

# ES: EXECUTIVE SUMMARY

## ES.1 Introduction

---

Gill Ranch Storage, LLC (GRS), an Oregon limited liability company formed in 2007, and Pacific Gas and Electric Company (PG&E), a regulated California utility, submitted applications to the California Public Utilities Commission (CPUC) for a Certificate of Public Convenience and Necessity (CPCN) on July 29, 2008 for the purpose of developing the Gill Ranch Gas Storage Project (Project) in Madera and Fresno Counties, California. The CPUC is the lead agency responsible for the preparation of this Draft Initial Study/Mitigated Negative Declaration (IS/MND) for the Project.

The Project would enable the Applicants to build the necessary facilities to:

- Provide flexible, economic natural gas storage services to a variety of customers, which could include gas utilities, electric utilities, independent electric generators, gas marketers, gas producers, industrial gas users, and other wholesale and retail gas customers
- Provide storage services using reservoirs with geologic characteristics suitable for conversion to multiple turn<sup>1</sup> and high-deliverability storage
- Diversify the location of storage facilities in California by providing centrally-located storage capacity in the southern San Joaquin Valley
- Provide storage services in a geographic area with low intensity present land use and with land use projected to be less intensive over the long term
- Provide storage services at a location with reasonable access to PG&E's gas and electric facilities and make use of existing transportation and utility corridors
- Create additional natural gas storage capacity in California in order to enhance natural gas supply reliability

---

<sup>1</sup> Storage system that allows the rapid transfer of gas into and out of storage.

## **ES.2 Project Summary**

---

The proposed Project would provide additional storage capacity to help meet the energy needs of California customers. The Project would utilize depleted reservoirs in the Gill Ranch Gas Field (Gas Field). The Project includes use of the Gas Field, existing and proposed injection and withdrawal (IW) and observation and monitoring (OM) wells, construction of a natural gas pipeline from the Storage Field to PG&E's existing Line 401, construction of a 115-kilovolt (kV) electric power line, and construction of a central compressor station and associated facilities.

## **ES.3 Project Location**

---

The proposed Storage Field would utilize the depleted reservoirs of the Gill Ranch Gas Field (Gas Field). The Gas Field is located in central California's San Joaquin Valley, primarily in western Madera County, and is located near the geographic center of California, approximately 10 miles (mi) east of Mendota and approximately 20 mi west of Fresno.. A portion of the Storage Field would underlay the San Joaquin River into Fresno County. The proposed gas pipeline would extend from the Storage Field to PG&E's existing Line 401 near Interstate 5, southwest of the Storage Field. The electric power line would extend from the Storage Field to the existing PG&E Dairyland-Mendota Power Line, northwest of the Storage Field. Figure 1.1-1 shows the Project in relation to nearby communities. Figure 2.1-1 shows the location of the Project components.

## **ES.4 Project Components**

---

The Project's key components are listed below. A discussion of each element follows the list. The Project elements are:

- Gas Storage Field for storage of natural gas
- Wells and pipelines
- Central compressor and operating facility
- Gas pipeline
- Electric transmission line
- Substation

### **STORAGE FIELD**

The proposed Project would include the storage of natural gas in depleted reservoirs in an existing natural gas production field, the Gill Ranch Gas Field (Gas Field), located approximately 20 miles west of Fresno, near the town of Mendota. The Project is designed for 20 billion cubic feet (Bcf) of working gas and 650 million cubic feet per day (MMcfd) of peak deliverability.

The Gas Field was discovered in 1942, and production began in 1943 from the Domengine/Kreyenhagen formations. Production from the Starkey Formation began in 1957, and ceased in 1996. Minor gas production continues from two wells completed in the Kreyenhagen and Moreno formations.

The Gas Field consists of several geologically separate reservoirs. The First and Second sands of the Starkey Formation lie at depths of 5,700 to 6,300 feet (ft) below ground surface, and contain the depleted reservoirs that are proposed to be developed for storage.

The total acreage for surface facilities within the Storage Field (including compressor station and injection and withdrawal (IW) wells, observation and monitoring (OM) wells, salt-water disposal well, potable water supply well, and compressor station) would be approximately 22 acres (ac) (including 10 acres for the central compression facility, and approximately 12 ac for the well pads). Each IW well pad would measure 300 ft by 250 ft (approximately 1.7 ac) for a total of 6.8 ac. Each OM well pad would measure 150 ft by 200 ft (0.7 ac) for a total of 4.8 ac. Figure 1.1-1 shows the proposed Storage Field facility sites.

## **WELLS AND PIPELINES**

The Project would include new high deliverability IW wells, wellhead surface facilities, and gathering pipelines from each well pad. Up to 15 new IW wells would be drilled in three separate reservoirs. Existing well sites would be used to the extent practical. It is expected that only one Project-related well would be located in Fresno County.

In addition, up to seven new OM wells would be drilled into the storage formations, outside of the active working gas portion of the reservoirs. Three of the wells could potentially use existing well sites. One salt-water disposal well would be constructed to properly dispose of water from the IW wells during withdrawal operations.

## **CENTRAL COMPRESSOR AND OPERATING FACILITY**

The operating facility and compressor would be located near the center of the Project area. The facilities would be located on a 10-ac site and include:

- Control room
- Approximately 45,000 brake horsepower (BHP) compressor station
- Gas dehydration and processing equipment
- Flow and pressure equipment
- Metering
- Communication equipment
- Maintenance facility

The central compressors would be driven by electric motors and designed to meet the Project's energy requirements. The substation and salt water disposal well would be located in this same area.

## **GAS PIPELINE**

An approximately 27-mi, 30-inch diameter gas transmission pipeline would be constructed between PG&E's existing Line 401 near Interstate 5 and the proposed compressor station site. The pipeline would be designed to transport up to 650 MMcfd.

The easement for the pipeline would typically be 95 ft, including a permanent post-construction easement of 50 ft, and a temporary construction easement of 45 ft. The pipeline would be buried at a depth of 5 ft from the top of the pipe. The pipeline would be constructed under the San Joaquin River and the California Aqueduct using horizontal directional drilling techniques. The total area temporarily disturbed would be approximately 150 ac. The Applicants will implement an Agricultural Impact Mitigation Plan, as outlined in Mitigation Measure Agriculture-1 to avoid or minimize any long-term impacts and to return disturbed areas to agricultural production after construction.

Gill Ranch would have 75% ownership of the pipeline, and PG&E would have 25% ownership of the pipeline.

## **ELECTRIC POWER LINE**

An approximately 9.75-mi electric power line would be constructed between PG&E's existing Dairyland-Mendota 115-kV power line on Avenue 7½ and the Storage Field central compressor station site. Approximately 4.3 mi of the new power line would be installed by replacing old poles with new wood poles in existing PG&E electric distribution line corridors. The existing wood poles are 40 to 50 ft tall and would be replaced with similar single and wider circuit wood poles that would be 60 to 70 ft tall.

No power lines or electric distribution lines currently exist along approximately 1 mi of the proposed power line route along Avenue 7½. PG&E would construct the new wood pole power line in public road rights-of-way where PG&E currently has a franchise authorizing it to operate; however, there may be a need to acquire additional land rights, pending final engineering. The amount of land disturbance required for the electric power line has not yet been determined; however, the maximum total final footprint of the power line poles would be approximately 0.015 ac (assuming a maximum footprint of 4 square ft for each of the 162 poles). PG&E would own and operate the electric power line.

## **SUBSTATION**

An electric substation would be constructed at the compressor station. The substation would reduce the voltage of the electricity from the 115-kV electric power line for use at the compressor station, dehydration facility, and other locations. The substation would have two transformer bays fed from two connections (taps) to the electric power line. The substation is designed to allow expansion without requiring additional upgrades to the substation.

The substation yard would be approximately 120 ft by 200 ft in size (approximately 0.55 ac) off of the existing road. The substation would be secured by a 9-ft-tall chain link fence with razor wire on top.

## **ES.5 Impacts Summary**

---

The IS/MND addresses all potential environmental impacts, as listed in the CEQA Checklist (Appendix G of the CEQA Guidelines). Table ES.5-1 lists the potential environmental impacts, their levels of significance, and mitigation (if necessary). All impacts that are potentially significant can be mitigated to less than significant levels.

**Table ES.5-1: Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
<b><i>Aesthetics</i></b>			
Have a substantial adverse effect on a scenic vista	NI	None required.	N/A
Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	LTS	None required.	N/A
Substantially degrade the existing visual character or quality of the site and its surroundings	PS	Mitigation Measure Aesthetics-1 Mitigation Measure Agriculture-1 Mitigation Measure Biology-16 Mitigation Measure Aesthetics-2 Mitigation Measure Aesthetics-3	LTS
Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area	PS	Mitigation Measure Aesthetics-2 Mitigation Measure Aesthetics-3 Mitigation Measure Aesthetics-4 Mitigation Measure Aesthetics-5 Mitigation Measure Aesthetics-6 Mitigation Measure Aesthetics-7 Mitigation Measure Aesthetics-8	LTS
<b><i>Agricultural Resources</i></b>			
Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use		Mitigation Measure Agriculture-1 Mitigation Measure Agriculture-2 Mitigation Measure Agriculture-3	
Conflict with existing zoning for agricultural use, or a Williamson Act contract	NI	None required.	N/A

**Initial Study**  
**Gill Ranch Gas Storage Project**

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
<b>Air Quality</b>			
Conflict with or obstruct implementation of the applicable air quality plan?	LTS	None required.	N/A
Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	LTS	None required.	N/A
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	PS	Mitigation Measure Air Quality-1	LTS
Expose sensitive receptors to substantial pollutant concentrations?	NI	None required.	N/A
Create objectionable odors affecting a substantial number of people?	LTS	None required.	N/A
Conflict with the State goal of reducing greenhouse gas emissions in California to 1990 levels by 2020, as set forth by AB 32, California Global Warming Solutions Act of 2006?	LTS	None required.	N/A
<b>Biological Resources</b>			
Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service	PS	Mitigation Measure Biology-1 Mitigation Measure Biology-2 Mitigation Measure Biology-3 Mitigation Measure Biology-4 Mitigation Measure Biology-5 Mitigation Measure Biology-6	LTS

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		Mitigation Measure Biology-7 Mitigation Measure Biology-8 Mitigation Measure Biology-9 Mitigation Measure Biology-10 Mitigation Measure Biology-11 Mitigation Measure Biology-12 Mitigation Measure Biology-13 Mitigation Measure Biology-14 Mitigation Measure Biology-15 Mitigation Measure Biology-16 Mitigation Measure Biology-17 Mitigation Measure Biology-18 Mitigation Measure Noise-1	
Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service	PS	Mitigation Measure Hydrology-5	LTS
Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means	PS	Mitigation Measure Biology-16 Mitigation Measure Biology-19 Mitigation Measure Biology-20 Mitigation Measure Biology-21	LTS
Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory	PS	Mitigation Measure Hydrology-5	LTS

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
wildlife corridors, or impede the use of native wildlife nursery sites			
Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	PS	Mitigation Measure Biology-1 Mitigation Measure Biology-2 Mitigation Measure Biology-3 Mitigation Measure Biology-4 Mitigation Measure Biology-5 Mitigation Measure Biology-6 Mitigation Measure Biology-7 Mitigation Measure Biology-8	LTS
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan	PS	Mitigation Measure Biology-5 Mitigation Measure Biology-15	LTS
<b>Cultural Resources</b>			
Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5	PS	Mitigation Measure Cultural-1 Mitigation Measure Cultural-2 Mitigation Measure Cultural-3 Mitigation Measure Cultural-4	LTS
Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5	PS	Mitigation Measure Cultural-1 Mitigation Measure Cultural-2 Mitigation Measure Cultural-3 Mitigation Measure Cultural-4	LTS
Directly or indirectly destroy a unique paleontological resource or site or unique geologic	PS	Mitigation Measure Cultural-5	LTS

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
feature			
Disturb any human remains, including those interred outside of formal cemeteries	PS	Mitigation Measure Cultural-6	LTS
<b>Geology and Soils</b>			
Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:  Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	LTS	None required.	N/A
Strong seismic ground shaking	PS	Mitigation Measure Geology-1 Mitigation Measure Geology-2	LTS
Seismic-related ground failure, including liquefaction	PS	Mitigation Measure Geology-1 Mitigation Measure Geology-2 Mitigation Measure Geology-3	LTS
Landslides	PS	Mitigation Measure Geology-3	LTS
Result in substantial soil erosion or the loss of topsoil	PS	Mitigation Measure Hydrology-4 Mitigation Measure Hydrology-5	LTS
Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse	PS	Mitigation Measure Geology-1 Mitigation Measure Geology-2 Mitigation Measure Geology-3 Mitigation Measure Geology-4 Mitigation Measure Hazards-1 Mitigation Measure Hazards-2	LTS

**Initial Study**  
**Gill Ranch Gas Storage Project**

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property	PS	Mitigation Measure Geology-3	LTS
Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water	NI	None required.	N/A
<b>Hazards and Hazardous Materials</b>			
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	PS	Mitigation Measure Hazards-1 Mitigation Measure Hazards-2 Mitigation Measure Hazards-3 Mitigation Measure Hazards-4 Mitigation Measure Hazards-5	LTS
Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	PS	Mitigation Measure Hazards-1 Mitigation Measure Hazards-2 Mitigation Measure Hazards-3 Mitigation Measure Hazards-6 Mitigation Measure Hazards-7 Mitigation Measure Hazards-8 Mitigation Measure Hazards-9 Mitigation Measure Hazards-10 Mitigation Measure Hazards-11 Mitigation Measure Hazards-12 Mitigation Measure Hazards-13 Mitigation Measure Hazards-14	LTS

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		Mitigation Measure Hazards-15 Mitigation Measure Hazards-16 Mitigation Measure Hazards-17 Mitigation Measure Hazards-18 Mitigation Measure Hazards-19	
Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school	NI	Not required.	N/A
Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	PS	Mitigation Measure Hazards-9	LTS
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area	LTS	None required.	N/A
For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area	NI	None required.	N/A
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	PS	Mitigation Measure Traffic-1	LTS
Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to	PS	Mitigation Measure Hazards-20	LTS

**Initial Study**  
**Gill Ranch Gas Storage Project**

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
urbanized areas or where residences are intermixed with wildlands			
<b>Hydrology and Water Resources</b>			
Violate any water quality standards or waste discharge requirements	PS	Mitigation Measure Hydrology-1 Mitigation Measure Hydrology-2	LTS
Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)	PS	Mitigation Measure Hydrology-3 Mitigation Measure Hydrology-4	LTS
Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site	PS	Mitigation Measure Hydrology-4 Mitigation Measure Hydrology-5 Mitigation Measure Hydrology-6	LTS
Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site	PS	Mitigation Measure Hydrology-4 Mitigation Measure Hydrology-6	LTS
Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff		Mitigation Measure Hydrology-4 Mitigation Measure Hazards-1	
Otherwise substantially degrade water quality	PS	Mitigation Measure Hydrology-4	LTS

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		Mitigation Measure Hazards-1 Mitigation Measure Hazards-5	
Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map	NI	None required.	N/A
Place structures within a 100-year flood hazard area, which would impede or redirect flood flows	LTS	None required.	N/A
Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam	NI	None required.	N/A
Inundation by seiche, tsunami, or mudflow	NI	None required.	N/A
<b>Land Use and Planning</b>			
Physically divide an established community	NI	None required.	N/A
Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect	NI	None required.	N/A
Conflict with any applicable habitat conservation plan or natural community conservation plan	PS	Mitigation Measure Biology-16	LTS
<b>Mineral Resources</b>			
Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state	PS	Mitigation Measure Hazards-6 Mitigation Measure Hazards-7 Mitigation Measure Hazards-8	LTS

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		Mitigation Measure Hazards-9 Mitigation Measure Hazards-10 Mitigation Measure Hazards-11 Mitigation Measure Hazards-12 Mitigation Measure Hazards-13 Mitigation Measure Hazards-14 Mitigation Measure Hazards-15 Mitigation Measure Hazards-16 Mitigation Measure Hazards-17 Mitigation Measure Hazards-18	
Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan	LTS	None required.	N/A
<b>Noise</b>			
Cause exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies	PS	Mitigation Measure Noise-1	LTS
Cause exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels	LTS	None required.	N/A
Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project	PS	Mitigation Measure Noise-1	LTS
Result in a substantial temporary or periodic increase in ambient noise levels in the project	PS	Mitigation Measure Noise-1	LTS

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
vicinity above levels existing without the project			
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels	NI	None required.	N/A
For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels	NI	None required.	N/A
<b>Population and Housing</b>			
Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)	LTS	None required.	N/A
Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere	NI	None required.	N/A
Displace substantial numbers of people necessitating the construction of replacement housing elsewhere	NI	None required.	N/A
<b>Public Services</b>			
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to			

**Initial Study**  
**Gill Ranch Gas Storage Project**

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

<b>Environmental Impact</b>	<b>Level of Significance Before Mitigation</b>	<b>Mitigation Measure(s)</b>	<b>Level of Significance After Mitigation</b>
maintain acceptable service ratios, response times, or other performance objectives for any of the public services:			
Fire protection	LTS	None required.	N/A
Police protection	LTS	None required.	N/A
Schools, parks, and other public facilities	LTS	None required.	N/A
<b>Recreation</b>			
Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	LTS	None required.	N/A
Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment	NI	None required.	N/A
Result in permanent and/or temporary impacts, such as possible disruption of recreational activities, affecting the recreational value of existing facilities	PS	Mitigation Measure Noise-1 Mitigation Measure Aesthetics-4 Mitigation Measure Aesthetics-5	LTS
<b>Transportation and Traffic</b>			
Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)	PS	Mitigation Measure Traffic-1	LTS
Exceed, either individually or cumulatively, a level of service standard established by the county	PS	Mitigation Measure Traffic-1	LTS

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
congestion management agency for designated roads or highways			
Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks	NI	None required.	N/A
Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	PS	Mitigation Measure Traffic-1	LTS
Result in inadequate emergency access	PS	Mitigation Measure Traffic-1	LTS
Result in inadequate parking capacity	NI	None required.	N/A
Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)	NI	None required.	N/A
<b>Utilities and Service Systems</b>			
Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board	NI	None required.	N/A
Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	NI	None required.	N/A
Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	NI	None required.	N/A
Have insufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements	PS	Mitigation Measure Utilities-1	LTS

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
needed			
Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments	LTS	None required.	N/A
Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs	PS	Mitigation Measure Agriculture-1 Mitigation Measure Utilities-1	LTS
Comply with federal, state, and local statutes and regulations related to solid waste	PS	Mitigation Measure Utilities-1	LTS
<b>Mandatory Findings of Significance</b>			
Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory	PS	Mitigation Measure Biology-1 Mitigation Measure Biology-2 Mitigation Measure Biology-3 Mitigation Measure Biology-4 Mitigation Measure Biology-5 Mitigation Measure Biology-6 Mitigation Measure Biology-7 Mitigation Measure Biology-8 Mitigation Measure Biology-9 Mitigation Measure Biology-10 Mitigation Measure Biology-11 Mitigation Measure Biology-12 Mitigation Measure Biology-13 Mitigation Measure Biology-14	LTS

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		Mitigation Measure Biology-15 Mitigation Measure Biology-16 Mitigation Measure Biology-17 Mitigation Measure Biology-18 Mitigation Measure Biology-19 Mitigation Measure Biology-20 Mitigation Measure Biology-21 Mitigation Measure Cultural-1 Mitigation Measure Cultural-2 Mitigation Measure Cultural-3 Mitigation Measure Cultural-4 Mitigation Measure Cultural-5 Mitigation Measure Cultural-6	
Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	PS	Mitigation Measure Air Quality-2 Mitigation Measure Air Quality-3 Mitigation Measure Air Quality-4 Mitigation Measure Air Quality-5 Mitigation Measure Air Quality-6 Mitigation Measure Air Quality-7 Mitigation Measure Air Quality-8 Mitigation Measure Air Quality-9 Mitigation Measure Air Quality-10	LTS
Have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly	PS	All mitigation measures previously listed.	LTS

**Table ES.5-1 (Continued): Summary of Environmental Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
<p>Notes</p> <p><b>PS:</b> Potentially Significant</p> <p><b>LTS:</b> Less than Significant</p> <p><b>NI:</b> No Impact</p> <p><b>N/A:</b> Not Applicable</p>			