified at least 48 hours prior to start of construction. In the event that tribal representatives or construction workers find evidence of potential tribal cultural resources, the procedures identified in Mitigation Measure 3.4-1c and 3.4-2 shall be implemented. **Mitigation Measure 3.4-1c: Halt ground-disturbing activity upon discovery of subsurface archaeological features.** If any prehistoric or historic-era subsurface archaeological features or deposits, including locally	

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		darkened soil ("midden"), that could conceal cultural deposits are discovered during construction, all ground-disturbing activity shall cease within 100 feet of the resource(s) discovered. A qualified cultural resources specialist and Native American representatives and monitors from culturally affiliated Native American Tribes shall assess the significance of the find and make recommendations for further evaluation and treatment as necessary. These recommendations shall be documented in the project record. For any recommendations made by interested Native American Tribes that are not implemented, the project record shall provide a justification explaining why the recommendation was not followed. If the qualified archaeologist determines the find to be significant (because the find constitutes either a historical resource, a unique archaeological resource, or a tribal cultural resource), and if an adverse impact on a TCR, unique archaeology, or other cultural resource occurs, then SMUD shall consult with interested Native American groups and individuals regarding mitigation contained in PRC Sections 21084.3(a) and 21084.3(b) and State CEQA Guidelines Section 15370. Potential mitigation measures developed in coordination with interested Native American groups may include: • preservation in place (the preferred manner of mitigating impacts on archaeological sites), • archival research, • replacement of cultural items for educational or cultural purposes, • preservation of substitute TCRs or environments and/or subsurface testing, or	

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		• contiguous block unit excavation and data recovery (when it is the only feasible mitigation, and pursuant to a data recovery plan).	
Impact 3.4-2: Impacts on tribal cultural resources. Consultation with the Wilton Rancheria is ongoing and could result in the identification of TCRs as described under AB 52 and PRC Section 21074. Because consultation has not yet been completed, this impact would be **potentially significant.**	PS	**Mitigation Measure 3.4-2: Complete AB 52 consultation.** SMUD concluded consultation with the UAIC and Wilton Rancheria under AB 52.If TCRs are identified that have the potential to be adversely affected by the project, SMUD shall notify Tribal Historic Preservation Officer Matthew Moore (THPO@auburnrancheria.com) and Antonio Ruiz (aruiz@wiltonrancheria-nsn.gov) should an inadvertent discovery of TCRs occur, and will develop mitigation measures in consultation with interested Native American groups and individuals to minimize those impacts. These mitigation measures could include the following or equally effective mitigation measures (as identified in PRC Section 21084.3): (1) Avoidance and preservation of the resources in place, including but not limited to planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria. (2) Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including but not limited to the following: (A) protecting the cultural character and integrity of the resource; (B) protecting the traditional use of the resource; or (C) protecting the confidentiality of the resource.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		(3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places. (4) Protecting the resource. (5) Preserving substitute TCRs, resources, or environments.	
Impact 3.4-3: Impacts on previously unidentified human remains. Excavation during project construction could disturb previously undiscovered human remains. This impact would be **potentially significant.**	PS	**Mitigation Measure 3.4-3: Halt ground-disturbing activity upon discovery of human remains.** If human remains are discovered during any demolition/construction activities, potentially damaging ground-disturbing activities within 100 feet of the remains shall be halted immediately, and SMUD will notify the Solano County coroner and the NAHC immediately, according to PRC Section 5097.98 and Section 7050.5 of the California Health and Safety Code. If the remains are determined by the NAHC to be Native American, the guidelines of the NAHC shall be followed during the treatment and disposition of the remains. SMUD will also retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the Most Likely Descendant, if any, identified by the NAHC. Following the coroner's and NAHC's findings, the archaeologist and the NAHC-designated Most Likely Descendant shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. PRC Section 5097.94 identifies the responsibilities for acting upon notification of a discovery of Native American human remains.	LTS
Impact 3.4-4: Indirect impacts on a historical resource. The Hastings Adobe (a historical resource listed in the NRHP and CRHR) is located outside of the project's direct APE. Project-	LTS	No mitigation is required.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
related construction vibration and visual effects would not result in an indirect substantial adverse change. This impact would be **less than significant.**			
3.5 Geology and Soils			
Impact 3.5-1: Substantial soil erosion or loss of topsoil. The proposed project has the potential to disturb approximately 91 acres during decommissioning, rehabilitation, and construction. Although these activities would be temporary, grading, excavation, and other ground-disturbing activities would expose soil and could result in accelerated erosion. Therefore, this impact would be **potentially significant.**	PS	**Mitigation Measure 3.5-1: Prepare and implement a SWPPP and associated BMPs.** Before any ground-disturbing activities begin, the construction contractor shall apply for and maintain coverage under the Construction General Permit. The contractor shall prepare and implement a SWPPP, including an erosion control plan, that includes erosion control measures and construction waste containment measures to ensure that waters of the United States and the state are protected during and after project construction. The SWPPP shall include site design measures to minimize off-site stormwater runoff that might otherwise affect surrounding habitats. The SWPPP shall be provided to SMUD for review and approval before it is provided to the SWRCB. The Central Valley Regional Water Quality Control Board and/or San Francisco Bay Regional Water Quality Control Board will review and monitor the effectiveness of the SWPPP through mandatory reporting by SMUD and the construction contractor as required. The SWPPP shall be prepared with the following objectives: • Identify all pollutant sources, including sources of sediment, that may affect the quality of stormwater discharges from construction of the project. • Identify BMPs that effectively reduce or eliminate pollutants in stormwater discharges and authorized nonstormwater discharges from the site during	LTS

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		construction to the Best Available Technology/Best Control Technology standard. • Provide calculations and design details as well as BMP controls for site run-on that are complete and correct. • Identify project discharge points and receiving waters. • Provide stabilization BMPs to reduce or eliminate pollutants following construction. The construction contractor shall implement the SWPPP, including all BMPs, and shall inspect all BMPs during construction. Potential SWPPP BMPs could include but would not be limited to the following: • Preserve existing vegetation where possible. • Roughen the surfaces of final grades to prevent erosion, decrease runoff, increase infiltration, and aid in vegetation establishment. • Place riparian buffers or filter strips along the perimeter of the disturbed area to intercept pollutants before off-site discharge. • Place fiber rolls around on-site drain inlets to prevent sediment and construction-related debris from entering inlets. • Place fiber rolls along down-gradient disturbed areas of the site to reduce runoff flow velocities and prevent sediment from leaving the site. • Place silt fences down-gradient of disturbed areas to slow down runoff and retain sediment. • Stabilize the construction entrance to reduce the tracking of mud and dirt onto public roads by construction vehicles.	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		• Stage excavated and stored construction materials and soil stockpiles in stable areas and cover or stabilize materials to prevent erosion. • Stabilize temporary construction entrances to limit transport/introduction of invasive species and control fugitive dust emissions.	
Impact 3.5-2: Location of the project on a geologic unit or soil that is unstable, or that would become unstable as a result of the project. Historically the project area has experienced a low level of seismic activity; however, the potential exists for unstable soils to be present in the project area. Therefore, this impact would be **potentially significant.**	PS	**Mitigation Measure 3.5-2: Conduct a site-specific geotechnical investigation.** Before final design of the project, the construction contractor shall complete a design level geotechnical investigation and report for the project, to be prepared by a California Registered Civil Engineer or Geotechnical Engineer. The report will set forth design and construction measures intended to ensure site stability in compliance with applicable seismic and building codes. The report shall address and make recommendations on the following: • road, pavement, and parking area design; • structural foundations; • grading practices; • erosion/winterization; • special problems discovered on-site (e.g., groundwater, expansive/unstable soils); and • slope stability. All recommendations of the geotechnical report shall be incorporated into the construction plans and specifications that are reviewed and stamped by a licensed engineer of the appropriate discipline. SMUD must include the measures in the contract for implementation by the construction contractor for the duration of construction related activities.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.5-3: Creation of a substantial risk as a result of expansive soils. Expansive soils are composed largely of clays, and extensive areas of clay soils are present on the project site. Although these soils are not expected to adversely affect WTG foundations, clay soils are subject to shrinkage and swelling that can affect ancillary site improvements, such as roadways that are supported by shallow foundations. Therefore, this impact would be **potentially significant.**	PS	**Mitigation Measure 3.5-3: Implement Mitigation Measure 3.5-2, "Implement all recommendations from the geotechnical investigation."** The construction contractor shall implement Mitigation Measure 3.5-2, above, which requires the completion of a design level geotechnical investigation and report for the project and the implementation of all design and construction measures contained therein.	LTS
Impact 3.5-4: Degradation or destruction of a unique paleontological resource. The proposed project has the potential to disturb approximately 91 acres during decommissioning, rehabilitation, and construction. The Montezuma Hills, including the project site, have been determined by Solano County to be a sensitive resource area with respect to paleontological resources. A site-specific paleontological investigation has not been prepared for the site to confirm the presence or absence of paleontological resources. Therefore, this impact would be **potentially significant.**	PS	**Mitigation Measure 3.5-4: Conduct a site-specific paleontological resource investigation and implement identified protective measures.** Before the start of any ground-disturbing activities, SMUD shall have prepared a site-specific analysis of paleontological resources. At a minimum, the site-specific analysis shall include a review of the types of the geologic formation(s) present at the project site and a determination of the likelihood that those formation(s) would contain a "unique paleontological resource" as stated in Title 14, California Code of Regulations, Appendix G (the CEQA checklist). If a site-specific analysis determines that a project may have an adverse effect on a "unique paleontological resource," project-specific mitigation measures shall be identified and implemented to address the following requirements: • Cessation of work in the vicinity of the find and notification to SMUD. • Retention of a qualified paleontologist to evaluate the resource and prepare a proposed mitigation plan, which may include some or all of the following elements: a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		• Implementation of recommendations made by the paleontologist, where SMUD determines that such recommendations are necessary and feasible. All recommendations of the report shall be incorporated into the construction plans and specifications that are reviewed and stamped by a licensed engineer of the appropriate discipline. SMUD must include the measures in the contract for implementation by the construction contractor for the duration of construction related activities.	
3.6 Greenhouse Gas Emissions and Energy			
Impact 3.6-1: Direct or indirect generation of GHG emissions that may have a significant impact on the environment or conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHGs. The fundamental purpose of the project is to reduce GHG emissions produced in the SMUD service area and in California, or to support beneficial uses there. The project is expected to reduce GHG emissions by approximately 2,446,322 $MTCO_2e$ over the project's 35-year life. Although project construction activities would make a relatively small contribution of 4,603 $MTCO_2e$ to overall GHG emissions, implementing the project would not result in a substantial cumulative contribution to GHG emissions or conflict with any applicable plan, policy, or regulation regarding GHGs. This impact would be **less than significant**.	LTS	No mitigation is required.	LTS
Impact 3.6-2: Impacts of climate change on the project. Climate change is anticipated to result in various changes to local weather patterns in the future. The project does not propose any new residences and would not expose people to increased risks from climate change. This impact would be **less than significant**.	LTS	No mitigation is required.	LTS
Impact 3.6-3: Wasteful, inefficient, and unnecessary consumption of energy. Project construction activities would consume energy. However, because the project, once operational, would serve as a power generation facility and	LTS	No mitigation is required.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
increase SMUD's capacity to generate power, the project would not result in the wasteful, inefficient, and unnecessary consumption of energy. Therefore, this impact would be **less than significant**.			
3.7 Hazards and Hazardous Materials			
Impact 3.7-1: Exposure of people and the environment to hazardous materials. Construction, operation, and eventual decommissioning activities would involve the storage, transport, and/or handling of hazardous materials. Transport or use of these materials on-site could expose workers or the environment to hazards. Therefore, this impact would be **potentially significant.**	PS	**Mitigation Measure 3.7-1a: Implement Mitigation Measure 3.5-1, "Prepare and implement a SWPPP and associated BMPs."** The contractor shall implement Mitigation Measure 3.5-1 listed in Section 3.5, "Geology, Soils, and Mineral Resources." This measure requires the preparation of a project-specific SWPPP and implementation of the SWPPP by the construction contractors, including all necessary BMPs. **Mitigation Measure 3.7-1b: Establish and implement an environmental training program.** Before the start of construction, SMUD or its contractor shall establish an environmental training program to communicate environmental concerns and appropriate work practices to all field personnel. The training program shall cover the use of hazardous materials, waste management, spill prevention, emergency response measures, and proper implementation of BMPs. The program shall emphasize site-specific physical conditions to improve hazard prevention (e.g., identification of potentially hazardous substances) and shall include a review of all site-specific plans, including but not limited to the project's SWPPP, health and safety plan (as required by OSHA), fugitive dust control plan, and hazardous substances control and emergency response plan. **Mitigation Measure 3.7-1c: Prepare and implement a hazardous substance control and emergency response plan.**	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		Before the start of construction, SMUD or its contractor shall prepare a construction-specific hazardous substance control and emergency response plan. The plan shall include preparations for quick and safe cleanup of accidental spills; prescribe procedures for handling hazardous materials to reduce the potential for a spill during construction; and include an emergency response program to ensure quick and safe cleanup of accidental spills. The hazardous substance control and emergency response plan shall also identify BMPs in the event a spill occurs. BMPs may include but are not limited to the following: use of oil-absorbent materials, tarps, and storage drums to contain and control any minor releases; and storage and use of emergency-spill supplies and equipment in locations adjacent to work and staging areas. The hazardous substance control and emergency response plan shall identify areas where refueling and vehicle maintenance activities and storage of hazardous materials, if any, will be permitted. **Mitigation Measure 3.7-1d: Prepare and implement a spill prevention, control, and countermeasures (SPCC) plan.** If more than 1,320 gallons of petroleum products will be stored on-site (excluding vehicles), SMUD's construction contractor shall prepare and implement a SPCC plan in accordance with state and federal requirements, including 40 CFR 112. The SPCC plan shall identify engineering and containment measures for preventing releases of oil into waterways. The SPCC plan shall be submitted to SMUD for review and approval before the start of operations, or during construction. If less than 1,320 gallons of petroleum products will be stored on-site (excluding vehicles), this mitigation measure is not required.	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		Mitigation Measure 3.7-1e: Prepare and implement a hazardous materials business plan. If the project will use or store hazardous materials equal to or greater than 55 gallons of liquids, 500 pounds of solids, and/or 200 cubic feet (at standard temperature and pressure) of compressed gases, SMUD's construction contractor shall prepare a hazardous materials business plan that will conform with Solano County Environmental Health requirements. The contractor shall file the plan with SMUD annually. The hazardous materials business plan shall identify site activities; list the contact information for the business owner/operator; provide an inventory of hazardous materials used on-site; provide a facilities map; and identify an emergency response plan/contingency plan. During the construction phase, if threshold quantities of any hazardous materials are stored on-site for more than 90 consecutive days, then the hazardous materials business plan shall be filed and maintained for as long as any of those thresholds are met or exceeded. During the operations phase, if the threshold for any hazardous materials is met or exceeded for more than 30 consecutive days, then the hazardous materials business plan shall be to SMUD and shall be maintained as long as the thresholds are met or exceeded. The regulations require annual submittal of the hazardous materials business plan as long as the project meets the conditions for the continued applicability of the regulations. If less than 55 gallons of liquids, 500 pounds of solids, and/or 200 cubic feet (at standard temperature and pressure) of compressed gases will be used or stored on-site, this mitigation measure is not required.	
Impact 3.7-2: Exposure of people and the environment to subsurface hazardous materials disturbed during construction. Construction could result in a short-term hazard to	PS	**Mitigation Measure 3.7-2a: Implement Mitigation Measures 3.7-1a through 3.7-1e.**	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
the public and/or the environment if subsurface hazardous materials were to be disturbed during construction activities. Therefore, this impact would be **potentially significant.**		SMUD or its construction contractor shall implement Mitigation Measures 3.7-1a through 3.7-1e, listed above. These measures establish and require implementation of various plans to minimize the risk of accidental release of hazardous materials. **Mitigation Measure 3.7-2b: Delineate any construction areas where the presence of hazardous materials is known or suspected.** Before the start of construction, SMUD or its contractor shall delineate construction areas where the presence of hazardous materials is known or suspected. Such areas shall be avoided during construction to the extent feasible. These areas include but are not limited to abandoned gas wells and underground gas pipelines. Underground utilities, such as gas pipelines and high-voltage lines, shall be identified and marked clearly. If necessary, appropriate encroachment permits shall be obtained before work begins. A Spill Discovery Response Plan shall be developed before construction begins. The plan shall be implemented in the event that hazardous materials are unexpectedly encountered during construction. The plan shall include instructions for work crews to stop work immediately, notify the appropriate emergency response agency, and in the case of natural gas pipelines, notify the pipeline operator. **Mitigation Measure 3.7-2c: Maintain access to gas wells.** Should a gas well location be verified, SMUD and its construction contractor shall implement the following measures: • Maintain physical access to any gas well encountered. • Ensure that the abandonment of gas wells is to current standards. • If one or more unknown wells is discovered during project development, immediately notify the California	

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		Department of Conservation, Division of Oil, Gas, and Geothermal Resources so that the newly discovered well(s) can be incorporated into the records and investigated. Any wells found during implementation of the project, and any pertinent information obtained, shall be communicated to the Solano County Recorder for inclusion in the title information of the subject real property. This is to ensure that present and future property owners are aware of (1) the wells located on the property, and (2) potentially significant issues associated with any improvements near oil or gas wells. • Avoid performing work on any oil or gas well without written approval from the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources in the form of an appropriate permit. This includes but is not limited to mitigating leaking fluids or gas from abandoned wells, modifications to well casings, and/or any other re-abandonment work.	
Impact 3.7-3: Safety hazard to air traffic. The project site lies within the planning boundary of the Travis AFB LUCP, which contains policies designed to promote land use compatibility with airport operations. Placement of WTGs have the potential to intrude into navigable airspace, thereby increasing the risk of aircraft collision, or causing interference with radar signals used by air traffic control. Therefore, this impact would be **potentially significant.**	PS	**Mitigation Measure 3.7-3: Mark and light wind turbine generators during construction.** SMUD will e-file FAA Form 7460-2, Part 1, Notice of Actual Construction or Alteration, at least 60 days before the start of construction, so that appropriate action can be taken to amend the affected procedure(s) and/or altitude(s), if necessary. To ensure proper conspicuity of turbines at night during construction, all WTGs shall be lit with temporary lighting once they reach a height of 200 feet or greater until the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting shall be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical,	LTS

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		permanent obstruction lights shall be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, WTGs shall be lit with self-contained, solar-powered light-emitting diode (LED) steady red light fixtures that meet the photometric requirements of an FAA Type L-810 lighting system. The lights shall be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a Notice to Airmen (NOTAM) (D) to avoid lighting WTGs within the project site until completion of the entire project is prohibited. This measure includes temporary construction equipment such as cranes and derricks, which may be used during actual construction of the structures. However, this equipment shall not exceed a height of 200 feet. Separate notice shall be provided to the FAA for any equipment taller than 200 feet.	
Impact 3.7-4: Exposure of employees and the public to hazards from accidental rotor failure. If a blade on a project WTG were to fail, the blade could become a projectile, exposing employees and the public to a hazard. As part of final design and siting, SMUD requires that the contractor prepare a blade throw analysis to inform the final site layout, and ensure sufficient setback is provided to minimize the risk of exposure to such a hazard. This impact would be **less than significant.**	LTS	**Mitigation Measure 3.7-4: Conduct Safety Evaluation of WTGs.** The Contractor shall provide a safety evaluation of the proposed siting plan, and ensure that the design and layout of the Project considers the safety evaluation. The Contractor's safety evaluation shall include an analysis of the following types of failure that could occur: a. Blade Throw Risk Analysis: Probability of Loss of an entire blade by failure at the hub attachment. b. Tower Failure. Complete failure of the tower, particularly at the base. c. Rotor Delamination. Failure of the fiberglass rotor skin, resulting in flying fragments. d. Blade-Throw Strike. Impact of a failed rotor blade on the tubular tower	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.7-5: Exposure of people or structures to a significant risk of loss, injury, or death involving wildfires. The project site is not located in an area classified as a High Fire Hazard Severity Zone. Although the project would adhere to applicable fire regulations, the use of construction equipment in grass-covered areas could expose people or structures to a significant fire risk. Therefore, this impact would be **potentially significant.**	PS	**Mitigation Measure 3.7-5a: Prepare and implement a grass fire control plan.** SMUD or its construction contractor will develop a grass fire control plan. The plan shall be implemented for use during construction and operation of the project to reduce potential impacts on public services relative to fire protection services in the project area. The plan shall include notification procedures and emergency fire precautions, as discussed in Section 4.8, "Hazards and Hazardous Materials." This shall include the training of construction workers in the use of firefighting equipment available on-site (e.g., fire extinguishers) and communicating with the Montezuma Fire Protection District. Additionally, the nearby Montezuma Fire Protection District stations are equipped for grass fires, and the proposed access roads for WTG maintenance shall be used to improve access by fire trucks during emergency situations and serve as a fire break. The operations and maintenance building shall be designed to SMUD's safety standards and shall include a fire alarm. In addition, construction and maintenance crews shall be trained in fire prevention, carry fire extinguishers in all vehicles, and have access to one or more water trucks. **Mitigation Measure 3.7-5b: Implement Mitigation Measure 3.11-1b, "Create and implement an emergency access plan and notify emergency services providers of anticipated roadway obstructions."** SMUD will implement Mitigation Measure 3.11-2 listed in Section 3.11, "Transportation and Traffic." This measure requires the development and implementation of a plan to maintain emergency access during WTG transport and throughout the construction period.	LTS

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Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.8 Hydrology and Water Quality			
Impact 3.8-1: Short-term degradation of water quality. Decommissioning of existing wind power facilities, project construction, and future project decommissioning or repowering activities would require the grading and movement of soil. Such activities could result in erosion, sedimentation, and discharge of other nonpoint-source pollutants to stormwater, which could then drain off-site and degrade local water quality. This impact would be **potentially significant.**	PS	**Mitigation Measure 3.8-1a: Implement Mitigation Measure 3.5-1, "Prepare and implement a SWPPP and associated BMPs."** SMUD shall prepare and the construction contractor to implement Mitigation Measure 3.5-1 listed in Section 3.5, "Geology, Soils, and Mineral Resources." This measure requires the construction contractor to implement a SWPPP, including all necessary BMPs. **Mitigation Measure 3.8-1b: Implement Mitigation Measure 3.7-1b, "Establish and implement an environmental training program."** The construction contractor shall implement Mitigation Measure 3.7-1b listed in Section 3.7, "Hazards and Hazardous Materials." This measure requires SMUD to establish and require implementation of an environmental training program for all field personnel that communicates spill prevention, emergency response measures, and proper implementation of BMPs. **Mitigation Measure 3.8-1c: Implement Mitigation Measure 3.7-1c, "Prepare and implement a hazardous substance control and emergency response plan."** The construction contractor shall implement Mitigation Measure 3.7-1c listed in Section 3.7, "Hazards and Hazardous Materials." This measure requires SMUD to prepare and implement a construction-specific hazardous substance control and emergency response plan for quick, safe cleanup of accidental spills. **Mitigation Measure 3.8-1d: Implement Mitigation Measure 3.7-1d, "Prepare and implement a spill prevention, control, and countermeasures plan."**	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		The construction contractor shall implement Mitigation Measure 3.7-1d listed in Section 3.7, "Hazards and Hazardous Materials." This measure requires SMUD to prepare and the construction contractor to implement a spill prevention control and closures plan to prevent the discharge of petroleum products into waterways.	
Impact 3.8-2: Alteration of the site's existing drainage pattern. The project would include limited grading of the project site, with only a small portion of the site to be developed with compacted materials and concrete pads. Therefore, installation of project facilities would not alter existing on-site drainage patterns and flow paths sufficiently to alter the way in which stormwater flows onto and off the site during major events. This impact would be **less than significant.**	LTS	No mitigation is required.	LTS
Impact 3.8-3: Long-term degradation of water quality. The project would alter the types, quantities, and timing of contaminant discharges in stormwater runoff. Overall, if the system is not designed properly, the project could cause or contribute to a long-term increase in discharges of urban contaminants (e.g., oil and grease, trace metals and organics, trash) into the stormwater drainage system compared with existing conditions. SMUD would comply with federal and state stormwater management regulations and would incorporate appropriate BMPs into project design to prevent long-term degradation of water quality. Therefore, this impact would be **less than significant.**	LTS	No mitigation is required.	LTS
Impact 3.8-4: Substantial decrease in groundwater supplies. The project is expected to use up to several million gallons of water during construction for dust control and other activities. Water use would vary over time depending on the construction phasing. SMUD or its contractor plans to obtain construction water from the City of Rio Vista. Because Rio Vista has forecast	LTS	No mitigation is required.	LTS

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
that it would have excess water capacity during project construction, this impact would be **less than significant.**			
3.9 Land Use			
Impact 3.9-1: Division of an established community. The proposed project is not located within an existing community and does not have any features that would divide a community. This impact would be **less than significant.**	LTS	No mitigation is required.	LTS
Impact 3.9-2: Conflict with a plan, policy, or regulation adopted to avoid or mitigate an environmental effect. The proposed project could be found consistent with local plans, policies, and regulations. This impact would be **less than significant.**	LTS	No mitigation is required.	LTS
3.10 Noise			
Impact 3.10-1: Generation of a Substantial Temporary Increase in Ambient Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance, or Applicable Standards of Other Agencies due to Short-term construction noise impacts. Proposed construction areas are located mostly far from existing noise-sensitive receptors, the only closest receptor (LT-2) being approximately 275 feet from where construction activities (underground cabling) would occur. Most noise-generating construction activity would be performed during daytime hours, when people are less sensitive to noise. This impact would be **less than significant**. .	LTS	No mitigation is required.	LTS
Impact 3.10-2: Temporary and Short-Term Exposure of Sensitive Receptors to, or Temporary and Short-Term Generation of, Excessive Groundborne Vibration. Construction activities, including but not limited to the use of large	LTS	No mitigation is required.	LTS

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
dozers, would not expose existing nearby sensitive residential or historical receptors and structures to levels of ground vibration that could result in structural damage and/or disturbance to people occupying nearby buildings because of the project's distance from the closest sensitive receptor (275 feet). This impact would be **less than significant.**			
3.11 Transportation			
I**mpact 3.11-1: Short-term construction transport-related traffic hazards and incompatible uses.** Construction-related transport of WTG components could result in hazardous conditions on state routes and local roadways because of the transport vehicle's weight, length, width, height, and speed. This impact would be **potentially significant.**	PS	**Mitigation Measure 3.11-1a: Create and implement a traffic control plan and notify the public of anticipated roadway obstructions.** SMUD or its construction contractor will work with Caltrans, Solano County, and the City of Napa to determine the lowest hourly traffic flows on affected facilities and develop a traffic control plan. The traffic control plan shall specify travel times and days and provide for public notification of anticipated roadway obstructions before transporter travel days. Traffic control plan measures shall include the use of pilot cars for oversize loads; traffic safety measures, such as warning signs; coordination with local jurisdictions; and safety personnel to direct traffic as needed. To minimize impacts on roadway traffic flows, transporters shall travel under loaded conditions during off-peak hours and possibly during evenings or at night. The final plan shall be submitted to all affected agencies for review and approval. After agency approvals have been received, the traffic control plan shall be implemented during transport of the WTG components. **Mitigation Measure 3.11-1b: Create and implement an emergency access plan and notify emergency services providers of anticipated roadway obstructions.** SMUD or its construction contractor will work with affected emergency services providers to develop and implement a plan to maintain emergency access during transport of WTG components and throughout the construction period. The	LTS

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		plan shall identify alternative emergency access routes; the need to station emergency equipment in areas where access will be reduced; and notification protocols between SMUD, its contractors, and affected providers. The final plan shall be submitted to all affected agencies for review and approval. After agency approvals have been received, the emergency access plan shall be implemented during transport of WTG components and throughout the construction period as necessary. **Mitigation Measure 3.11-1c: Obtain an agency transportation permit for each load exceeding weight, length, width, and height standards.** SMUD or its construction contractor will submit an application to Caltrans, Solano County, and the City of Napa for a transportation permit for each load that exceeds weight, length, width, or height standards. The applications shall identify the specific transporter to be used and provide details about the turbine components' load specifications, the requested route, and the time and date of transport. All permit conditions shall be implemented during transport of WTG components. **Mitigation Measure 3.11-1d: Improve roadways to enable safe use or use shorter transporters, and obtain agency transportation permits for transport of extra-legal length vehicles.** SMUD or its construction contractor will make improvements to public roads to enable delivery of WTG components and provide access for construction equipment. These improvements shall accommodate all turning movements of the maximum-size transporter. A detailed topographic survey shall be conducted to determine the exact limits, and to identify additional areas that may be affected. All roadway improvements shall be designed and implemented in close	

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		cooperation with Solano County (and other jurisdictions, if applicable). An alternative mitigation measure is to use shorter transporters to reduce the impact, although this measure is also expected to require a reduction in the size of the WTG components, which likely will increase the number of trips if the overall turbine dimensions remain the same.	
Impact 3.11-2: Short-term increase in construction traffic on physically deficient roadway segments. Construction activities would result in a short-term increase in heavy vehicle traffic on state routes and local roads. The project could result in the degradation of pavement conditions along these roadways. This impact would be **potentially significant.**	PS	**Mitigation Measure 3.11-2: Monitor the physical condition of roadway segments along primary access routes to the project site and restore the physical condition of affected roadways to the extent damaged by the project.** SMUD or its construction contractor will conduct a preconstruction survey and assessment of existing pavement conditions along SR 12 east, Shiloh Road, Collinsville Road, Talbert Lane, Stratton Road, Birds Landing Road, and Montezuma Hills Road. If the preconstruction pavement conditions are deficient, the preconstruction pavement analysis shall establish the baseline for required improvements. If the preconstruction pavement conditions are acceptable, improvements shall be required only if the postconstruction pavement condition is deficient, and only to the extent that the project demonstrably contributed to such deficiencies. If deficient following construction, any segments of SR 12 east and Shiloh Road, Collinsville Road, Talbert Lane, Stratton Road, Birds Landing Road, and Montezuma Hills Road that are affected by the project shall be returned to preconstruction conditions after construction. Implementing this measure will ensure that construction activities will not worsen pavement conditions, relative to existing conditions. Before construction, SMUD will make a good-faith effort to enter into mitigation agreements with Caltrans (for SR 12 east) and Solano County (for Shiloh Road, Collinsville Road,	LTS

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		Talbert Lane, Stratton Road, Birds Landing Road, and Montezuma Hills Road) to verify the location, extent, timing, and fair-share cost to be paid by SMUD for any necessary pre- and postconstruction physical improvements. The fair-share amount will be either the cost to return the affected roadway segment to its preconstruction condition or a contribution to programmed planned improvements. Repairs may include overlays or other surface treatments.	

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