3.9. Land Use

This section describes the land use characteristics of the project area that may affect or be affected by the project.

3.9.1. Regulatory Setting

Federal

The Travis Air Force Base (AFB) Air Installation Compatible Zone Study (AICUZ) program promotes compatible land development in areas subject to aircraft noise and accident potential. U.S. Air Force AICUZ guidelines reflect land use recommendations for the Clear Zone, Accident Potential Zones I and II, and the four noise zones exposed to noise levels at or above 65 decibels day-night average A-weighted sound level. These guidelines were established based on studies prepared and sponsored by the U.S. Department of Housing and Urban Development, U.S. Environmental Protection Agency, and U.S. Air Force, as well as state and local agencies. The guidelines recommend land uses that are compatible with airfield operations while allowing maximum beneficial use of adjacent properties. According to the AICUZ, project boundaries are outside of either the Clear Zone or accident potential zone of Travis AFB.

State

The California State Aeronautics Act (California Public Utilities Code Sections 21670 through 21679.5) requires the creation of airport land use commissions (ALUCs) to coordinate planning for areas surrounding public use airports. The purpose of the law is to protect public health, safety, and welfare by ensuring orderly expansion of airports and adoption of land use measures that minimize the public’s exposure to excessive noise and safety hazards in areas around public use airports. The ALUC is also concerned with airport activities that may adversely affect adjacent areas and nearby land uses that may interfere with airport operations.

The California Department of Transportation, Division of Aeronautics, administers much of this statute and publishes the California Airport Land Use Planning Handbook to provide guidance for conducting airport land use compatibility planning. Airport land use compatibility is determined to reconcile how land development and airports function together. The concept of compatibility has been defined as follows (Caltrans 2011):

[T]hose uses that can coexist with a nearby airport without either constraining the safe and efficient operation of the airport or exposing people living or working nearby to unacceptable levels of noise or (safety) hazards. Compatibility concerns include any airport impact that adversely affects the livability of surrounding communities, as well as any community characteristic that can adversely affect the viability of an airport.
Local

As discussed in Section 1.2 of this EIR, construction of facilities for the production of electrical energy by a local agency like SMUD is exempt from County zoning and building ordinances (Government Code ARTICLE 5. Regulation of Local Agencies by Counties and Cities [53090 - 53097.5]). Therefore, SMUD's wind turbine facilities are exempt from County land use plans because SMUD, as a municipal utility district, is a local agency and the project is an electrical generation facility.

However, the EIR recognizes that plans, policies, and regulations reflect the local community’s policy decisions regarding appropriate uses of land in the area. For purposes of disclosure, Solano County policies that relate to the project area are identified below.

**Solano County General Plan**

The Solano County General Plan (General Plan) (Solano County 2008) identifies goals, policies, and implementation measures to guide the development and conservation of natural resources in the county on a long-term basis. The General Plan designates the project area as Agriculture. Commercial wind turbine development is a permitted use in the following districts: Exclusive Agricultural (A), Limited Agricultural (A-L), Water-Dependent Industrial (rWD), Limited Manufacturing (M-L), General Manufacturing (M-G), and Watershed and Conservation (W).

The Agriculture designation is intended to provide areas for practicing agriculture as the primary use, including areas that contribute substantially to the local agricultural economy, and allows for secondary uses that support the economic viability of agriculture. Agricultural land use designations protect these areas from intrusion by nonagricultural uses and other uses that do not directly support the economic viability of agriculture.

Solano County (County) has identified the Collinsville–Montezuma Hills south of State Route (SR) 12 as the primary wind resource area in the county. Wind energy development has been deemed inappropriate in certain areas of the county, to protect public health and safety and natural resources. These areas are urban areas, the Suisun Marsh Primary Management Area, the Stebbins Cold Canyon Natural Area, San Pablo Bay National Wildlife Refuge, and the Jepson Prairie Preserve owned by the Solano Land Trust.

Chapter 4, Resources, of the General Plan covers the project area. This element contains procedures for review and siting of wind turbines in a manner that do not conflict with air operations at Travis Air Force Base and avoids impacting natural resources or creating an increased risk to public safety. Studies required for siting wind turbines include archeological, geotechnical, biological resources, and public safety. The County also requires detailed plans for structures, foundations, and electrical systems to be submitted by a licensed professional engineer.
Solano County Airport Land Use Commission

The Solano County ALUC has adopted the Travis Air Force Base Land Use Compatibility Plan (ESA 2015), which includes regulations to ensure land use compatibility in the vicinity of Travis AFB. The project site is identified as Zone D, which is an area where the ALUC calls for structures taller than 200 feet to provide radar line of site studies and ALUC consistency determination. However, as discussed in Section 3.7, Hazards and Hazardous Materials, of this EIR, the LUCP provisions do not apply to SMUD WTG facilities under section 53091 of the Government Code (Subdivisions d and e). And even if SMUD was required to obtain a determination from ALUC, SMUD, as a local agency, can overrule the ALUC determination consistent with the State Aeronautics Act provisions.

3.9.2. Environmental Setting

Regional Setting

Solano County is a suburban and rural area between the San Francisco and Sacramento metropolitan areas. The county covers approximately 907 square miles, including 683 square miles of rural lands, 146 square miles of urban areas, and 79 square miles of water. Solano County is situated between the Sierra Nevada to the east and the Coast Ranges to the west. It is also bordered by the Sacramento River to the south. The project site is in southeastern Solano County.

Agriculture constitutes the land use in two-thirds of Solano County. Agricultural activities include irrigated agriculture, dryland farming, and grazing. The major agricultural commodities are nursery stock, cattle, alfalfa hay, wheat, feeder lambs, grapes, milk, and walnuts. However, agricultural production has declined in recent years as the county has continued to urbanize.

Travis Air Force Base

Travis AFB, located approximately 15 miles northwest of the project area, is home to the 60th Air Mobility Wing, which is considered the largest air mobility organization in the U.S. Air Force. Travis AFB serves as the strategic airlift and aerial refueling base for the West Coast. The base is on approximately 6,260 acres of land (see Exhibit 2-1, “Regional Location Map,” in Chapter 2, “Project Description”). Access to Travis AFB is available via Air Base Parkway from the west and Peabody Road from the north. Travis AFB has two main runways and a future landing zone, which will be shorter and will parallel the main runways.

Aircraft types operating at Travis AFB consist primarily of military aircraft and contract commercial aircraft. In addition to the aircraft based at Travis AFB, numerous types of transient military and contract commercial aircraft conduct operations at the base. Travis AFB conducts approximately 42,000 aircraft operations annually. An aircraft operation is
defined as one takeoff/departure, one approach/landing, or half a closed pattern (USAF 2009).¹

Local Setting

The project area is designated for agricultural use and leased for dryland farming and grazing. Visible developments include electric transmission towers, and WTGs on the surrounding hilltops.

With the exception of the home run lines running between the two main WTG project subareas and the Russell Substation, all project facilities would be constructed on land that is owned in fee title by SMUD.

As described in Chapter 2, “Project Description,” several existing and planned wind farms also surround the project area. These include Phases 1, 2A and 2B, and 3 of the Solano Wind Project, previously developed by SMUD.

3.9.3. Environmental Impacts and Mitigation Measures

Methods and Assumptions

The evaluation of potential impacts of the proposed project on land use was based on a review of the following planning documents pertaining to the proposed project and surrounding area:

- FAA Notice of No Hazard Determination
- Solano County General Plan (Solano County 2008)
- Travis Air Force Base Land Use Compatibility Plan (ESA 2015)

Thresholds of Significance

Based on Appendix G of the State CEQA Guidelines, the project would result in a potentially significant impact related to land use if it would:

- physically divide an established community; or
- cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

¹ A closed pattern consists of two portions: a takeoff/departure and an approach/landing, i.e., two operations.
Impact Analysis

Impact 3.9-1: Division of an established community.

The project site is not located within an existing community and the project does not have any features that would divide a community. This impact would be less than significant.

The project would be located on rural land. The nearest established community (Collinsville) is about one-half mile east of the project area. Collinsville is a 27-acre residential area at the end of Collinsville Road. The nearest city, Rio Vista, is about 5 miles northeast of the project area on the western bank of the Sacramento River. No established communities lie within the project area. The project is not a linear project that would divide a community or block travel. Therefore, the project would not divide an established community. This impact would be less than significant.

Mitigation Measures

No mitigation is required.

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.

As stated above, SMUD is not subject to County zoning ordinances, nor does project construction and operation require Solano County to issue a permit under the County’s zoning ordinances. Nevertheless, this EIR considers local land use plans, policies, and regulations consistent with the intent of the CEQA to provide full disclosure, along with SMUD’s desire to promote informed decisionmaking.

The Solano County General Plan designates the project area as Agriculture. Commercial wind energy operations are permitted on lands designated for agricultural use. Therefore, the project would not conflict with the General Plan’s land use designations for the site.

Solano County sets policies to ensure development occurring in the established compatibility zones of Travis AFB, do not interfere with airport operations or present a hazard to the public through exposure to high noise levels or creation of risk to public safety. The Solano 4 Wind Project has been designed with the intent to avoid impacting operations at Travis AFB. Project construction and operation would not be a hazard to public safety or to flight operations. SMUD criteria used in siting WTGs included efficient wind power collection; presence of resources, surrounding land uses, topographic features, construction and operating costs; product availability, equipment lifespan; neutral or reduced probability of detection by radar, and ability to meet SMUD’s design criteria, project schedule, and cost of power delivery goals.
But the Travis AFB divides the land around Travis AFB into zones which correspond to airport flight patterns and the greatest risk for accident (takeoff or landing). The project site is located in Zone 4 of the Travis AFP LUCP and a line-of-sight analysis would be required for projects taller than 100 feet. As discussed in Section 3.7, Hazards and Hazardous Materials, of this EIR, the project would likely be within the line-of-sight of the Travis AFB radar based on Appendix H of LUCP. Therefore, the project as proposed is unlikely to be determined consistent with this policy of LUCP. But the FAA has issued a Determination of No Hazard Finding for the Solano 4 Wind Project, and FAA and its regulations concerning air safety and aviation navigation preempt the ALUC’s land use regulations regarding radar system interference. Due to the FAA Determination, the project could be found consistent with the intent of ALUC policies to avoid obstruction of airport operations. See Section 3.7, Hazards and Hazardous Materials and Appendix G for the FAA Notice for more details regarding the FAA findings.

Further, as also discussed in Section 3.7, Hazards and Hazardous Materials, of this EIR, the LUCP provisions do not apply to SMUD WTG facilities under section 53091 of the Government Code (Subdivisions d and e). And even if SMUD was required to obtain a determination from ALUC, SMUD, as a local agency, can overrule the ALUC determination consistent with the State Aeronautics Act provisions.

WTGs proposed as part of the project are generally consistent with regulations establishing setbacks from the property line to promote safety on adjacent property, requirements to shield the equipment preventing radio frequency emissions from disrupting operations at Travis Air Force Base, and site WTGs avoiding the potential hazard of blade throw (see Section 3.7 Hazards and Hazardous Materials). Due to the FAA Determination, the project could be found consistent with the intent of ALUC policies to avoid obstruction of airport operations. See Section 3.7, Hazards and Hazardous Materials and Appendix G for the FAA Notice for more details regarding the FAA findings.

The project uses existing roadways and transmission infrastructure to minimize land disturbance, and WTGs are sited in a manner that avoids direct impact on wetlands and sensitive biological resources (see Section 3.3 Biological Resources).

The project also proposes the construction of up to two meteorological towers, each up to 105 meters high. SMUD will site the two meteorological towers a minimum of 132 feet, or 1.25 times the total tower height, from public roads, dwelling units, and other structures, consistent with requirements established by the County Department of Resource Management for previous wind projects. The purpose of this setback is to prevent a safety hazard to the public in the event that a tower falls toward a county road.

Additionally, the tower would be lighted and marked for safety in the same manner as required by the FAA. The FAA determined that the structures would not be a hazard to air navigation, provided that the WTGs are marked with white paint and lighted using synchronized red lights in accordance with Chapters 4, 12, and 13 of FAA Advisory Circular 70/7460-1L with Change 2, Obstruction Marking and Lighting (FAA 2018)
This impact would be **less than significant**.

*Mitigation Measures*

No mitigation measures are required.
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