Strategic Reliability Reserve Environmental Review for the Turlock Irrigation District Marshall Substation Site

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Acronyms and Abbreviations

Acronym	Definition
AAQA	ambient air quality analysis
BACT	best available control technology
BMP	best management practice
CAISO	California Independent System Operator
CBC	California Building Code
CEQA	California Environmental Quality Act
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DWR	California Department of Water Resources
L_{eq}	equivalent continuous sound level
NOx	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PGA	peak ground acceleration
PM_{10}	particulate matter 10 microns in diameter or smaller
$PM_{2.5}$	particulate matter 2.5 microns in diameter or smaller
RTP/SCS	Regional Transportation Plan and Sustainable Communities Strategy
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	sulfur dioxide
SR	State Route
SRR	Strategic Reliability Reserve
SWRCB	State Water Resources Control Board
TID	Turlock Irrigation District
UCMP	University of California, Berkeley Museum of Paleontology
VMT	vehicle miles traveled

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1 Introduction

California Assembly Bill 205 and Assembly Bill 209 created a state-led Strategic Reliability Reserve (SRR) program to be developed by the California Department of Water Resources (DWR) in conjunction with its sister state agencies, the California Energy Commission and California Air Resources Board. As part of the SRR program, DWR is looking to develop new emergency and temporary generators, new energy storage systems, and clean energy generation projects, and generate funding for an extension of existing energy generation operations. This effort is just one part of California's broader effort to safeguard the state's energy system in the face of climate-induced drought, wildfires, and heat waves that are impacting the state's energy grid. The equipment installed as part of the SRR program would be used only in extreme peak-demand events to provide temporary power generation to stabilize and supplement existing grid-tied power supplies to avoid grid failures.

DWR is currently procuring, installing, and licensing emergency generator units at existing facilities (proposed project). The units would be placed at a developed facility to feed directly into the grid as needed and at the direction of the California Independent System Operator (CAISO) in response to an emergency event when supplemental power supply is required. The units would be operational by summer 2023.

Assembly Bill 205 establishes a process to streamline approval and construction of new energy projects by exempting the projects from the California Environmental Quality Act (CEQA) and establishing a streamlined California Energy Commission review and certification process for applications for new energy generation projects. In the interest of addressing the need for immediate additional power generation capacity to provide adequate power supply throughout California during peak-demand events, Assembly Bill 205 also provides for DWR to self-certify certain temporary energy generation projects. This document analyzes the potential environmental impacts of SRR temporary energy generation facilities proposed by DWR under the self-certification process.

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2 Project Design, Operation, and Location

A. A detailed description, including drawings of the project's major structures, of the design, methods of construction and operation of the facilities

Project Design

As shown in Figure 2-1, Project Location (all figures can be found in Appendix A), the proposed project would be located in southern unincorporated Stanislaus County, south of the community of Patterson, in the Central Valley of California. The proposed project would be located on a parcel containing the existing Marshall substation, operated by the Turlock Irrigation District (TID). The proposed project would be directly adjacent to the existing substation in the southern corner of the parcel. The project site is currently a vacant, fenced-in area that is improved with decomposed granite and used for storage and staging.

The proposed project would include installation of 120 natural gas generators. The generators would be arranged in 24 rows with five generators (see Figure 2-2, Project Site Layout). Associated infrastructure proposed for installation adjacent to the generators would include 24 transformers, and four electric switchgear boxes. Each generator would be housed in an enclosure with maximum dimensions of 120 inches by 96 inches by 142 inches (length by width by height). The overall footprint of the proposed generator facility would be a rectangle measuring approximately 200 feet by 300 feet.

Each of the 120 generators would be identical and have an engine rating of 673 horsepower. Collectively, the generator facility would be capable of producing up to 47 megawatts of electricity. When in operation, the generators would operate in grid synchronous mode at 480 volts. The facility would be operated temporarily to provide emergency power in the event that the CAISO-controlled grid cannot support periods of peak demand, or to prevent grid failure as a result of extreme weather events or other power disruptions. The installed generators would be capable of delivering emergency power at any time, but annual operations are not expected to exceed 300 hours per year. This would include operation, and monthly tests that are required as part of standard operations.

Enchanted Rock generators use an efficient, ultra-low-emissions natural gas engine, permanent magnet generator alternator with electronic voltage regulator, isochronous electronic governor, sound-attenuated enclosure, smart battery charter, and motorized synchronizing circuit breaker. Each generator would have a dual exhaust, with each exhaust having its own emissions point/stack. The stacks would feature rain flaps and would extend 2 inches above the generator enclosure. Each stack would have an inner-stack diameter of 5 inches. Total absolute volumetric flow rate from each engine would be 2,754 cubic feet per minute and have a maximum exhaust temperature of 1,193°F. The units would be air cooled. Fuel for the generators would be pipeline-quality natural gas from Pacific Gas & Electric delivered to the site via Pacific Gas & Electric pipeline infrastructure. A natural gas meter would be in the southeastern corner of the project site. The system would not require energy storage. Emissions from combustion would be controlled via non-selective catalytic reduction.

The generators would deliver power to the grid via the TID Marshall substation located west of the project site. Connection to the substation would be performed via new underground cabling from the new switchgear to four new circuit breakers that would be installed within the substation.

Construction

Construction of the proposed project is expected to begin mid-March 2023 and have a duration of approximately 4 to 6 months. Construction would include site preparation and grading of approximately 70,000 square feet of land for installation of the generators. No demolition would be required for site preparation. There would be approximately 900 feet of trenching for fuel pipelines on the project site. Proposed trenches would range from 3 feet wide by 3 feet deep, to 6 feet wide by 6 feet deep. All earthmoving is anticipated to balance on site to the extent feasible; thus, no import of soil is anticipated. However, some oil export/import may occur and associated haul truck trips have been incorporated into the analysis contained in Chapter 3, Environmental Information. The area proposed for installation of the generators would be surfaced with several inches of compacted crushed concrete base rock. The anticipated schedule, vehicle trips, and equipment that would be used to construct the project are identified in Table 1.

Table 1. Construction Activities, Schedule, Vehicle Trips, and Equipment

			One-Way Vehicle Trips			Equipment		
Construction Phase	Start Date*	End Date*	*Ave. Daily Worker Trips*	*Ave. Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Site Preparation	3/15/2023	3/29/2023	10	4	16	Graders	1	8
						Scrapers	1	8
						Tractors/ Loaders/ Backhoes	1	8
Grading	3/30/2023	5/9/2023	10	4	30	Graders	1	8
						Rubber Tired Dozers	1	8
						Tractors/ Loaders/ Backhoes	2	8
Trenching	5/10/2023	5/24/2023	10	0	0	Default equipment		
Civil Construction/ Generator Installation	5/10/2023	7/31/2023	50	10	65	Cranes	1	8
						Forklifts	2	8
						Generator Sets	1	8
						Tractors/ Loaders/ Backhoes	1	8
						Welders	3	8

Table 1. Construction Activities, Schedule, Vehicle Trips, and Equipment

Construction Phase	Start Date*	End Date*	One-Way Vehicle Trips			Equipment		
			Ave. Daily Worker Trips	*Ave. Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Energization	8/1/2023		10	0	0	N/A	0	0

*Start and end dates are estimated based on best available information at the time of preparation this document and provide a conservative estimate for technical modeling and analysis. The actual energization date for the project is anticipated to occur in September 2023.

Operation

The proposed project is anticipated to be operational by September 2023. Personnel would not be required regularly on site for operation; the generators would be operated remotely. Personnel would visit the site periodically throughout the year for scheduled maintenance, and the generators would be test-operated approximately once per month during daylight hours; up to 200 operational trips per year are anticipated. The generator facility would initially be available for emergency use for a 5-year timeframe ending in September 2028. After 5 years, the property owner would have the option to purchase the generator facility. Operation of the generator facility after the 5-year term would be subject to subsequent certification of the generator facility by the California Energy Commission.

Decommissioning

If, after 5 years, the generator facility is not purchased by the property owner, the units would be decommissioned and removed. Infrastructure upgrades related to utilities (i.e., gas, electricity, and water) at the site would remain, but all detachable items would be removed from site. As such, underground cabling and piping would be left in place, and only aboveground items would be removed.

B. A detailed description of the design, construction, and operation of any electric transmission facilities.

See Section 2(A), Project Description.

C. An explanation of the site selection criteria establishing whether the location selected for the proposed site and related facilities is an optimal location based on the potential to improve reliability, reduce the occurrence of public safety power shutoffs, decrease the use of high-emission backup power, minimize air pollution, and avoid impacts on disadvantaged communities, as identified pursuant to Section 39711 of the Health and Safety Code.

The project site was selected based on a rigorous site selection process, with three tiers of screening totaling 39 separate screening criteria. The criteria considered location, existing capacity, climate/environmental conditions, economic impacts, and more. The project site scored high when all potential criteria were considered, and was ultimately selected due to its ability to meet DWR's objectives for this SRR effort.

The project site is strategically located adjacent to an existing energy infrastructure site, and would therefore serve to improve local electric grid reliability in existing service areas and prevent power shutoffs

and other interruptions of power provision during emergency events. The potential impact to disadvantaged communities was considered as one of the criteria for site selection and location, and it was determined that no impacts to disadvantage communities would occur with project implementation.

D. A narrative that describes whether the proposed site and related facilities would be capable of delivering energy during net peak hours in response to a dispatch by the Independent System Operator during extreme events and would have access to the infrastructure and resources needed to operate.

The generator facility would feed into the grid as needed in response to a CAISO-declared emergency event. The generator facility would be brought online to prevent grid failure during extreme weather events. When in operation, the generator facility would be capable of delivering 47 megawatts of additional Peaker energy during such events. The installed generators would be capable of delivering temporary power at any time, but annual operations are not expected to exceed 300 hours per year.

2.1 Project Schedule

A. Proposed dates of initiation and completion of construction, initial start-up, and full-scale operation of the proposed facilities. Include a discussion of anticipated project duration and potential operation beyond initial term of operation and/or decommissioning, as applicable.

See Table 1 for the anticipated construction schedule and associated activities. Construction would occur over 6 months, beginning in March 2023 and ending in September 2023. Once operational, the project is intended to remain operational as temporary emergency generators for an initial term of approximately 5 years. After this initial term, the property owner would have the option to purchase the emergency generator units for continued use, or the generator units would be decommissioned, as described in Section 2(A).

2.2 Project Ownership

A. A list of all owners and operators of the site(s) and the facilities.

The property containing the project site is owned by TID. The proposed facility will be owned by DWR, and Enchanted Rock will have a Site License Agreement with TID to maintain and operate the facility. The TID Marshall substation is owned and operated by TID.

3 Environmental Information

3.1 Air Quality and Greenhouse Gas Emissions

A. ***A description of how the proposed facility meets the requirements of the applicable new source review rule and all other applicable district regulations.***

The San Joaquin Valley Air Pollution Control District (SJVAPCD) regulates air quality in eight counties: Fresno, Kern (western and central), Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare. The SJVAPCD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the San Joaquin Valley Air Basin. The project site is in Stanislaus County and under the jurisdiction of the SJVAPCD. As shown in Appendix B, Air Quality and Greenhouse Gases Technical Memorandum, the project would comply with applicable regulations and would meet SJVAPCD thresholds for new source review. The project has submitted an Authority to Construct to the SJVAPCD for review and approval. As shown in Appendix B, the project's estimated annual construction and operational emissions would be below the applicable SJVAPCD's thresholds of significance, which are based on new source review offset thresholds. Pursuant to SJVAPCD Rule 2201, New and Modified Stationary Source Review Rule, Section 4.1, best available control technology (BACT) requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emission-unit basis. Any new emission unit with a potential to emit more than 2 pounds per day of criteria air pollutant are subject to BACT. The SJVAPCD does not currently have an approved BACT guideline for this source category (natural-gas-fired internal combustion engines powering electrical generators); therefore, a project-specific BACT determination would be made for the project during the SJVAPCD permitting process. Additionally, through the permitting process, the SJVAPCD will conduct an ambient air quality analysis (AAQA) and health risk assessment. Pursuant to SJVAPCD policies, the project will not be permitted if it causes a violation of an ambient air quality standard or an increase in cancer risk greater than the SJVAPCD's thresholds. Accordingly, the project would be in compliance with new source review and SJVAPCD regulations.

B. ***A description of the control technologies proposed to limit the emission of criteria pollutants.***

The proposed generators would involve non-selective catalytic reduction.

C. ***Representative meteorological data approved by the California Air Resources Board or the local air pollution district.***

A summary of climate and topography is provided in Appendix B, Air Quality and Greenhouse Gases Technical Memorandum. The information is excerpted from the 2015 SJVAPCD's Guide for Assessing and Mitigation Air Quality Impacts (SJVAPCD 2015a).

D. An evaluation of the project's air quality impacts, consisting of the following:

- *An analysis of the criteria pollutant impacts of project construction activities, including fugitive dust (PM10) emissions from grading, excavation and site disturbance, as well as the combustion emissions [nitrogen oxides (NOx), sulfur dioxide (SO2), carbon monoxide (CO), and particulate matter less than 10 microns in diameter (PM10) and particulate matter less than 2.5 microns in diameter (PM2.5)] from construction-related equipment according to local air district requirements;*

- *A screening level air quality modeling analysis of the direct criteria pollutant (NOx, SO2, CO and PM10 and PM2.5) impacts on ambient air quality during project operation.*

Appendix B provides a summary of the project's potential construction and operational impacts relative to estimated annual emissions and applicable SJVAPCD regional thresholds established for the protection of air quality and attainment of air quality standards. As shown in Tables 4 and 5 of Appendix B, the project's estimated construction and operational emissions of oxides of nitrogen (NOx), sulfur dioxide (SO_2), carbon monoxide (CO), particulate matter 10 microns in diameter or smaller (PM_{10}), and particulate matter 2.5 microns in diameter or smaller ($PM_{2.5}$), would be below the SJVAPCD thresholds.

For projects subject to CEQA, the SJVAPCD provides an ambient air quality screening level to determine if refined dispersion modeling through an AAQA is recommended. The SJVAPCD recommends an AAQA when a stationary source project would result in an increase of 100 pounds per day screening level of any criteria pollutant for construction, operational permitted sources, and operational non-permitted source.

The project's construction emissions of NO_x, SO_2, CO, PM_{10}, and $PM_{2.5}$, would be less than the SJVAPCD's screening level thresholds of 100 pounds per day (see Table 6, Appendix B). The project's operational emissions of NO_x and SO_2 would not exceed the SJVAPCD's screening thresholds; however, CO, PM_{10}, and $PM_{2.5}$ would exceed 100 pounds per day. Pursuant to the SJVAPCD's permitting process, the SJVAPCD will perform an AAQA to determine whether a new or modified stationary source would cause or make worse a violation of a national or state ambient air quality standard (SJVAPCD 2019). The project would be required to comply with SJVAPCD permitting requirements, and as such, if the AAQA determines that an ambient air quality standard violation could result, refinements to project operations would be required to ensure no violation of ambient air quality standards would occur. Accordingly, compliance with SJVAPCD permitting requirements would reduce potential localized air quality impacts, and no violation of SJVAPCD standards would occur.

E. A detailed description of the mitigation, if any, which an applicant may propose, for all project impacts from criteria pollutants that currently exceed state or federal ambient air quality standards, but are not subject to offset requirements under the district's new source review rule.

The project would not require mitigation beyond compliance with SJVAPCD's new source review permitting process.

F. A discussion of project consistency with Greenhouse Gas Emissions Reduction Plan

As discussed in Appendix B, the project would be consistent with applicable greenhouse gas reduction measures included in DWR's Greenhouse Gas Emissions Reduction Plan (DWR 2020). The project's estimated greenhouse gas construction emissions would total approximately 132 metric tons of carbon

dioxide equivalent (CO_2e), which is well below DWR's Extraordinary Construction Project Determination thresholds of 25,000 metric tons of CO_2e for the entire phase of construction, or 12,500 metric tons of CO_2e for any single year of construction.

DWR has adopted best management practices (BMPs) for construction and maintenance activities, and made significant changes to its construction project specification requirements to help reduce construction emissions. Construction BMPs apply to all construction and maintenance projects that DWR completes or for which DWR issues contracts. The following is a list of potential BMPs that would be incorporated into the project:

- Minimize idling time by requiring that equipment be shut down after 5 minutes when not in use (as required by the state airborne toxics control measure [13 CCR Section 2485]). Provide clear signage that posts this requirement for workers at the entrances to the site and provide a plan for the enforcement of this requirement.

- Maintain all construction equipment in proper working condition and perform all preventative maintenance. Required maintenance includes compliance with all manufacturer's recommendations, proper upkeep and replacement of filters and mufflers, and maintenance of all engine and emissions systems in proper operating condition. Maintenance schedules will be detailed in an Air Quality Control Plan prior to commencement of construction.

- Implement a tire inflation program on the jobsite to ensure that equipment tires are correctly inflated. Check tire inflation when equipment arrives on site and every 2 weeks for equipment that remains on site. Check vehicles used for hauling materials off site weekly for correct tire inflation. Procedures for the tire inflation program will be documented in an Air Quality Management Plan prior to commencement of construction.

- Develop a project-specific ride-share program to encourage carpools and shuttle vans, and provide for transit passes and/or secure bicycle parking for construction worker commutes.

- For deliveries to a project site where the haul distance exceeds 100 miles and a heavy-duty class 7 or class 8 semi-truck or 53-foot or longer box type trailer is used for hauling, a SmartWay[1] certified truck will be used to the maximum extent feasible.

- Develop a project-specific construction debris recycling and diversion program to achieve a documented 50% diversion of construction waste.

- Evaluate the feasibility of restricting all material hauling on public roadways to off-peak traffic congestion hours. During construction scheduling and execution minimize, to the extent possible, uses of public roadways that would increase traffic congestion.

The project would implement construction BMPs through the contracting process. As such, construction of the project would be consistent with, and would not impede, DWR's implementation of its Greenhouse Gas Emissions Reduction Plan.

[1] The U.S. Environmental Protection Agency has developed the SmartWay truck and trailer certification program to set voluntary standards for trucks and trailers that exhibit the highest fuel efficiency and emissions reductions (www.epa.gov/smarway).

There are no Greenhouse Gas Emissions Reduction Plan (DWR 2020) operation or maintenance measures that would apply to the project. As discussed in Appendix B, the project would be consistent with, and would not impede, DWR's implementation of its Greenhouse Gas Emissions Reduction Plan.

3.2 Biological Resources

A. A regional overview and discussion of terrestrial and aquatic biological resources, with particular attention to sensitive biological resources. In the discussion include a list of the USGS topographic quadrangle(s) utilized to search records from the California Natural Diversity Database (CNDDB), and a citation which includes the date the CNDDB was accessed. Include a map showing sensitive biological resource location(s) in relation to the project site and any boundaries of a local Habitat Conservation Plan or similar open space land use plan or designation.

The potential for special-status species to occur within the project site was determined by analyzing identified species against available information on preferred habitats and vegetation communities, soil substrates, and known geographic and elevation ranges. Special-status species potentially present within the project site were identified through a literature search of the following databases conducted on November 8, 2022: U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPaC) (USFWS 2022), California Department of Fish and Wildlife's California Natural Diversity Database (CDFW 2022), and the California Native Plant Society's Inventory of Rare and Endangered Plants of California (CNPS 2022). Searches of the above-referenced databases were completed for the Patterson and following eight surrounding U.S. Geological Survey 7.5-minute quadrangles: Newman, Crows Landing, Brush Lake, Orestimba Peak, Copper Mountain, Solyo, Westley, and Wilcox Ridge (see Appendix C, Biological Compendium and Potential to Occur Tables).

Vegetation communities present within the project site include orchards and a small stand of narrowleaf cattail. Beyond these areas, the project site is dominated by developed and disturbed habitat land covers. Outside of the project site, the surrounding land cover is dominated by active agricultural uses (orchard). Additional detail is provided in Section 3.2(C).

For this analysis, special-status plant and wildlife species are defined as those that are (1) listed, proposed for listing, or candidates for listing as threatened or endangered under the federal Endangered Species Act; (2) listed or candidates for listing as threatened or endangered under the California Endangered Species Act; (3) designated as Fully Protected under the California Fish and Game Code; (4) designated as a California Species of Special Concern by California Department of Fish and Wildlife; and/or (5) assigned a California Rare Plant Rank of 1A, 1B, or 2B by the California Native Plant Society.

Results of the California Natural Diversity Database, Inventory for Planning and Consultation (IPaC), and California Native Plant Society searches are discussed further in Section 3.2(C). See also Figure 3.2-1, Soil Types; Figure 3.2-2, Land Cover Types; and Figure 3.2-3, California Natural Diversity Database.

B. A description and results of all field studies and specialized surveys (e.g., focused and protocol) used to provide biological baseline information about the project site.

After reviewing the database results, Dudek biologist Alex Freeman visited the site on November 10, 2022, to assess current conditions and evaluate the site's potential to support sensitive natural communities and

special-status plant and wildlife species. Mr. Freeman conducted the field survey from 8:30 a.m. to 10:20 a.m. on November 10, 2022. Weather was clear, with an ambient temperature of approximately 53°F. The visit was conducted on foot to ensure visual coverage of the entire site. ArcGIS Field Maps with an overlay of the site boundary was used to map vegetation communities and record any sensitive biological resources. All plant and wildlife species observed during the survey were recorded. Wildlife species detected by sight, calls, tracks, scat, or other signs were recorded into an electronic form.

The field survey also served to identify potential jurisdictional aquatic resources that occur within the site. Jurisdictional aquatic resources include wetlands, streams, and creeks, among other aquatic features, that are subject to regulation under the federal Clean Water Act (CWA), California Porter–Cologne Water Quality Act (Porter-Cologne), or California Fish and Game Code, discussed further in Section 3.13, Water Resources. No formal wetland delineation was conducted at the site.

No focused or protocol-level surveys for special-status species were performed as part of this assessment. Observations of plant and wildlife species, vegetation communities, and other observations are described further in Section 3.2(C).

C. Include a list of the species and habitat(s) actually observed and those with a potential to occur.

Vegetation Communities and Land Cover Types

Land Cover Types

Four land cover types were documented at the project site and within the 100-foot survey buffer (study area): urban/developed, disturbed habitat, orchard, and cattail-dominated wetland (Figure 3.2-2). The land cover types are discussed in detail below.

Urban/Developed is a land cover characterized by development such as roads, buildings, and other built structures. The site contains four urban/developed areas: Marshall substation, an attached auxiliary lot to the northwest, an attached auxiliary lot to the east, and Marshall Road. Marshall substation and the two auxiliary lots are surrounded by a high fence and contain substation equipment, buildings, and storage containers, and the ground is covered with gravel and cobbles. Small mammal burrows were infrequently observed along the fence line.

Disturbed Habitat is a land cover type characterized by disturbed soils that may have non-native vegetation present, but no longer function as a native community. The undeveloped dirt lot in the northeast of the site is heavily disturbed, with compacted soils, a stormwater retention basin, and patches of Coulter's horseweed (*Laennecia coulteri*). The stormwater retention basin has unvegetated banks and stormwater drainage pipe. There are numerous small mammal burrows concentrated in the slopes around the basin and fences. There are staged metal pipes along the eastern edge of the lot.

Orchard is a land cover type characterized by planted rows of agricultural trees. Within the study area, orchards are present north of the project site and consist of rows of almond trees, with little to no herbaceous ground cover.

Cattail-Dominated Wetland is a vegetation community characterized by the presence of stands of cattail (*Typha* sp.). In the study area, an approximately 100-square-foot patch of cattails was observed on both

sides of the fence at the southwest corner of the Marshall substation. Most of the cattail-dominated wetland is on the outside of the Marshall substation fence, and the project site does not overlap with the wetland. No impacts to this vegetation community are anticipated.

Plant and Wildlife Species Observed

Common bird species—red-winged blackbird (*Agelaius phoeniceus*), house finch (*Haemorhous mexicanus*), Eurasian collard-dove (*Streptopelia decaocto*), killdeer (*Charadrius vociferus*), European starling (*Sturnus vulgaris*), common raven (*Corvus corax*), red-tailed hawk (*Buteo jamaicensis*), and white-crowned sparrow (*Zonotrichia leucophrys*)—were the only wildlife species observed during the survey. Evidence of California ground-squirrel (*Otospermophilus beecheyi*) (burrows) and desert cottontail (*Sylvilagus audubonii*) (scat) were observed on site. Coulter's horseweed and cattails were the only significant vegetation observed in the study area. No special-status plant or wildlife species were observed during the survey. Nesting birds protected by the federal Migratory Bird Treaty Act and the California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513) may be in and around the project site. Refer to Sections 3.2(D) and 3.2(E) for additional discussion regarding the Migratory Bird Treaty Act.

Potentially Occurring Special-Status Plant and Wildlife Species

The site is highly disturbed and does not provide suitable habitat for special-status plant or wildlife species. Additionally, the project site does not occur within any U.S. Fish and Wildlife Service designated Critical Habitat boundaries for listed plant or wildlife species.

Results of the California Natural Diversity Database (Figure 3.2-3), Inventory for Planning and Consultation (IPaC), and California Native Plant Society searches identified records for 20 special-status plant species and 30 special-status wildlife species within the region of the project site. A total of 48 species (20 plants and 28 wildlife) were removed from consideration based on a lack of suitable habitat or soil substrates, or because the project site is outside the known geographic or elevation range for the species. Two special-status wildlife—burrowing owl (*Athene cunicularia*) and Swainson's hawk (*Buteo swainsonii*)—have a moderate potential to occur within the project site (refer to Appendix C for further information). Table 2 summarizes these special-status species.

Table 2. Potentially Occurring Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/State)
Buteo swainsonii	Swainson's hawk	State Threatened
Athene cunicularia	Burrowing owl	California Species of Special Concern

Burrowing owl is a California Species of Special Concern that nests and forages in grassland, scrub, and agricultural areas. Burrowing owls use mammal burrows for refuge and nesting, particularly the burrows of California ground squirrel. Nesting typically occurs February through August.

Burrowing owl has a moderate potential to nest and forage on the site. The California ground squirrel burrows on the site and the staged metal pipes on the eastern edge of the site are potential refuge and nesting sites for the species. The project site's heavy disturbance and lack of suitable habitat in the surrounding orchards reduce the likelihood of the species occurring and nesting on the site. The nearest documented occurrence of this species is approximately 2.3 miles north of the site (Occ. No. 588) (CDFW 2022).

Swainson's hawk is a California Threatened Species that nests in open woodland, riparian areas, and isolated trees near grassland and agricultural areas. Swainson's hawks forage in grasslands and agricultural fields with suitable crops, such as alfalfa.

Although the project site does not provide suitable nesting or foraging habitat for this species, Swainson's hawk has a moderate potential to nest and forage in trees and cropland in the vicinity of the site. The property west of the project site, across the canal, has several large trees that are suitable for Swainson's hawk to nest in. The project site's heavy disturbance and surrounding orchards, which are not suitable for Swainson's hawk as foraging habitat, reduce the likelihood of the species occurring on site. The nearest documented occurrence of this species is approximately 4 miles northeast of the site (Occ. No. 481) (CDFW 2022).

D. A discussion of all impacts (direct, indirect, and cumulative) to biological resources from project site preparation, construction activities, plant operation, maintenance, closure, and decommissioning.

The project has the potential to impact nesting birds through increased activity, noise, and direct destruction of nests during the construction, maintenance, and decommissioning phases. Nests of native birds are protected by the federal Migratory Bird Treaty Act and state Fish and Game Code Sections 3503, 3505.5, 3511, and 3514. With implementation of the measures described in Section 3.2(E), potential impacts would be avoided.

Impacts to the two special-status wildlife species with at least a moderate potential to occur (burrowing owl and Swainson's hawk) are discussed below.

There is potential for direct impacts to burrowing owl from project activities if disturbance from construction, maintenance, and decommissioning activities cause nest abandonment or failure, if active burrows are destroyed, or if project activities result in direct mortality. Indirect impacts to burrowing owls are not expected because habitat quality on the project site and surrounding area is not expected to change as a result of project implementation. With implementation of the measures described in Section 3.2(E), potential impacts would be avoided.

There is the potential for direct impacts to Swainson's hawks nesting in trees west of the project site if visual and noise disturbance from project activities cause nest abandonment and/or failure. Indirect impacts to Swainson's hawk are not expected because habitat quality on the project site and surrounding area is not expected to change as a result of project implementation. With implementation of the measures described in Section 3.2(E), potential impacts would be avoided.

E. A discussion of all feasible mitigation measures and an evaluation of their anticipated efficacy in reducing the level of impacts.

Nesting Birds. To avoid potential direct and indirect impacts to nesting birds, activities should be conducted outside of the nesting season (September through February). If not feasible and construction occurs during the nesting season (February through August), the following measures will be implemented to avoid or minimize impacts to nesting birds:

- A qualified biologist will conduct a pre-construction survey for nesting birds no more than 2 days prior to ground-disturbing activities during the nesting season (February through August). The survey will cover the limits of construction and suitable nesting habitat within 500 feet of the project site for raptors and 100 feet for other nesting birds, as feasible and accessible.

- If any active nests are observed during surveys, a qualified biologist will establish a suitable avoidance buffer from the active nest. The buffer distance will range from 50 to 500 feet and be determined based on factors such as the species of bird, topographic features, intensity and extent of the disturbance, timing relative to the nesting cycle, and anticipated ground disturbance schedule. Limits of construction to avoid active nests will be established in the field with flagging, fencing, or other appropriate barriers, and will be maintained until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist.

- If project activities are delayed, additional nest surveys will be conducted such that no more than 7 days elapse between the prior survey and vegetation removal activities.

- If an active nest is identified in or adjacent to the construction limits after construction has started, work in the vicinity of the nest will be halted until the qualified biologist can provide appropriate avoidance and minimization measures to ensure that the nest is not disturbed by construction. Appropriate measures may include a no-disturbance buffer until the birds have fledged and/or full-time monitoring by a qualified biologist during construction activities conducted near the nest.

If Swainson's hawks are observed within 0.25 miles of the project site during the nesting bird survey, appropriate agencies will be consulted for guidance.

F. A discussion of compliance and monitoring programs to ensure the effectiveness of impact avoidance and mitigation measures incorporated into the project.

Based on the existing conditions and developed nature of the project site, no potential for impacts to sensitive vegetation communities or special-status plant species are anticipated. Implementation of the recommended avoidance measures provided in Section 3.2(E) would ensure no impacts to special-status wildlife species occur as a result of construction activities.

3.3 Cultural Resources and Tribal Cultural Resources

A cultural resources memorandum was prepared for the project and is provided as Appendix D. The following section summarizes Appendix D.

Cultural resources and tribal cultural resources together comprise objects, buildings, structures, sites, features, areas, places, records, sacred places, cultural landscapes, or manuscripts.

A. Locate and provide all relevant existing data: Undertake and submit the results of a records search to identify cultural resources and tribal cultural resources at the appropriate information center(s) of the California Historical Resources Information System (CHRIS). Define the project Area of Potential Effect (APE) (including depth). The records search shall cover the project site and a 1-mile buffer around the project site and 0.25 mile on each side of any linear facilities. Identify any cultural resources or tribal cultural resources listed pursuant to ordinance by a city or county or recognized by any local historical or archaeological society or museum.

Provide copies of California Department of Parks and Recreation (DPR) 523 forms for all cultural resources and tribal cultural resources identified in the records search.

On November 4, 2022, a California Historical Resources Information System records search was completed on behalf of Dudek by staff at the Central California Information Center. The records search results indicate that no cultural resources have been recorded within the project site. Record search results did indicate that there is one listed linear resource adjacent to the project footprint: the Delta–Mendota Canal (P-50-001904). The Delta–Mendota Canal has been determined eligible through the National Historic Preservation Act Section 106 consultation process under National Register of Historic Places/California Register of Historical Resources Criteria A/1 for its major role in water conveyance between the Sacramento River Valley and San Joaquin River Valley as part of the Central Valley Project. Although the Delta–Mendota Canal is adjacent to the project site, no physical changes to this resource or to the character-defining features that support its eligibility/listing would be affected by project implementation. Moreover, the Delta–Mendota Canal spans multiple miles in length, and as such, the introduction of a new generator facility at one point along its total alignment would not affect the ability of the resource to convey overall significance.

To date, no record search results have been received that indicate any documented CEQA historical resources at the project site. At this location is an electrical substation owned by TID. The substation appears on aerial imagery no earlier than 2005, and as such has not reached the 50-year threshold age for consideration as a historical resource under CEQA, or as a historical property under the National Historic Preservation Act.

B. Conduct and provide result of pedestrian archaeological and built environment surveys, as applicable, inclusive of the project site and project linear facility routes.

An intensive pedestrian survey of the entire project footprint was conducted on November 11, 2022, by Dudek archaeologists. The survey involved walking in closely spaced transects and scanning the ground for cultural resources. Exposed soils were inspected for artifacts, potential buried deposits, soil discoloration that might indicate the presence of a cultural midden, and/or possible prehistoric or historic-era features. Ground disturbances, including subsurface soils exposed by burrowing animals, were also visually inspected for cultural materials.

Surface visibility was variable during survey, with excellent visibility (approximately 100%) in the undeveloped northeastern portion of the project footprint, but very low visibility (approximately 0% to 10%) within the developed substation. Visibility was moderate to low (approximately 25% to 50%) in the proposed generator installation area, with the surface partially obscured by imported gravels. Exposed soils consisted of brown, sandy-clay loam. No cultural resources were identified within the project footprint during survey.

C. ***(1) a copy of the applicant's request to the Native American Heritage Commission (NAHC) for information on Native American sacred sites and lists of California Native American tribes interested in the project vicinity, and copies of any correspondence received from the NAHC. (2) A copy of all correspondence sent to Native American individuals and groups listed by the NAHC and copies of all responses. Notification to Native Americans shall include a project description and map. (3) A written summary of any oral responses.***

DWR is committed to coordination with all traditionally culturally affiliated tribes, consistent with its Tribal Engagement Policy and the California Natural Resources Agency's TribalConsultation Policy. A request was sent on December 13, 2022, to the Native American Heritage Commission for a search of its Sacred Lands File and an updated contact list of traditionally culturally affiliated Native American representatives associated with the area. Results of this search are still pending. Tribal engagement letters were mailed to tribal groups traditionally and culturally affiliated with the project area on December 16, 2022.

D. ***Summarize mitigation and management recommendations:***

The project site is in an area of low sensitivity for prehistoric and historic-era archaeological resources. Given the existing disturbed and developed conditions of the site, the potential for introducing disturbances to archaeological resources is relatively low. No previously recorded resources intersect the project site, and no resources were identified during pedestrian survey, nor were any potential resources identified through archival research. To date, Native American Heritage Commission Sacred Lands File search results are still pending, and tribal engagement is ongoing.

Based on these results, the project site may be considered cleared for cultural resources. However, in the event that unanticipated cultural resources are encountered during construction activities, all construction work will immediately stop until DWR staff is notified and a qualified archaeologist can evaluate the sensitivity of the find and determine whether or not additional study is warranted. The level of sensitivity of the find will be assessed, and if warranted, additional efforts, such as preparation of an archaeological treatment plan, testing, and/or data recovery, may be recommended prior to allowing construction to proceed in this area. The potential for avoidance and/or preservation would also be the primary consideration. Should human remains be uncovered, all work will stop immediately, and the county coroner will be contacted pursuant to California Health and Human Safety Code 7050.5(b). The requirement for Native American monitoring to occur would be determined by DWR based on the results of tribal engagement.

3.4 Hazardous Materials

A. A summary of hazardous materials sites records searches and applicable hazardous materials site surveys. Include a description of areas of concern or sites within the project boundary or that could be reasonably affected by project implementation.

A hazardous materials assessment was completed to determine if there are any potential environmental concerns on the project site related to hazardous materials and/or waste. The hazardous materials assessment consisted of a review and summary of regulatory agency records; historical aerial photographs, historical topographic maps, historical city directories, and historical fire insurance maps; interviews with site representatives; and a site reconnaissance. The full hazardous materials assessment is provided as Appendix E. A summary of site features identified during the research and site reconnaissance is shown in Figure 3.4-1, Project Site Features. In summary, the following potential hazardous material impacts were identified:

- Historical sources indicate the project site was used for agricultural purposes from the 1930s to the early 2000s. As with all agricultural properties, pesticides and herbicides were likely used. The chemicals of concern associated with these compounds, such as organochlorinated compounds and metals, are bio accumulative and persistent in soil. Considering the ongoing long-term agricultural use, there is a potential for elevated concentrations of pesticide and herbicide-related compounds in shallow soils.

- During the site reconnaissance, surface staining was observed surrounding an agricultural pump along the southern border of the project site. The apparent petroleum stains covered the concrete pad and the surrounding soils.

- The western adjoining site, T.S. Castle Farms Farming (also identified as Pacific Sod, AL Castle, and Sandhu Farms), has been a farming operation since the 1950s, and reportedly conducted spraying and application of pesticides, herbicides, and fertilizers to nearby farms. The site has a history of multiple environmental violations, including unpermitted discharges to the Delta–Mendota Canal. The site also has an underground storage tank with limited associated regulatory information, and historically operated an unlined pond used to capture rinse water from pesticide and herbicide application trucks and equipment. Based on the available information, it is likely this site has impacted soils, surface water, and groundwater in the area.

As such, the following measures will be implemented:

- Should project site construction require removal of site soils, soils will be screened prior to disposal or reuse to determine if pesticide- or herbicide-related compounds are above acceptable levels for the disposal or reuse facility.

- Should project site construction require removal or disturbance of the agricultural pump concrete pad or surrounding soils, soils will be screened prior to removal, disposal, or reuse to determine if impacts are above acceptable levels for reuse or disposal.

- A health and safety plan will be put in place to ensure worker safety protocols are established and followed during earthmoving and trenching activities. The plan will address potential pesticide- and herbicide-related contamination and petroleum contamination around the agricultural pump.

- Should the project site use change to residential or sensitive-receptor use (such as healthcare, childcare, or schools), site soils may require evaluation to determine if there are pesticide- or herbicide-related compounds above applicable regulatory screening levels.

- Should the proposed project require groundwater use, groundwater quality will be evaluated to determine if there are hazardous material impacts related to impacts associated with the western adjoining property operations.

3.5 Land Use

A. List current assessor's parcel numbers and owners' names and addresses for all parcels within 1000 feet of the site and related facilities. Provide the direct mailing addresses for the owners and occupants of properties contiguous to the proposed site and related facilities as shown on the latest equalized assessment roll. Send notification letters to property owners and occupants within 1000 feet of the site and related facilities.

The project site is within unincorporated Stanislaus County jurisdictional limits. The site is owned by TID, with Assessor's Parcel Number 027001054 (Stanislaus County 2022a).

Contiguous Assessor's Parcel Numbers, owners, and direct mailing addresses are included in Appendix F. Notification letters were mailed to these addresses on December 20, 2022, and are also included in Appendix F.

B. A description of existing land uses, general plan land use designations, and current zoning districts (including any overlay districts) at the site and surrounding land uses. Include: an identification of residential, commercial, industrial, recreational, scenic, agricultural, natural resource protection, natural resource extraction, educational, religious, cultural, and historic areas, and any other area of unique land uses.

The project site is in southern unincorporated Stanislaus County, south of the community of Patterson, in the Central Valley of California (see Figure 2-1). The proposed project would be on a parcel containing the existing TID Marshall substation (Assessor's Parcel Number 027001054). The parcel is 11.57 acres, designated for agriculture land use (Stanislaus County 2016), and zoned General Agriculture 40-Acre UT (Stanislaus County 2022b). Refer to Figure 3.5-1, Existing General Plan Land Use Designations, and Figure 3.5-2, Existing Zoning, for a depiction of land use designations and zoning of the site and surroundings.

The 18 surrounding parcels on all sides of the project site are zoned General Agriculture 40-Acre. The surrounding parcels are primarily used for agricultural production. The project parcel is bordered to the west by the Delta–Mendota Canal and a rural residence, and to the south by West Marshall Road. To the north and the east, the project parcel is bordered by agricultural land. Beyond the adjacent parcels, the vicinity of the project site is dominated by agricultural uses, with rural residential and agriculture-related structures. The City of Patterson is approximately 1.6 miles to the north and is dominated by residential and commercial land uses; Interstate 5 is approximately 1.5 miles to the west. Refer to Figure 3.5-3, Existing Surrounding Land Uses, showing these surrounding existing land uses.

C. An explanation of the compatibility of the proposed project with present and expected land uses, and conformity with any long-range land use plans and policies adopted by any federal, state, regional, or local planning agencies.

The project would involve installation of a power generation system, consistent with the existing public utility use of the project parcel (electric substation). The proposed project would not conflict with other adjacent land uses, which is predominantly agricultural production.

Applicable land use planning documents and policies are the Stanislaus County Code and Stanislaus County General Plan 2015. The Stanislaus County Code establishes permittable uses for each zoning district. For the zoning district General Agriculture, which the project parcel is zoned in, facilities for public utilities are considered a "Tier Three" use requiring a use permit, indicating they are a use not directly related to agriculture, but may be necessary to serve the General Agriculture district or may be hard to place in urban settings (Stanislaus County Code 21.20.030). These uses are permitted subject to first securing a use permit, and therefore the proposed project would not conflict with allowable uses as established by the Municipal Code.

The Stanislaus County General Plan establishes land use patterns and goals for future development of unincorporated Stanislaus County. The General Plan identifies the project site as agriculture land use designation and states that this land use designation should be zoned General Agriculture, which is consistent with the project site. The General Plan depicts the project site as outside of the sphere of influence of the City of Patterson (Stanislaus County 2016).

The proposed project would not conflict with the regulations and policies of the Stanislaus County Code or General Plan, and would not conflict with the allowable uses for the land use designation of Agriculture or General Agriculture zoning. Further, the proposed project would not conflict with the goals and policies found in the General Plan Land Use Element.

D. A map and written description of agricultural land uses found within all areas affected by the proposed project. The description shall include:

- *Land classifications as shown on the Farmland Mapping and Monitoring Program's Important Farmland maps; and*
- *Whether agricultural land affected by the project was historically classified Farmland as defined by the California Department of Conservation (Prime Farmland, Farmland of Statewide Importance, or Unique Farmland).*
- *Adverse effects on agricultural land uses. If the proposed site or related facilities are subject to an Agricultural Land Conservation contract, provide a written copy and a discussion of the status of the expiration or canceling of such contract.*

As shown in Figure 3.5-4, Existing Farmland, Mapping, and Monitoring Program Designations, the project site is designated as Vacant or Disturbed Land. Adjacently west of the project site is designated Vacant or Disturbed Land associated with the TID substation and a canal. West of the canal is a parcel containing a residence that has been designated as Semi-Agricultural and Rural Commercial Land. All other adjacent lands are designated as Prime Farmland. There are no lands defined by the California Department of

Conservation as Farmland of Statewide Importance or Unique Farmland, on the project site or in the vicinity. There are no identified Agricultural Land Conservation contracts on the project site or in the vicinity. Because the project site is on vacant or disturbed land and would not include improvements outside of the project site, the proposed project would not conflict with the existing Prime Farmland in the vicinity.

3.6 Noise

A. On a map, identify noise sensitive land uses (i.e. residences, hospitals, libraries, schools, places of worship, or other facilities where quiet is an important attribute of the environment) within the area impacted by the proposed project.

Noise-sensitive land uses in the project vicinity consist of a small number of rural residences. Refer to Figure 3.6-1, Noise-Sensitive Receivers and Ambient Sound Level Measurement Locations, which shows the locations of the closest residences to the project site, as well as the locations of the 25-hour and short-term (sub-hour) sound-pressure-level measurements conducted to characterize the ambient noise levels in the project vicinity. Short-term (ST) measurement location ST1 was adjacent to Marshall Road, near the closest residence west of the project site (identified as sensitive receiver A). Long-term (LT) measurement LT1 was on the north side of Marshall Road, opposite the nearest residence east of the project site (identified as sensitive receiver B). The sound-pressure-level measurements were completed using SoftdB Piccolo II sound level meters, which are classified as an ANSI Type 2 meter (general purpose sound level meter suitable for all environmental noise surveys). The sound level meters were calibrated before conducting the measurements with a Reed Instruments R8090 calibrator. Refer to Appendix G for additional information on the baseline measurement surveys.

B. A description of the existing ambient noise levels at those sites identified above. The results of the noise level measurements shall be reported as hourly averages in L_{eq} (equivalent sound or noise level), L_{dn} (day-night sound or noise level) or CNEL (Community Noise Equivalent Level) in units of dB(A).

Table 3 and Table 4 provide summaries of the ambient noise level survey results for the project vicinity. Both of the nearby residences are adjacent to a busy roadway, with traffic along the roadways a principal contributor to the ambient noise levels. As shown in Table 3, daytime (7 a.m. to 7 p.m.) ambient noise levels are generally in the 65–70 A-weighted decibel (dBA) equivalent continuous sound level (L_{eq}) range; evening noise levels (7 p.m. to 10 p.m.) are in the 63–65 L_{eq} range, and nighttime noise levels (10 p.m. to 7 a.m.) are in the 53–65 dBA L_{eq} range. These fluctuations in the levels between the periods of the day, evening, and night are typical for areas with traffic noise exposure as the dominant noise source.

Table 3. Long-Term Measurement Results (LT1); 25-Hour Minimum Monitoring Period

Hour of Day	Energy-Averaged Noise Level (Leq 1-hour) dBA	Statistical Noise Level (L10) dBA	Statistical Noise Level (L50) dBA	Statistical Noise Level (L90) dBA
2:00 PM	68	68.5	47.7	37.1
3:00 PM	70	73.2	49.8	39.7
4:00 PM	69	71.6	49.6	38.9
5:00 PM	68	70.3	49.5	38.6
6:00 PM	67	65.2	43.6	37.8
7:00 PM	65	61.1	40.8	35.5
8:00 PM	65	59.9	40.3	33.4

Table 3. Long-Term Measurement Results (LT1); 25-Hour Minimum Monitoring Period

Hour of Day	Energy-Averaged Noise Level (Leq 1-hour) dBA	Statistical Noise Level (L10) dBA	Statistical Noise Level (L50) dBA	Statistical Noise Level (L90) dBA
9:00 PM	63	54.1	34.2	31.6
10:00 PM	60	47.5	33.7	31.0
11:00 PM	57	45.8	34.5	33.6
12:00 AM	54	37.7	34.3	33.3
1:00 AM	55	45.1	33.6	29.7
2:00 AM	53	42.3	33.8	29.2
3:00 AM	62	51.1	35.9	30.6
4:00 AM	63	52.1	38.7	34.4
5:00 AM	64	54.9	40.2	35.0
6:00 AM	65	59.6	44.8	37.7
7:00 AM	67	63.5	47.6	41.7
8:00 AM	68	65.1	46.7	42.2
9:00 AM	67	66.1	50.6	40.2
10:00 AM	67	66.6	44.3	34.9
11:00 AM	65	64.9	42.9	34.8
12:00 PM	67	67.9	44.5	34.3
1:00 PM	68	70.1	49.4	36.6
2:00 PM	67	69.0	47.1	35.2
3:00 PM	68	70.4	50.0	36.1
4:00 PM	68	69.8	49.3	34.0
Calculated CNEL (dBA)	***69***	***N/A***	***N/A***	***N/A***

Note: L_{eq} = equivalent noise level; dBA = A-weighted decibels; CNEL = Community Noise Equivalent Level; N/A = not applicable

As shown in Table 4, the 1-minute average noise levels during the short-term measurement at ST1 ranged from 49 to 70 dBA L_{eq}. These short-term levels were within the range of daytime noise levels documented at LT1, and also illustrate a noise environment dominated by traffic noise from the adjacent roadway.

Table 4. Short-Term Measurement (ST1); 1-Minute Averaging Period

Time	Energy-Averaged Noise Level (Leq) dBA	Statistical Noise Level (L10) dBA	Statistical Noise Level (L50) dBA	Statistical Noise Level (L90) dBA
5:13 PM	65	77.1	52.7	48.1
5:14 PM	70	81.9	55.2	46.8
5:15 PM	66	80.3	46.0	42.7
5:16 PM	49	58.8	45.8	42.8
5:17 PM	61	74.7	48.3	44.4
5:18 PM	65	78.5	45.0	40.9
5:19 PM	70	77.8	65.2	57.9
Calculated L_{eq} for ST1 Duration	**69**	N/A	N/A	N/A

Note: L_{eq} = equivalent noise level; dBA = A-weighted decibels; N/A = not applicable

C. A description of the major noise sources of the project.

Construction of the project would result in the temporary generation of noise at the project site, with the primary construction noise generation occurring at the project site during trenching and site preparation. Construction would involve the use of heavy equipment and machinery, such as loaders, cranes, temporary generators, scrapers, and other equipment. Construction noise would generate levels of noise that can vary from hour to hour and day to day depending on the equipment in use, the operations being performed, and the distance between the source and receptor.

Operationally, the primary noise sources of the project would be the 120 gas-powered generators. Associated noise-producing mechanical infrastructure would also be installed, including 24 transformers. Each of the generators would be identical and have an engine rating of 673 horsepower. The generator facility would be installed to provide back-up emergency power in the event the CAISO-controlled grid cannot support periods of peak demand, or to prevent grid failure during emergency periods, such as extreme weather events. When in operation, the generator facility would operate in grid synchronous mode at 400 kilowatt electric. The installed generator facility would be capable of delivering emergency power at any time, but annual operations are not expected to exceed 300 hours per year. This would include monthly tests that are part of standard operations. Table 5 contains the octave band center frequency power levels for the operational equipment.

Table 5. Modeled Stationary Operational Sound Sources

Equipment Type	Unweighted Sound Power Level in Hertz (Hz)									
	31.5	*63*	*125*	*250*	*500*	*1000*	*2000*	*4000*	*8000*	*Overall*
Generator Unit[1]	84.1	85.5	85.2	86.7	86.3	86.6	90.0	92.8	92.5	98.3
Transformer (3 units)[2]	67.9	73.9	75.9	70.9	70.9	64.9	59.9	54.9	47.9	79.9
Transformer (5 units)[2]	71.1	77.1	79.1	74.1	74.1	68.1	63.1	58.1	51.1	83.1

Notes:
1 Values are based on CadnaA reference data for a fuel-burning engine with turbocharger and exhaust silencer that yield overall A-weighted sound levels considered sufficiently comparable to supplier proprietary test data.
2 Calculated from the Electric Power Plant Environmental Noise Guide (Teplitzky 2005).

D. An estimate of the project noise levels, during both construction and operation, at noise sensitive land uses (e.g. residences, hospitals, libraries, schools, places of worship, or other facilities where quiet is an important attribute of the environment), within the area impacted by the proposed project.

Construction

The typical maximum noise levels for various pieces of construction equipment at a distance of 50 feet are presented in Table 6. Note that the equipment noise levels presented in Table 6 are maximum noise levels (L_{max}). Typically, construction equipment operates in alternating cycles of full power and low power, producing average noise levels less than the maximum noise level. The average sound level of construction activity also depends on the amount of time that the equipment operates and the intensity of construction activities during that time.

Table 6. Construction Equipment – Typical Maximum Noise Levels

Equipment Type	Typical Equipment (dBA at 50 Feet)
Air Compressor	80
Backhoe	80
Compactor	82
Crane	83
Drill Rig	95
Dozer	85
Generator	82
Grader	85
Loader	80
Scraper	85
Truck	84

Source: FTA 2018
Note: dBA = A-weighted decibels.

Aggregate noise emissions from proposed project construction activities, broken down by sequential phase, was predicted at two evaluation distances to the nearest existing noise-sensitive receptor: (1) from the nearest position of the construction site boundary, and (2) from the geographic center of the construction site, which serves as the time-averaged location or geographic acoustical centroid of active construction equipment for the phase under study. Table 7 summarizes these two distances to the apparent closest noise-sensitive receptor for each of the four sequential construction phases. At the site boundary, this analysis assumes that up to only one piece of equipment of each listed type per phase would be involved in the construction activity for a limited portion of the 1-hour period. In other words, at such proximity, the operating equipment cannot "stack" or crowd the vicinity and still operate. For the acoustical centroid case, which intends to be a geographic average position for all equipment during the indicated phase, this analysis assumes that the equipment may be operating up to 1 hour per day.

Table 7. Estimated Distances Between Construction Activities and the Nearest Noise Sensitive Receptors

Construction Phase (and Equipment Types Involved)	Distance from Nearest Noise-Sensitive Receptor to Construction Site Boundary (Feet)	Distance from Nearest Noise-Sensitive Receptor to Acoustical Centroid of Site (Feet)
Site Preparation (graders, scrapers, tractors/loaders/backhoes)	2,435	2,640
Grading (graders, rubber-tired dozers, tractors/loaders/backhoes)	2,435	2,640
Trenching (equipment >5 horsepower [hp], flatbed truck)	2,435	2,640
Civil Construction/Generator Installation (cranes, forklifts, generator sets, tractors/ loaders/backhoes, welders)	2,435	2,640
Energization (equipment >5 hp, flatbed truck)	2,435	2,640

Construction noise in a well-defined area typically attenuates at approximately 6 decibels (dB) per doubling of distance. Project construction would take place approximately 2,435 feet from the nearest existing noise-sensitive uses (residence east of the project site). The results in Table 8 show the predicted noise levels for each construction phase with respect to the distance from the nearest noise-sensitive receptor to the construction site boundary, and the distance to the acoustical centroid of the site. Appendix G contains the construction noise modeling worksheets used to predict construction noise for the project.

Table 8. Predicted Construction Noise Levels per Activity Phase

Construction Phase (and Equipment Types Involved)	1-Hour L_{eq} at Nearest Noise-Sensitive Receptor to Construction Site Boundary (dBA)	1-Hour L_{eq} at Nearest Noise-Sensitive Receptor to Acoustical Centroid of Site (dBA)
Site Preparation (graders, scrapers, tractors/loaders/backhoes)	40.0	43.0
Grading (graders, rubber tired dozers, tractors/loaders/backhoes)	40.0	43.8
Trenching (equipment >5 horsepower [hp], flat bed truck)	40.8	40.1
Civil Construction/Generator Installation (cranes, forklifts, generator sets, tractors/loaders/backhoes, welders)	38.6	42.9
Energization (equipment >5 hp, flatbed truck)	41.0	40.1

Note: L_{eq} = equivalent noise level; dBA = A-weighted decibels.

Although nearby off-site residences would be exposed to elevated construction noise levels, the increased noise levels would typically be short term. Noise levels associated with construction noise are predicted to be significantly lower than ambient noise levels measured at ST1 and LT1 (as shown in Table 3). It is also anticipated that construction activities associated with the proposed project would take place primarily within the allowable hours per the Stanislaus County Code. Therefore, construction noise is not anticipated to adversely affect the nearest sensitive receptors.

Operation

Long-term operational noise associated with the project would include noise from the gas-powered generators and transformers associated with operation of the project.

Sound Propagation Prediction

The aggregate noise emission from these outdoor-exposed sound sources has been predicted with the Datakustik CadnaA sound propagation program. CadnaA is a commercially available software program for the calculation, presentation, assessment, and prediction of environmental noise based on algorithms and reference data per International Organization of Standardization (ISO) Standard 9613-2, Attenuation of Sound During Propagation Outdoors, Part 2: General Method of Calculation (ISO 1996). The CadnaA computer software allows sources of sound emissions to be positioned in a simulated three-dimensional space atop rendered "blocks" of project building masses having heights and footprints consistent with project architectural plans and elevations. In addition to the above-mentioned sound source inputs and

building-block structures that define the three-dimensional sound propagation model space, the following assumptions and parameters are included in this CadnaA-supported stationary noise source assessment:

- Ground effect acoustical absorption coefficient equal to 0.7, which intends to represent an average or blending of ground covers that are characterized largely by hard reflective pavements and existing building surfaces across the project site and the surroundings.
- Reflection order of 1, which allows for a single reflection of sound paths on encountered structural surfaces such as the modeled building masses.
- Calm meteorological conditions (i.e., no wind) with 68°F and 50% relative humidity.
- For purposes of impact assessment as evaluated herein, all modeled equipment is operating concurrently and continuously for a minimum of 1 hour.

Table 9 presents the predicted aggregate noise level exposures from these systems at each of three nearby off-site receptors (existing single-family homes and positions representing ST1 and LT1). Predicted levels shown in Table 9 range from 31 to 33 dBA hourly L_{eq}. Figure 3.6-2, Aggregate Project Operational Noise Emissions, shows the location of the studied noise-sensitive receptors and noise contours.

Table 9. Stationary Operations Noise Modeling Results

Studied Noise-Sensitive Receptor	Location	Predicted Project Attributed Noise Exposure Level (dBA L_{eq})
R1/ST1	West of the project site; representative of ST1	32.4
R2	West of the project site; representative of single-family residence west of Ward Avenue	31.0
R3/LT1	West of the project site; representative of single-family residence on the southwest corner of Marshall Road and Davis Road	32.6

dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level (time-averaged sound level)

Stationary operations are predicted to be lower than the measured ambient noise levels at the same locations found in Tables 3 and 4. Therefore, operational noise is not anticipated to adversely affect the nearest sensitive receptors.

Corona Noise

The effects of potential corona noise (i.e., a crackling or hissing sound commonly associated with transmission lines) were analyzed using an industry-accepted conductor corona audible noise estimation technique based on Bonneville Power Administration Technical Report ERJ-77-168 (BPA 2015). The anticipated audible noise from a three-phase alternating-current conductor connecting the project transformers to the nearest existing substation would be 32.5 dBA L50 at a distance of 25 feet under "foul" (rainy, wet, and/or dusty conductor surface) conditions. Under "fair" conditions, the predicted noise would be 25 dB less. At these magnitudes, and correcting for distance at an attenuation rate of approximately 3 dB per doubling of distance (i.e., a line source of noise), the new conductor would make a negligible acoustic contribution to the afore-stated prediction of aggregate noise from on-site gensets and associated

transformers. Consequently, the new conductor is expected to make a negligible change to the pre-existing outdoor ambient sound environment at the relevant boundaries of transmission line rights-of-way and the nearest receiving off-site noise-sensitive properties.

E. An estimate of the project noise levels within the project site boundary during both construction and operation.

The existing facility is an industrial land use that is not considered noise sensitive. Workers during construction and operation are anticipated to use hearing protection as required by the Occupational Safety and Health Administration (OSHA). During construction, noise levels from the various pieces of heavy equipment would be similar to those listed in Table 6, but would likely be less depending on use and distance. Figure 3.6-2 show predicted operational noise levels within the project site to range from approximately 62 dBA to exceeding 87 dBA.

3.7 Paleontological Resources

A. Identification of the Geomorphic Province, as defined by the California Department of Conservation, California Geologic Survey Note 36, and a brief summary of the geologic setting, formations, and stratigraphy of the project area. The size of the paleontological study area may vary depending on the depositional history of the region.

The City of Turlock, in Stanislaus County, California, is within the central San Joaquin Valley, in the Great Valley Geomorphic Province (Great Valley) (Harden 2004; California Geological Survey 2002). The Great Valley (also known as the Central Valley) is an extensive, relatively flat valley composed of sedimentary deposits that are thousands of feet thick, adjacent to and west of the Sierra Nevada and east of the Coast Ranges Geomorphic Province (Harden 2004). Stanislaus County is known for its agricultural industry.

The project site is mapped as being underlain by Holocene (less than 11,700 years old) (Cohen et al. 2022) Quaternary alluvial surficial sediments (map unit Qa), according to published mapping at a 1:24,000 scale (Dibblee and Minch 2007). The Quaternary alluvium has a low paleontological resource sensitivity on the surface that increases with depth below the surface, where older, Pleistocene-age (approximately 11,700 to 2.58 million years ago) (Cohen et al. 2022) sediments conducive to fossil preservation may be encountered. Refer to Figure 3.7-1, Underlying Geological Formations.

Paleontological resources have been recovered from the Pleistocene Modesto Formation and correlative Pleistocene deposits elsewhere in Stanislaus County, and include the following University of California Museum of Paleontology (UCMP) localities: V72007, V72186, V39059, Modesto Sanitary Landfill, V81120, V81119, and V4822, and Natural History Museum of Los Angeles County locality LACM VP (Los Angeles County Museum Vertebrate Paleontology) 3513. These localities have yielded fossils of terrestrial mammals (e.g., mammoths, ground sloths, horses, camels, and bison) (Jefferson 1991a, 1991b; Confidential Appendix H).

B. A discussion of the sensitivity of the project area and the presence and significance of any known paleontologic localities or other paleontologic resources within or adjacent to the project.

The Holocene alluvial deposits underlying the project site have a low paleontological resources sensitivity on the surface and at shallow depths. The paleontological resources sensitivity of these deposits increases with depth beneath the ground surface. Underlying Pleistocene alluvial deposits and the Modesto Formation have a high paleontological resource sensitivity. Paleontological resources have been recovered from correlative Pleistocene sedimentary deposits elsewhere in Stanislaus County (Confidential Appendix H).

C. A summary of all local museums, literature searches and field surveys used to provide information about paleontologic resources in the project area

The Quaternary alluvial surficial sediments, characteristically tan and light gray in color, are generally too young to contain significant paleontological resources; however, underlying Pleistocene deposits have been known to contain Ice Age mammals, as confirmed by the records search results obtained from the Natural History Museum of Los Angeles County. According to the Natural History Museum of Los Angeles County, the closest fossil locality to the project site includes LACM VP locality 7254, which produced a mammoth (*Mammuthus*) from an unknown Pleistocene formation (Confidential Appendix H). According to published and unpublished records (Jefferson 1991a, 1991b; Confidential Appendix H), the following fossils have been found in localities from the Modesto Formation and an unknown Pleistocene formation within Stanislaus County, generally from the west and east sides of the City of Modesto: giant sloth (*Megalonyx jeffersoni*) and mammoth (*Mammuthus*) UCMP V72007; bison (*Bison sp.*) UCMP V72186 and V81120; horse (*Equus* sp.) UCMP V39059 and V4822; mammoth from the Modesto Sanitary Landfill; and camel (*Camelops hestemus*) UCMP V81119.

D. A discussion of any educational programs proposed to enhance employees' awareness of potential impacts to paleontological resources, measures proposed for mitigation of impacts to known paleontologic resources, and a set of contingency measures for mitigation of potential impacts to currently unknown paleontologic resources.

No paleontological resources were identified within the project site as a result of the institutional records searches or desktop geological and paleontological review (Confidential Appendix H). However, intact paleontological resources may be present below disturbed and/or reworked sedimentary deposits. Given the proximity of past fossil discoveries in the surrounding area and the underlying Pleistocene deposits, the project site ranges from low paleontological resource sensitivity at the surface to high paleontological resource sensitivity at depth.

The project site is potentially underlain by previously undisturbed Pleistocene-age Modesto Formation, approximately 29,500 years old, that would require monitoring below a depth of 10 feet. In the event that intact paleontological resources are located on the project site, ground-disturbing activities associated with construction of the project, such as grading during site preparation, trenching, and large-diameter augering (2 feet or greater), have the potential to destroy unique paleontological resources or sites.

The following measure for paleontological resources will be implemented:

Prior to commencement of any grading activity on site, the California Department of Water Resources will retain a qualified paleontologist meeting the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The paleontologist will prepare a Paleontological Resources Impact Mitigation Program for the project. The Paleontological Resources Impact Mitigation Program will be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP 2010) and include the following elements: project description, requirements for preconstruction worker environmental awareness training, frequency of monitoring based on grading plans and/or geotechnical reports, salvage protocols, reporting, and collections management. The qualified paleontologist or a qualified monitor meeting the SVP (2010) guidelines will be on site during all rough grading and other significant ground-disturbing activities below a depth of 10 feet below the existing ground surface in previously undisturbed Pleistocene-age deposits and/or Modesto Formation. If excavations below 10 feet are not impacting previously undisturbed Pleistocene-age deposits and/or

Modesto Formation, as determined by the qualified paleontologist, spot-check monitoring will ensue. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of the paleontological resources. The area of discovery will be roped off with a 50-foot-radius buffer to document and collect the fossils. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find. No monitoring is required during excavations that the paleontologist determines are within artificial fill (i.e., previously disturbed sedimentary deposits).

3.8 Population and Housing

A. Provide an estimate of the potential temporary and permanent population increase caused directly and indirectly by the project. Include applicable impacts to school districts, hospital or ambulance districts, fire districts, parks and recreational districts, etc.

Construction of the project would result in a temporary direct increase in construction jobs in the area. However, given the nature of project construction and schedule anticipated, the demand for construction employment would likely be met within the existing and future labor market in greater Stanislaus County and surrounding areas. If construction workers live outside of the immediate local area, these workers would likely commute during the temporary construction period and would not necessitate temporary or permanent housing. During construction, there may be a temporary increase in demand for emergency services at the site. However, short-term construction would not impact schools, parks or recreational facilities, or other similar services because no temporary or permanent population increase in the area would occur.

Operationally, the project would not introduce land uses or activities that typically result in direct population growth, such as new homes or large commercial/business centers. The project would not change the use of the existing TID Marshall substation. Upon completion of construction, the project would be operated remotely and would require periodic visits for operational maintenance throughout the year from personnel already in the area. As a source of back-up emergency power, the project would not indirectly contribute to an increase in population in the area. Rather, the project is intended to serve existing areas by improving local electric grid reliability and prevent power shutoffs or other interruptions of power provision during emergency events by siting additional energy generation at an existing energy infrastructure site. Therefore, the project would not result in a direct or indirect permanent population increase and thus, would not permanently impact school districts, hospital or ambulance districts, fire districts, parks and recreational districts, or other similar services.

3.9 Public Health

A. An assessment of the potential risk to human health from the project's hazardous air emissions using the Air Resources Board Hotspots Analysis and Reporting Program (HARP) (Health and Safety Code §§ 44360-44366) or its successor and Approved Risk Assessment Health Values. These values shall include the cancer potency values and noncancer reference exposure levels approved by the Office of Environmental Health Hazard Assessment (OEHHA Guidelines, Cal-EPA 2005).

Construction

The primary pollutant of concern related to exposure of sensitive receptors is diesel particulate matter generated by construction-related vehicles and equipment. The actual risk of adverse air quality effects depends on a person's current health status, the pollutant type and concentration, and the length of exposure to the polluted air. Health risk is a function of the concentration of contaminants in the environment and the duration of exposure to those contaminants. Health effects from toxic air contaminants are often described in terms of individual cancer risk, which is based on a 30-year lifetime exposure to toxic air contaminants (OEHHA 2015). Construction activities were modeled based on an approximately 5-month construction duration, which would be approximately 1% of the total exposure period used for typical health risk calculations. Additionally, concentrations of mobile-source diesel particulate matter emissions are typically reduced by 70% at a distance of approximately 500 feet (CARB 2005). The nearest sensitive receptor (residence) is approximately 2,700 feet east the project site. Due to the temporary nature of construction activities and the dispersive properties of diesel particulate matter, the nearest residential receptors would not be impacted regarding construction health risks.

Operations

The project would be subject to SJVAPCD permitting requirements. Pursuant to SJVAPCD Risk Management Policy APR-1905, all projects resulting in increases in hourly, daily, or annual potential to emit hazardous air pollutants must undergo a public health risk evaluation as part of the permit review process prior to any final decision on Authority to Construct or Permits to Operate (SJVAPCD 2015b).

APR-1905 requires implementation of Toxic Best Available Control Technology (T-BACT) when a new or modified emissions unit results in a greater than de minimus increase in cancer risk (greater than 1 in 1 million) or a greater than de minimus increase in noncancer risk (increase in hazard index of 1). Additionally, the SJVAPCD will not permit a project if the emissions unit results in an increase in the maximum excess cancer risk of 20 in 1 million or greater.

During the permitting process, the SJVAPCD will conduct a health risk assessment for the project. Compliance with the permitting process will ensure that operational emissions do not exceed applicable thresholds for health risk.

B. A map showing sensitive receptors within the area.

See Figure 3.6-1, Noise-Sensitive Receivers, and Figure 3.9-1, Surrounding Sensitive Receptors, for locations of sensitive receptors in proximity to the project site.

3.10 Soils and Geology

A. A map and written description of soil types and all agricultural land uses that will be affected by the proposed project.

As illustrated in Figure 3.2-1, the project site is underlain by Elsalado loam and Vernalis loam. The Elsalado soil series, which comprises the approximate western half of the site, consists of very deep soils formed in alluvium, derived from sandstone and shale, and located on alluvial fans on slopes of 0% to 2%. These soils are typically brown to grayish brown, slightly hard, slightly sticky, slightly plastic, fine to very fine loam, with a weak, subangular blocky structure, to a depth of 60 inches. These soils are generally dry from May to November and moist from mid-December to May. Elsalado soils are well-drained, have negligible to low runoff, and moderate permeability (National Cooperative Soil Survey 2000).

The Vernalis soil series, which comprises the approximate eastern half of the site (including the proposed generators location), consists of very deep soils on alluvial fans and floodplains, with slopes of 0% to 5%. These soils, which were derived from mixed rock sources, are brown, dark grayish brown, and yellowish brown clay loam, which are hard, friable, slightly sticky, and slightly plastic, to a depth of 62 inches. These soils are generally dry from April to late November, and moist from early December to March. The Vernalis soil series is well-drained, with moderately slow to moderate permeability (National Cooperative Soil Survey 2003).

The Elsalado soils are used for irrigated cropland, including field crops, row crops, and orchards. Commonly grown crops are tomatoes, beans, and apricots. However, some areas are used for urban land (National Cooperative Soil Survey 2000). The Vernalis soils are used mostly for growing irrigated crops, although some areas are used for livestock grazing and growing non-irrigated small grain (National Cooperative Soil Survey 2003). As indicated in Figure 3.5-4, the project site is considered vacant or disturbed land. Therefore, the proposed project would not displace existing agricultural land uses. Refer also to Section 3.5, Land Use, for an additional discussion of agricultural land.

B. A summary of the geology, seismicity, and geologic resources of the project site and related facilities.

The project site is along the western perimeter of the northern portion of the San Joaquin Valley, which constitutes the southern and larger portion of the Central Valley of California. The San Joaquin Valley is underlain by sediments transported from the surrounding mountains by the San Joaquin River and its tributaries, with surficial deposits consisting primarily of unconsolidated Quaternary sediments. The San Joaquin Valley occupies the southern part of the Great Valley structural trough, which is a 50-mile-wide by 400-mile-long alluvial plain in which deposition has occurred almost continuously since the Jurassic (about 160 million years ago) (CGS 2002).

The project site is east of the San Andreas Fault system of the San Francisco Bay area. No Holocene active (past 11,700 years) faults are in the vicinity of the project site. The closest Holocene active faults are the Greenville and Ortigalita Faults, approximately 19 miles west and 15 miles southwest of the project site, respectively (Figure 3.10-1, Regional Faults). The closest pre-Holocene/Quaternary (past 1.6 million years) fault is the San Joaquin Fault, approximately 1 mile southwest of the project site. This fault has been dated late Quaternary (past 700,000 years). Other regional pre-Holocene/Quaternary faults include the Vernalis, Midway, and Black Butte Faults, 12 to 26 miles northwest of the project site (CGS 2022a).

The project site could be subject to seismically induced ground shaking from an earthquake in the western part of Stanislaus County or within the San Andreas Fault system of the San Francisco Bay area to the west. Ground shaking is measured in terms of peak ground acceleration (PGA). The project site is in an area with an anticipated PGA of 0.45g (percent of gravity), which is the highest anticipated PGA in Stanislaus County. There is a 63% to 77% chance of one or more magnitude 6.7 to 7.0+ earthquakes occurring in the San Francisco Bay area in the next 30 years (California Earthquake Authority 2020; Stanislaus County 2015).

C. ***A map and description of all recognized stratigraphic units, geologic structures, and geomorphic features within two (2) miles of the project site. Include an analysis of the likelihood of ground rupture, seismic shaking, mass wasting and slope stability, liquefaction, subsidence, tsunami runup, and expansion or collapse of soil structures at the facility site.***

Stratigraphy

The project site is underlain by Holocene (less than 11,700 years old) alluvium, consisting of alluvial gravel, sand, and clay (Figure 3.7-1) (Dibblee and Minch 2007).

Seismicity and Seismic Ground Rupture

No Holocene active faults or Alquist–Priolo Earthquake Fault Zones, which mandate completion of a fault investigation for proposed habitable structures or critical infrastructure, traverse the project site (CGS 2022b). The closest Holocene active faults are the Greenville and Ortigalita Faults, approximately 19 miles west and 15 miles southwest of the project site, respectively (Figure 3.10-1). Therefore, the potential for damage due to fault rupture is considered negligible. In addition, completion of the project would not cause a regional fault to rupture.

As previously discussed, the project site could be subject to seismically induced ground shaking from an earthquake in the western part of Stanislaus County or within the San Andreas Fault system of the San Francisco Bay area to the west. The project site is in an area with an anticipated PGA of 0.45g (percent of gravity), which is the highest anticipated PGA in Stanislaus County. Proposed project improvements would be required to adhere to the seismic design requirements of the most current California Building Code (CBC). Incorporation of the seismic design standards and requirements in accordance with the most current version of the CBC would ensure that the proposed improvements do not result in catastrophic failure during strong seismically induced ground shaking. Although conformance with seismic design criteria does not constitute a guarantee or assurance that no structural damage would occur in the event of a large earthquake, adherence to seismic design criteria ensures that the potential for catastrophic failure is minimized. In addition, completion of the project would not cause seismic ground shaking to occur.

Liquefaction

Liquefaction occurs when loose, cohesionless, and water-saturated soils (generally coarse-grained sands and silt) are subjected to strong seismic ground motion that exceeds the frictional static forces of the grains within the soil. With such conditions, soils essentially behave more like a fluid than a solid, with a temporary reduction or loss of shear strength between grains. Improvements constructed on these soils may buckle, tilt, or settle when the soils liquefy. Liquefaction more often occurs in earthquake-prone areas underlain by young, sandy alluvium where the groundwater table is less than 50 feet below the ground surface.

The California Geological Survey has not evaluated the project site for liquefaction hazards under the Seismic Hazards Mapping Act (CGS 2022b). A review of well completion data indicates that domestic water wells in the vicinity of the site range in depth from 173 to 475 feet (DWR 2022), indicating that water production occurs well below a depth of 50 feet. However, it is unclear whether a shallow perched aquifer is also present beneath the site. As such, the potential for liquefaction at the site is unclear. Regardless, project construction would be completed in compliance with provisions of the CBC, which would require completion of a project-specific geotechnical report. In the event that the project-specific geotechnical report concludes that liquefaction is a potential issue, the project would be designed to mitigate any anticipated effects of liquefaction. In addition, completion of the project would not create conditions conducive to liquefaction, and thus cause or exacerbate the potential for liquefaction to occur.

Subsidence

Subsidence is the permanent collapse of the pore space within a soil or rock and downward settling of the earth's surface relative to its surrounding area. Subsidence can result from the extraction of water or oil, the addition of water to the land surface—a condition called "hydrocompaction," or peat loss. The compaction of subsurface sediment caused by the withdrawal or addition of fluids can cause subsidence. Land subsidence can disrupt surface drainage; reduce aquifer storage; cause earth fissures; damage buildings and structures; and damage wells, roads, and utility infrastructure. Although large areas of the Sacramento–San Joaquin Valley have recorded subsidence due to groundwater pumping and peat loss, there have been no recorded instances of subsidence in the project area (USGS 2022). Therefore, the potential for damage due to ground subsidence is low. In addition, completion of the project would not create conditions conducive to land subsidence.

Expansive Soils

Expansive soils are clay-rich soils that expand when water is added and shrink when dry. This continuous change in soil volume can cause foundations to move unevenly and crack. As previously discussed, the project site is underlain by Elsalado loam and Vernalis loam, which are well-drained and moderately permeable, indicating the soils are generally sandy. However, these soil types include clay loam that is slightly sticky and slightly plastic. Therefore, the potential exists for expansive soils to be present on site. Project construction would be completed in compliance with provisions of the CBC, which would require completion of a site-specific geotechnical report. In the event that expansive soils are encountered during the geotechnical investigation, typical remedial methods include overexcavation of clay-rich expansive soils and replacement with granular sandy soils, or construction with post-tension slabs, thus minimizing the potential for damage due to expansive soils. In addition, completion of the project would not create conditions conducive to soil expansion.

Collapsible Soils

Collapsible or compressible soils typically occur in recently deposited Holocene soils that were deposited in an arid or semi-arid environment. Soils prone to collapse are commonly associated with wind-laid sands, silts, alluvial fan sediments, and mudflow sediments deposited during flash floods. As previously discussed, the project site is underlain by Holocene alluvium, consisting of alluvial gravel, sand, and clay. As a result, collapsible soils may be present on site. However, project construction would be completed in compliance with provisions of the CBC, which would require completion of a site-specific geotechnical report. In the event that collapsible soils are encountered during the geotechnical investigation, typical remedial methods

include overexcavation of loose, unconsolidated soils and replacement with compacted, engineered fill, thus minimizing the potential for damage due to collapsible soils. In addition, completion of the project would not create conditions conducive to soil collapse.

Slope Stability

The topography of the project site is relatively flat. As a result, project construction would not undercut any slopes and potentially cause slope failure. Work required to connect the generator facility to the Marshall substation would include excavating and trenching for foundations and duct banks. There would be approximately 900 feet of trenching for pipe and electric conduit on the project site. Proposed trenches would range from 3 feet wide by 3 feet deep, to 6 feet wide by 6 feet deep. Trenching would be completed in accordance with federal and state OSHA regulations. OSHA requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area. With incorporation of proper trenching protocol, slope stability impacts in proposed trenches would be minimized.

Tsunami Runup

The project site is in the Central Valley, not in proximity to the Pacific Ocean. As a result, there is no potential for tsunami runup at the site.

3.11 Traffic and Transportation

A. Discuss the regional transportation setting, identifying the project location and major transportation facilities. Include a reference to the transportation element of any applicable local or regional plan.

The project site is on a parcel containing the existing TID substation, south of the community of Patterson in the southern unincorporated Stanislaus County. Interstate 5 and State Route (SR) 33 are the primary transportation corridors that provide regional access to Stanislaus County. Interstate 5 is west of the project site and can be accessed via ramps at Sperry Avenue north of the site and via ramps at Fink Road south of the project site. Average daily traffic on Interstate 5 between Sperry Avenue and Fink Road is 45,200 (Caltrans 2020). SR-33 is east of the project site and can be accessed via its intersection with Marshall Road. On SR-33, near Sperry Avenue, average daily traffic is 4,900 (Caltrans 2020). The roadway network in the vicinity of the project site consists of Ward Avenue and Marshall Road. Access to the proposed project would be via Marshall Road.

Marshall Road is an east/west roadway classified as a Major Collector per the County of Stanislaus's Circulation Element. It is constructed with unpaved shoulders on both sides of the roadway. The existing access driveway to the TID substation along this roadway would provide access to the proposed project. The stop-controlled intersections of Ward Avenue and SR-33 at Marshall Road would be used by worker and truck traffic to and from the project site. There is a railroad crossing at the SR-33/Marshall Road intersection.

The Stanislaus Regional Transit Authority operates 32 fixed-route transit services, intercity and commuter shuttle services, commuter shuttles, and Americans with Disabilities Act (ADA) complementary paratransit. A large portion of Stanislaus Regional Transit Authority's service area is within the Modesto-Ceres-Turlock area along SR-99; however, it also provides exclusive service between Modesto and the Patterson area via

Route 40, and the nearest bus stop is approximately 3.6 miles north of the project site along Salada Avenue. Route 45W operates between Gustine and Patterson, and the nearest bus stop is approximately 3 miles north of the project site along Sperry Avenue. Route 45E operates between Patterson and Turlock, and the nearest bus stop is approximately 3.6 miles north of the project site along Salada Avenue.

Stanislaus County has access to three passenger rail services: Bay Area Rapid Transit (BART), the Altamont-Commuter Express, and Amtrak. Amtrak service is closest to the project site and may be accessed locally at the Amtrak station off Parker Road (approximately 6 miles southeast of the project site). Route 25 also connects the Downtown Transit Center to the Modesto Amtrak Station.

Railroad freight operations in Stanislaus County include high-speed trains of the Burlington Northern and Santa Fe (BNSF) Railway and Union Pacific Railroad, and low-speed freight rail on the BNSF Railway, Union Pacific Railroad, Sierra Railroad, California Northern Railroad, Modesto and Empire Traction Company Railroad, and Tidewater Southern Railroad.

The Modesto City-County Airport is approximately 25 miles northeast from the project site in the City of Modesto. The NASA Crows Landing Airport and Test Facility is approximately 5.5 miles south of the project site.

The County of Stanislaus's General Plan Circulation Element (2016) depicts corridors for public mobility and access that are planned to meet the needs of the existing and anticipated population of Stanislaus County. Although the County of Stanislaus recognizes that the automobile is the primary transportation choice for most of its population, the Circulation Element also incorporates strategies intended to encourage land uses that support public transit and other transportation modes that will contribute to improved air quality in the future. The County of Stanislaus maintains a level of service (LOS) standard of LOS C or better for all County of Stanislaus roadways and intersections, except within the sphere of influence of a city that has adopted a lower level of service standard.

The Stanislaus Council of Governments 2022 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) specifies the policies, projects, and programs necessary over a 24-year period through 2046 to improve, manage, and maintain the region's transportation system. The region includes the cities and communities of Ceres, Hughson, Modesto, Newman, Oakdale, Patterson, Riverbank, Turlock, and Waterford, and Stanislaus County. The goals and objectives included in the Stanislaus Council of Governments RTP/SCS (StanCOG 2022) are related to mobility and accessibility, social equity, economic and community vitality, sustainable development pattern, environmental quality, safety and health, system preservation, smart infrastructure, resiliency and reliability, congestion management, and project delivery.

The proposed project is a temporary energy generation facility that would provide additional power generation capacity to provide adequate power supply throughout California during peak-demand (i.e., emergency) events. The proposed project would generate temporary construction trips for a short duration and nominal operational trips; therefore, it would not result in adverse impacts to any transportation facility in its vicinity, nor conflict with the adopted standards and policies included in the County of Stanislaus's Circulation Element or the region's 2022 RTP/SCS.

B. An evaluation of the project's potential impacts related to vehicle miles traveled (VMT).

The passage of Senate Bill 743 required the focus of transportation analysis change from level of service or vehicle delay to vehicle miles traveled (VMT) in California.[2] VMT is defined as "the amount and distance of automobile travel attributable to a project." "Automobile" refers to on-road passenger vehicles, specifically cars and light trucks. The Governor's Office of Planning and Research (OPR) has clarified in its Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018) that heavy-duty truck VMT is not required to be included in the estimation of a project's VMT. Other relevant considerations may include the effects of a project on transit and non-motorized traveled. Although a quantitative analysis of VMT is preferred per OPR's guidance, a qualitative analysis may be used if existing models or methods are not available to estimate VMT for the project being considered. Additionally, construction of a project may be evaluated qualitatively. The proposed project is in Stanislaus County. The County of Stanislaus or Stanislaus Council of Governments have not yet adopted VMT-specific guidelines; therefore, the following assessment is based on the OPR's Technical Advisory (OPR 2018). The anticipated construction and nominal operations and maintenance traffic generated by the project have been evaluated qualitatively.

The project would involve construction that would generate temporary construction-related traffic over 5 months and nominal operations traffic. As mentioned above, heavy vehicle traffic is not required to be included in the estimation of a project's VMT. Worker and vendor trips would generate temporary and short-term VMT; however, once construction is completed, the construction-related traffic and VMT would cease and return to pre-construction conditions. Additionally, the Air Quality and Greenhouse Gas analysis (Appendix B) accounts for the worker and truck trips during the construction period; therefore, a qualitative analysis for transportation purposes is considered adequate.

Project operations would not require personnel to be on site to maintain operations; the generators would be operated remotely. Personnel would visit the site periodically throughout the year for scheduled maintenance and to test-operate the generators once each month; up to 200 operational trips per year are anticipated. Therefore, the proposed project would result in nominal trips related to operations. Hence, operation of the proposed project can be screened out per OPR's guidelines that it would not generate 110 daily trips[3] or more, and project VMT would be considered de minimus.

[2] Pursuant to Senate Bill (SB) 743, the focus of transportation impact analysis under CEQA changed from level of service (LOS) or vehicle delay, to VMT. The related updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. This new methodology was required to be used statewide beginning July 1, 2020. The guidelines and thresholds apply to land use and transportation projects that are subject to CEQA analysis. The proposed project is not a land use or transportation project, and therefore neither Section 15064.3(b)(1) nor Section 15064.3(b)(2) of the CEQA Guidelines apply. Instead, the proposed project would be categorized under a Section 15064.3(b)(3) qualitative analysis. The updated CEQA Guidelines do not establish a significance threshold but recommend a threshold of significance for land use development (residential, office, and other land uses) and transportation projects. There is no significance threshold for construction or maintenance projects.

[3] This threshold ties directly to the OPR technical advisory and notes that CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines Section 15301(e)(2)). Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110–124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

C. An assessment of the construction and operation impacts of the proposed project on nearby transportation facilities. Also include anticipated project-specific traffic, estimated daily average and peak traffic trips and traffic/truck mix.

During construction, workers and trucks would access the project site from Marshall Road. Workers and trucks would use the vacant parcel of the TID substation facility during construction of the proposed project.

Construction and operation of the proposed project would generate relatively low daily and peak-hour trips. The Institute of Transportation Engineers' Trip Generation Manual does not contain trip rates for construction-related activities; therefore, trips generated from the peak phase of construction have been estimated using the project's air quality analysis (Appendix B). The estimated trip generation is primarily based on the number of construction employees or workers, as well as the quantity of vendor (material, equipment, or water trucks) and haul-related truck estimates. Each worker and truck would generate an average of two daily trips to/from the project site, one inbound and one outbound. All the workers were assumed to commute during the peak hours. Although some workers would likely carpool to the project site, to estimate the most conservative trip generation, it was assumed that each worker would drive separately. The construction work shift would generally occur between 7:00 a.m. and 5:00 p.m., but additional time maybe required after 5:00 p.m. It was assumed that vendor and haul truck traffic would be evenly distributed throughout the workday. However, it is expected that some restrictions during peak hours due to congestion could apply to truck traffic.

The project's construction traffic was estimated per phase of construction from the air quality analysis (Appendix B). Trip generation for workers and trucks is estimated for the peak phase of construction, which would occur for approximately 70 days. This would be during the trenching and generator installation phase when the maximum number of total worker and truck trips would be required. This peak construction month was established based on applying a passenger car equivalent conversion factor to truck trips. As shown in Table 10, the peak construction of the proposed project would generate 72 total daily trips, including 32 AM peak-hour trips and 32 PM peak-hour trips. Applying the passenger car equivalent conversion factor for trucks, the peak construction of the proposed project would generate 86 total daily trips, including 35 AM peak-hour trips and 35 PM peak-hour trips.

Table 10. Peak Phase Construction Trip Generation

Vehicle Type	Daily Quantity	Daily Trips1	AM Peak Hour			PM Peak Hour		
			In	*Out*	*Total*	*In*	*Out*	*Total*
Trip Generation								
Workers	30	60	30	0	30	0	30	30
Vendor Trucks	5	10	1	0	1	0	1	1
Haul Trucks	1	2	1	0	1	0	1	1
Total Trips		**72**	**32**	**0**	**32**	**0**	**32**	**32**
Trip Generation with PCE								
Workers (1.0 PCE)	30	60	30	0	30	0	30	30
Vendor Trucks (2.0 PCE)	5	20	2	0	2	0	2	2
Haul Trucks (3.0 PCE)	1	6	3	0	3	0	3	3
Total PCE Trips		**86**	**35**	**0**	**35**	**0**	**35**	**35**

Source: Appendix B
Note: PCE = passenger car equivalent
1 Daily trips are a total of all inbound and outbound trips and represent one-way trips per the air quality analysis.

All construction-related activities would occur on site, but for any obstruction in the City of Turlock's right-of-way due to the presence and use of construction vehicles and equipment, the applicant/contractor would prepare and implement a Temporary Traffic Control Plan. The plan would be prepared per the Work Area Traffic Control Handbook (WATCH)[4] and requirements of the County of Stanislaus's Public Works Department. The applicant/contractor would also obtain special permits for the movement of vehicles/loads exceeding statutory limitations from the California Department of Transportation (Caltrans).

As mentioned above, the proposed project would not require on site personnel to maintain the operations. Personnel would visit the site periodically throughout the year for scheduled maintenance and to test-operate the generators once each month; up to 200 trips per year are anticipated. Therefore, the proposed project would not result in a substantial number of daily trips related to operations.

The proposed project would generate temporary construction trips for a short duration and occasional operational trips. As shown in Table 10, based on the low trip generation potential of the project, the proposed project would not adversely affect the capacity of any transportation facility in its vicinity during project construction or operation.

3.12 Visual Resources

A. Explain the project's conformance with the city/county General Plan, and city municipal code or county government code (e.g., zoning) governing scenic quality.

As stated in Section 3.5, Land Use, the proposed project would not conflict with the regulations and policies of the Stanislaus County Code or Stanislaus County General Plan, and would not conflict with the allowable uses for the land use designation of Agriculture uses or General Agriculture zoning. Specifically, there are no regulations in the Stanislaus County Code (or Zoning Ordinance Code) specific to the preservation of scenic quality. Regarding Stanislaus County General Plan 2015, Goal One of the Conservation and Open Space Element is related to scenic quality in that it encourages the protection and preservation of natural and scenic areas throughout Stanislaus County (Stanislaus County 2016). Based on the established policies intended to implement and achieve Goal One, scenic areas are understood to be closely aligned with natural environments and areas supporting sensitive wildlife habitat and plant life. A map of key view locations and photographs of existing conditions of the site are shown in Figure 3.12-1A, Existing Conditions Key Map, and Figure 3.12-1B, Existing Conditions – Turlock Marshall Substation Site. Because the project site has been previously developed and is within the current fence line and footprint of the Marshall substation (which is surrounded by developed agricultural lands consisting of irrigated orchard lands), the project site is not considered scenic or a scenic area as described in the Stanislaus County General Plan. Although distant hilly and mountainous terrain west of the project site may display scenic qualities, there are no specific County of Stanislaus regulations or policies pertaining to the preservation of existing views, and project development would not result in substantial view blockage or degradation. Due to the anticipated scale of project components, including generators and transformers, as well as on account of the presence of existing steel and wood transmission and distribution support poles and miscellaneous hardware of the Marshall substation in the viewshed, implementation of the project would not result in

[4] The Work Area Traffic Control Handbook provides quick reference traffic control guidelines for work activities for contractors, cities, counties, utilities, and other agencies responsible for such work.

substantial view blockage or degradation, and would not conflict with any local regulations or policies governing scenic quality.

3.13 Water Resources

A. All the information required to apply for the following permits, if applicable, including:

- *Waste Discharge Requirements; National Pollutant Discharge Elimination System Permit(s); and/or a Section 401 Certification or Waiver from the appropriate Regional Water Quality Control Board (RWQCB);*
- *Construction and Industrial Waste Discharge and/or Industrial Pretreatment permits from wastewater treatment agencies;*
- *Nationwide Permits and/or Section 404 Permits from the U.S. Army Corps of Engineers, if applicable; and*
- *Underground Injection Control Permit(s) from the U.S. Environmental Protection Agency, California Geologic Energy Management Division (CalGEM), and RWQCB.*

The statutes that govern the potential project activities that may affect water quality are the federal CWA (33 USC 1251 et seq.) and the state Porter–Cologne Water Quality Control Act (Porter–Cologne Act; California Water Code Section 13000 et seq.). Section 402 of the CWA established the National Pollutant Discharge Elimination System (NPDES) regulations. The project site does not fall under a municipal stormwater permit area, and waste discharge requirements were not identified for the project site. Aquatic resources would not be affected during construction of the project or during operations; therefore, no CWA Section 401 Certification or Waiver or CWA Section 404 (Discharge of Dredged or Fill Material into Waters of the United States) would be required.

In California, stormwater discharges from industrial facilities are covered under the NPDES General Permit for Stormwater Discharges Associated with Industrial Activities. The Industrial General Permit requires implementation of management measures that would achieve the performance standard of best available technology economically achievable and best conventional pollutant control technology. The most recent Industrial General Permit (State Water Resources Control Board [SWRCB] Order No. 2014-0057-DWQ) was adopted on April 1, 2014, and became effective on July 1, 2015; it replaces the previous 1997 Statewide Permit for Industrial Stormwater (SWRCB Order No. 2014-0057-DWQ). Based on review of SWRCB's Stormwater Multiple Application and Report Tracking System (SMARTS) database (SWRCB 2022), the project site does not currently operate under an Industrial General Permit for its operations. It is not anticipated that an Industrial General Permit will be required for project operations.

Stormwater discharges associated with construction and land disturbance activities are covered under the NPDES Construction General Permit. The most recent Construction General Permit (SWRCB Order No. 2009-0009-DWQ) was adopted on September 2, 2009, and became effective on July 1, 2010 (the 2009 order has been administratively extended until a new order is adopted and becomes effective). A Construction General Permit is required for stormwater discharges from construction activities, including trenching for underground linear facilities, if land disturbance would be greater than 1 acre. The overall footprint of the proposed construction activities is estimated to be 70,000 square feet (i.e., 1.6 acres), with 900 feet of trenching (see Chapter 2, Project Design, Operation, and Location). Therefore, construction would require coverage under the Construction General Permit, which requires development and

implementation of a Stormwater Pollution Prevention Plan. The Stormwater Pollution Prevention Plan specifies water quality BMPs designed to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site. Routine inspection of all BMPs is required under the provisions of the Construction General Permit, and the Stormwater Pollution Prevention Plan must be prepared and implemented by qualified individuals as defined by the SWRCB.

Limited change to the existing project site would be needed during construction and operations. Trenching during construction would use all excavated material for backfill; no fill or dredge materials would be discharged to local waters. It is not anticipated that a permit under Section 404 of the CWA or certification per Section 401 would be needed. There would be no need for an injection well during construction or operations of the proposed project; therefore, an Underground Injection Control Permit would not be required.

B. A description of the hydrologic setting of the project.

The proposed project is within the jurisdiction of the Central Valley Regional Water Quality Control Board, which administers the Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan) and other water quality programs for the Central Valley Hydrologic Basin. The Central Valley region is separated into three basins that cover approximately one-fourth of California: Tulare Lake Basin, Sacramento River Basin, and San Joaquin River Basin. The Sacramento and San Joaquin River Basins flow through the Delta and into the San Francisco Bay, and provide 51% of California's water supply (CVR RWQCB 2019). The project site is within the San Joaquin River Basin, dominated by ephemeral streams and agricultural return flows (CVR RWQCB 2022). The Delta–Mendota Canal, an aqueduct, flows from the Delta to the northwest and past the project site along the southwest boundary. Surface runoff on the project site does not enter the aqueduct but is contained to on-site agricultural ditches and a detention basin in the northeast corner of the project site.

Table 11 shows the watersheds that encompass the project site as designated by the U.S. Geological Survey Watershed Boundary Dataset and the Basin Plan (USGS 2022b; CVR RWQCB 2019). These watersheds generally constitute the geographic basis around which many surface water quality problems and goals/objectives are defined in the Basin Plan. The project site is within the San Joaquin River hydrologic unit (Basin No. 5-022) and Lower San Joaquin River hydrologic area (Basin No. 5-022.02). The Northwest Side hydrologic subarea further defines the area encompassing the project site. The U.S. Geological Survey Watershed Boundary Dataset indicates that the project site is within the Pear Slough–San Joaquin River subwatershed (USGS 2022b).

Table 11. Watershed Designations by Agency/Source

Agency/Source	Hydrologic Unit Code/Basin No.	Analysis Scale	Name	Size (Square Miles)
USGS Watershed Boundary Dataset	180400	Basin	San Joaquin	15,824.86
	18040002	Subbasin	Lower San Joaquin River	917.57
	1804000202	Watershed	Crow Creek—San Joaquin River	286.71
	180400020205	Subwatershed	Pear Slough—San Joaquin River	171.05
	5	Regional Water Quality Control Board Region	Central Valley	60,000

Table 11. Watershed Designations by Agency/Source

Agency/Source	Hydrologic Unit Code/Basin No.	Analysis Scale	Name	Size (Square Miles)
Water Quality Control Plan for the Central Valley (Region 5)	5-022	Hydrologic Unit	San Joaquin River	15,880
	5-022.02	Hydrologic Area	Lower San Joaquin River	4,580
	—	Hydrologic Subarea	Northwest Side	574

Note: USGS = U.S. Geological Survey

C. A description of the water to be used and discharged by the project.

During construction, water may be used as a BMP for dust control on the project site. The project site is not paved, and water would only be used as necessary to wet the earth, so there would be no off-site discharge of water from the project site associated with dust control. Water would not be used during operations because the project generators would be cooled by air.

D. Identify all project elements associated with stormwater drainage

The project site generally slopes downward toward the northeast. The Delta–Mendota Canal and West Marshall Road, south-southwest of the project site, are raised above the Marshall substation. The project site and the dirt lot in the northeast are downgradient from the rest of the project site. Stormwater from the Marshall substation is directed toward drains that discharge to the detention basin in the northeast corner of the project site. An agricultural ditch is along the eastern boundary of the project site, separating the east-adjoining orchard. The project site is presently enclosed by an electrified chain-linked fence, which would not impact stormwater drainage of the project site. The area is covered primarily by decomposed granite, with some bare dirt spots. Stormwater is primarily contained to the project site, but excess flows toward the detention basin in the northeast corner of the project site. The proposed project would not impact any waterways, and does not propose any permanent stormwater drainage infrastructure (e.g., drains, pipes, culverts).

E. An impacts analysis of the proposed project on water resources. This discussion shall include:

- *The effects of project demand on the water supply and other users of this source;*
- *The effects of construction activities and facility operation on water quality and to what extent these effects could be mitigated by implementation of best management practices;*
- *The effects of the project on the 100-year flood plain, flooding potential of adjacent lands or water bodies, or other water inundation zones.*

The project would involve grading the project site and covering the generator location surfaces with crushed rock cement. Drainage would not be significantly impacted by the proposed project because the area would remain pervious and stormwater would not be discharged to a waterway. The proposed project would not require a water supply for operations, but may use water for dust control BMPs during construction. There is not a concern for water quality impairments because any water used would be contained to the project site and not be discharged to a waterway.

Flood zones for the 100-year floods are mapped in the Federal Emergency Management Agency's Flood Insurance Rate Maps. According to the Federal Emergency Management Agency maps, the project site would be impacted by a 100-year flood (FEMA 2022). The project site is within Flood Zone A, which does not have base flood elevations delineated by the Federal Emergency Management Agency (FEMA 2021). The project would not substantially block or redirect flood flows to the detriment of off-site properties, but discharge of pollutants would be a concern in the case of a 100-year flood. It is therefore recommended that the facility be designed in a manner that avoids being inundated in a 100-year flood (i.e., generators should be raised above the 100-year base flood elevation or be water-proofed).

3.14 Summary of Avoidance and Minimization Measures

Table 12 provides a summary of all BMPs, BACTs, and measures to be implemented during construction and operation as identified throughout Chapter 3.

Table 12. Avoidance and Minimization Measures

Measure	Timing Requirements	Related Section
Air Quality and Greenhouse Gas Emissions		
Authority to Construct. The Authority to Construct (ATC) was submitted to the San Joaquin Valley Air Pollution Control District (SJVAPCD) for the proposed project. The proposed project will comply with permitting requirements under the ATC Permit, including implementation of best available control technology (BACT).	Project operation	Section 3.1(A)
Greenhouse Gas Emissions Reduction Plan. The proposed project will comply with applicable measures in the California Department of Water Resources' (DWR) Greenhouse Gas Emissions Reduction Plan.	Project construction and operation	Section 3.1(F)
Best Management Practices (BMPs). The following DWR construction and maintenance BMPs will be implemented: • Minimize idling time by requiring that equipment be shut down after 5 minutes when not in use (as required by the State Airborne Toxics Control Measure [13 CCR Section 2485]). Provide clear signage that posts this requirement for workers at the entrances to the project site, and provide a plan for the enforcement of this requirement. • Maintain all construction equipment in proper working condition and perform all preventive maintenance. Required maintenance includes compliance with all manufacturer's recommendations, proper upkeep and replacement of filters and mufflers, and maintenance of all engine and emissions systems in proper operating condition. Maintenance schedules will be detailed in an Air Quality Control Plan prior to commencement of construction. • Implement a tire inflation program on the jobsite to ensure that equipment tires are correctly inflated. Check tire inflation when equipment arrives on site and every 2 weeks for equipment that remains on site. Check vehicles used for hauling materials off site weekly for correct tire inflation. Procedures for the tire inflation program will be documented in an Air Quality Management Plan prior to commencement of construction. • Develop a project-specific ride-share program to encourage carpools and shuttle vans, and provide transit passes and secure bicycle parking for construction worker commutes. • For deliveries to project sites where the haul distance exceeds 100 miles and a heavy-duty class 7 or class 8 semi-truck or 53-foot or longer box-type trailer is used for hauling, use a SmartWay certified truck to the maximum extent feasible. • Develop a project-specific construction debris recycling and diversion program to achieve a documented 50% diversion of construction waste. • Evaluate the feasibility of restricting all material hauling on public roadways to off-peak traffic congestion hours. During construction scheduling and execution, minimize, to the extent possible, uses of public roadways that would increase traffic congestion.	Project construction and operation	Section 3.1(F)

Table 12. Avoidance and Minimization Measures

Measure	Timing Requirements	Related Section
Biological Resources		
Nesting Birds. To avoid potential direct and indirect impacts to nesting birds, activities will be conducted outside of the nesting season (September through February). If not feasible and construction occurs during the nesting season (February through August), the following measures will be implemented to avoid or minimize impacts to nesting birds: • A qualified biologist will conduct a pre-construction survey for nesting birds no more than 2 days prior to ground-disturbing activities during the nesting season (February through August). The survey will cover the limits of construction and suitable nesting habitat within 500 feet of the project site for raptors and 100 feet for other nesting birds, as feasible and accessible. • If any active nests are observed during surveys, a qualified biologist will establish a suitable avoidance buffer from the active nest. The buffer distance will range from 50 to 500 feet and be determined based on factors such as the species of bird, topographic features, intensity and extent of the disturbance, timing relative to the nesting cycle, and anticipated ground disturbance schedule. Limits of construction to avoid active nests will be established in the field with flagging, fencing, or other appropriate barriers, and will be maintained until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist. • If project activities are delayed, additional nest surveys will be conducted such that no more than 7 days elapse between the prior survey and vegetation removal activities. • If an active nest is identified in or adjacent to the construction limits after construction has started, work in the vicinity of the nest will be halted until the qualified biologist can provide appropriate avoidance and minimization measures to ensure that the nest is not disturbed by construction. Appropriate measures may include a no-disturbance buffer until the birds have fledged and/or full-time monitoring by a qualified biologist during construction activities conducted near the nest. • If Swainson's hawks are observed nesting within 0.25 miles of the project site during the nesting bird survey, appropriate agencies will be consulted for guidance.	Project construction	3.2(E)
Cultural Resources and Tribal Cultural Resources		
Stop Work if Cultural Resources are Encountered. In the event that unanticipated cultural resources are encountered during construction activities, all construction work will immediately stop until DWR staff is notified and a qualified archaeologist can evaluate the sensitivity of the find and determine whether or not additional study is warranted. The level of sensitivity of the find will be assessed, and if warranted, additional efforts such as preparation of an archaeological treatment plan, testing, and/or data recovery, may be recommended prior to	Project construction	3.3(D)

Table 12. Avoidance and Minimization Measures

Measure	Timing Requirements	Related Section
allowing construction to proceed in this area. The potential for avoidance and/or preservation should also be the primary consideration. Should human remains be uncovered, all work must stop immediately, and the county coroner must be contacted pursuant to California Health and Human Safety Code 7050.5(b). The requirement for Native American monitoring to occur should be determined by DWR based on the results of tribal engagement.		
Hazardous Materials		
Soil Screening and Avoidance Measures. The following measures will be implemented: • Should project site construction require removal of site soils, soils will be screened prior to disposal or reuse to determine if pesticide- or herbicide-related compounds are above acceptable levels for the disposal or reuse facility. • Should project site construction require removal or disturbance of the agricultural pump concrete pad or surrounding soils, soils will be screened prior to removal, disposal, or reuse to determine if impacts are above acceptable levels for reuse or disposal. • A health and safety plan will be put in place to ensure worker safety protocols are established and followed during earthmoving and trenching activities. The plan will address both potential pesticide- and herbicide-related contamination and petroleum contamination around the agricultural pump. • Should the project site use change to residential or sensitive receptor use (such as healthcare, childcare, or schools), site soils may require evaluation to determine if there are pesticide- or herbicide-related compounds above applicable regulatory screening levels. • Should the proposed project require groundwater use, groundwater quality will be evaluated to determine if there are hazardous material impacts related to impacts associated with the western adjoining property operations.	Project construction	3.4(A)
Paleontological Resources		
Paleontological Monitoring. Prior to commencement of any grading activity on site, the California Department of Water Resources will retain a qualified paleontologist meeting the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The paleontologist will prepare a Paleontological Resources Impact Mitigation Program for the project. The Paleontological Resources Impact Mitigation Program will be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP 2010) and include the following elements: project description, requirements for preconstruction worker environmental awareness training, frequency of monitoring based on grading plans and/or geotechnical reports, salvage protocols, reporting, and collections management. The qualified paleontologist or a qualified monitor meeting the SVP (2010) guidelines will be on site during all rough grading and other significant ground-disturbing activities below a depth of 10 feet below the existing ground	Project construction	3.7(D)

Table 12. Avoidance and Minimization Measures

Measure	Timing Requirements	Related Section
surface in previously undisturbed Pleistocene-age deposits and/or Modesto Formation. If excavations below 10 feet are not impacting previously undisturbed Pleistocene-age deposits and/or Modesto Formation, as determined by the qualified paleontologist, spot-check monitoring will ensue. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of the paleontological resources. The area of discovery will be roped off with a 50-foot-radius buffer to document and collect the fossils. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find. No monitoring is required during excavations that the paleontologist determines are within artificial fill (i.e., previously disturbed sedimentary deposits).		
Public Health		
Compliance with Authority to Construct Permit. During the permitting process, the San Joaquin Valley Air Pollution Control District will conduct a health risk assessment for the project. Compliance with the permitting process will ensure that operational emissions do not exceed applicable thresholds for health risk.	Project operation	3.9(A)
Traffic and Transportation		
Temporary Traffic Control Plan. DWR will prepare and implement a Temporary Traffic Control Plan. The plan would be prepared per the Work Area Traffic Control Handbook (WATCH) and requirements of the County of Stanislaus's Public Works Department. DWR will also obtain special permits for the movement of vehicles/loads exceeding statutory limitations from the California Department of Transportation (Caltrans) as necessary.	Project construction	3.11(C)
Water Resources		
Construction General Permit. The project will require coverage under the Construction General Permit, which requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP will be prepared and implemented by a qualified individual as defined by the State Water Resources Control Board (SWRCB), and will specify water quality best management practices (BMPs) designed to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site.	Project construction	3.13 (A)

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4 Compliance with Laws, Ordinances, Regulations, and Standards

Provide tables which identify:

A. Laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and

B. Each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state, and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.

Table 13 provides a non-exhaustive summary of applicable laws, regulations, ordinances, and standards relevant to the project, and discusses project consistency with each item. Where appropriate, the project consistency discussion refers to the analysis provided in Chapter 3, Environmental Information. Otherwise, project consistency may be directly discussed in the table.

Table 13. Applicable Laws, Regulations, Ordinances, and Standards

Applicable Laws, Regulations, Ordinances, and Standards	Project Consistency
Air Quality and Greenhouse Gas Emissions	
Federal Clean Air Act – National Ambient Air Quality Standards	**Consistent.** See Section 3.1. The project was evaluated against San Joaquin Valley Air Pollution Control District (SJVAPCD) thresholds adopted to determine a project's consistency with attainment plans for achieving federal and state ambient air quality standards and was found to be less than significant. Furthermore, the project would comply with all federal regulations through the New Source Review permitting process.
Federal Hazardous Air Pollutants – National Emission Standards for Hazardous Air Pollutants (HAPs)	**Consistent.** See Section 3.1 and Section 3.9. The project would comply with national emissions standards for HAPs through the New Source Review permitting process. The SJVAPCD would prepare a health risk assessment and require Toxic Best Available Control Technology (T-BACT) to reduce risk if necessary.
California Clean Air Act – California Ambient Air Quality Standards	**Consistent.** See Section 3.1. The project was evaluated against SJVAPCD thresholds adopted to determine a project's consistency with attainment plans for achieving federal and state ambient air quality standards and was found to be less than significant.
San Joaquin Valley Air Pollution Control District (SJVAPCD) Regulation II Permits, Rule 2010 Permits Required Rule	**Consistent.** See Section 3.1. The project would submit an Authority to Construct application in accordance with Rule 2010.

Table 13. Applicable Laws, Regulations, Ordinances, and Standards

Applicable Laws, Regulations, Ordinances, and Standards	Project Consistency
SJVAPCD Regulation II Permits, Rule 2201 New and Modified Stationary Source Review Rule	**Consistent.** See Sections 3.1 and 3.9. The project would submit an Authority to Construct permit application and would follow the SJVAPCD permitting process.
SJVAPCD Regulation IV Prohibitions, Rule 4001 New Source Performance Standards	**Consistent.** See Sections 3.1 and 3.9. Through the permitting process, the project would comply with new source performance standards.
SJVAPCD Regulation IV Prohibitions, Rule 4002 National Emission Standards for Hazardous Air Pollutants	**Consistent**. See Sections 3.1 and 3.9. Through the permitting process the project would comply with HAPs standards.
SJVAPCD Regulation IV Prohibitions, Rule 4101 Visible Emissions	**Consistent**. See Sections 3.1 and 3.9. Through the permitting process the project would comply with visible emission limits.
SJVAPCD Regulation IV Prohibitions, Rule 4102 Nuisance	**Consistent**. See Sections 3.1 and 3.9. Through the permitting process the project would comply with prohibitions of discharges of air contaminants.
SJVAPCD Regulation IV Prohibitions, Rule 4703 Stationary Gas Turbines.	**Consistent**. See Sections 3.1 and 3.9. Through the permitting process the project would comply with standards established for stationary gas turbines.
SJVAPCD Regulation VIII Fugitive Dust Prohibitions, Rule 8021.	**Consistent.** See Sections 3.1 and 3.9. The project would comply with Regulation VIII and implement best management practices to limit fugitive dust impacts.
Biological Resources	
Federal Endangered Species Act	**Consistent**. See Section 3.2. The analysis considered special-status plant and wildlife species, which are defined as those that are listed, proposed for listing, or candidates for listing as threatened or endangered under the federal Endangered Species Act.
Migratory Bird Treaty Act	**Consistent.** See Sections 3.2(D) and 3.2(E). The project includes measures to minimize impacts to birds protected under the Migratory Bird Treaty Act.
California Endangered Species Act	**Consistent.** See Section 3.2. The analysis considered special-status plant and wildlife species, which are defined as those that are listed or candidates for listing as threatened or endangered under the California Endangered Species Act.
California Fish and Game Code, Sections 3503, 3503.5, 3511, 3513	**Consistent.** See Sections 3.2(D) and 3.2(E). The project includes measures to minimize impacts to birds protected under California Fish and Game Code Sections 3503, 3503.5, 3511, and 3513.
California Fish and Game Code, Section 4150	**Consistent.** See Section 3.2. The analysis considers mammals protected under the California Fish and Game Code.
California Fish and Game Code Section 1602 – Lake and Streambed Alteration Agreement	**Consistent.** See Section 3.2. The project would not alter any river, stream, or lake.
Cultural Resources and Tribal Cultural Resources	
National Register of Historic Places (NRHP)	**Consistent.** See Section 3.3 and Appendix D. The submitted records search includes a review of the NRHP. The analysis in Section 3.3 considers recorded and eligible resources.

Table 13. Applicable Laws, Regulations, Ordinances, and Standards

Applicable Laws, Regulations, Ordinances, and Standards	Project Consistency
California Register of Historical Resources	**Consistent.** See Section 3.3 and Appendix D. The submitted records search includes a review of the California Register of Historical Resources.
California Health and Safety Code, Section 7050.5	**Consistent.** See Section 3.3 and Appendix D. Unanticipated discovery of human remains would comply with California Health and Safety Code Section 7050.5 requirements.
National Park Service - Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines	**Consistent.** See Section 3.3 and Appendix D. All field practices were executed in accordance with Office of Historic Preservation professional standards and conducted under the direction of an archaeologist who meets the Secretary of Interior's standards.
California Natural Resources Agency's Tribal Consultation Policy and DWR's Tribal Engagement Policy	**Consistent.** See Sections 3.3(C) and 3.3(D), and Appendix D. Letters were sent to tribal groups consistent with the requirements of these policies.
Hazardous Materials	
Title 40 USC, Chapter 1, Subchapter I, Parts 260-265 – Solid Waste Disposal Act/ Federal Resource Conservation and Recovery Act of 1976; Title 19 CCR, Chapter 2, Subchapter 3, Sections 2729–2734/California Health and Safety Code (HSC) Division 20, Chapter 6.95, Sections 25500–25520 Title 22 CCR, Division 4.5 – Environmental Health Standards for the Management of Hazardous Waste; Title 22 California HSC, Division 20, Chapter 6.5 – California Hazardous Waste Control Act of 1972; 19 CCR 2735.1 et seq – California Accidental Release Prevention Program	**Consistent.** Project operation and construction would manage solid wastes, including hazardous wastes, as required by this rule. Hazardous wastes generated on the project site would be documented, stored, transported, and disposed of in accordance with this and local laws. Both federal hazardous waste characteristics and state hazardous waste characteristics apply.
Title 14 CCR, Division 7, Chapter 8.2 – Electronic Waste Recovery and Recycling Act of 2003	**Consistent.** Universal wastes, such as batteries and light bulbs, and electronic wastes would be transported and disposed of appropriately during construction and operation of the project.
Title 40 USC, Chapter 1, Subchapter D, Part 112 – Oil Pollution Prevention; Title 22 California HSC, Division 20, Chapter 6.67, Sections 25270 to 25270.13 – Aboveground Petroleum Storage Act	**Consistent.** A Spill, Prevention, Control, and Countermeasure Plan would be prepared for any aboveground petroleum or oil storage of more than 1,320 gallons. Aboveground petroleum storage of more than 10,000 gallons would also comply with the Aboveground Petroleum Storage Act.
Title 40 USC, Chapter 1, Subchapter C, Part 61 – National Emission Standards for Hazardous Air Pollutants, Subpart M – National Emission Standard for Asbestos; Enforcement of the NESHAP Regulation, HSC Section 39658(b)(1); Contractors State License Board; Title 15 USC, Chapter 53, Subchapter I, Section 2601 et seq. – Toxic Substances Control Act of 1976	**Consistent.** A licensed contractor would conduct asbestos surveys and abate asbestos-containing materials should they be identified in materials scheduled for removal during project construction or operation.

Table 13. Applicable Laws, Regulations, Ordinances, and Standards

Applicable Laws, Regulations, Ordinances, and Standards	Project Consistency
Title 42 U.S. Code of Federal Regulations, Chapter 116 – Emergency Planning and Community Right-to-Know Act; HSC, Division 20, Chapter 6.11, Sections 25404- 25404.9 Sections– Unified Hazardous Waste and Hazardous Materials Management Regulatory Program	**Consistent.** Storage of hazardous materials on the project site at or above reportable quantities would be reported to the local Certified Unified Program Agency (CUPA). The local CUPA administers multiple programs as the CUPA.
U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSLs); Human Health Risk Assessment Note 3 – DTSC Modified Screening Levels (DTSC-SLs); Environmental Screening Levels (ESLs)	**Consistent.** Screening levels established by the EPA, Department of Toxic Substances Control (DTSC), and State Water Resources Control Board would be used in the event that contaminated soils are identified. Applicable screening levels for the proposed use of the project site would be used to evaluate if remediation or contaminated material removal is required.
Title 29 USC, Part 1910 et seq. – Occupational Safety and Health Administration (OSHA) Standards; Title 29 USC, Part 1926 et seq. – Safety and Health Regulations for Construction; Title 8 CCR – Safety Orders	**Consistent.** Construction and operational workers would be protected under federal and state OSHA rules and regulations, and operators of the project site would comply with these rules and regulations.
Title 49 USC, Part 172, Subchapter C – Shipping Papers; Title 13 CCR, Division 2, Chapter 6 – Transportation of Hazardous Waste	**Consistent.** Hazardous wastes generated on the project site during construction and operation, if any, would be documented and transported by licensed transporters for off-site disposal to appropriately licensed disposal facilities.
California Health & Safety Code Sections 124125 to 124165; California Health & Safety Code Sections 105275 to 105310; California Health & Safety Code Section 105250; California Civil Code Section 1941.1; California Health & Safety Code Sections 17961, 17980, 124130, 17920.10, 105251 to 105257; California Civil Code Sections 1102 to 1102.16; California Education Code Sections 32240 to 32245; California Labor Code Sections 6716 to 6717; California Health & Safety Code Sections 116875 to 116880; California Health & Safety Code Sections 105185 to 105197	**Consistent.** Structures and materials on the project site scheduled for demolition or removal would be surveyed for lead-based paints and, if present, would be abated. Survey and abatement would be conducted by a licensed contractor. Removed materials would be transported and disposed of in accordance with applicable laws and regulations.
San Joaquin Valley Air Pollution Control District Rule 4301, 4601, 4603, 4623	**Consistent.** Operation of fuel burning equipment, such as furnaces and heaters, architectural and metal coatings applied during construction, and organic liquids (such as petroleum products) stored during construction and operation on the project site will comply with applicable laws and regulations.

Table 13. Applicable Laws, Regulations, Ordinances, and Standards

Applicable Laws, Regulations, Ordinances, and Standards	Project Consistency
Land Use	
Stanislaus County General Plan 2015	**Consistent.** The project is consistent with applicable policies pertaining to public utilities that direct the safe and compatible development of public facilities. Because the proposed project would be developed within the property of an existing public facility and would support existing energy infrastructure, the proposed project would not conflict with these policies. Additionally, the proposed project would be consistent with guidance for the development within Agriculture land use designations.
County of Stanislaus County Code	**Consistent.** The proposed project is consistent with the allowable uses and development standards for General Agriculture zones as established by the Stanislaus County Code.
Noise	
Chapter 10.46 of the Stanislaus County, California County Code	**Consistent.** See Section 3.6(D). Operational noise from the project would be in compliance with County of Stanislaus's noise regulations.
Paleontological Resources	
Paleontological Resources Protection Act of 2009, Federal Land Policy Management Act of 1976, and National Environmental Policy Act of 1969 (if federal nexus)	**Consistent**. See Section 3.7, Paleontological Resources, which discusses the potential for the project to impact paleontological resources and provides measures for minimization of impacts.
Population and Housing	
N/A	
Public Health	
Refer above to Air Quality and Greenhouse Gas Emissions.	
Soils and Geology	
Federal Earthquake Hazards Reduction Act	**Consistent.** See Section 3.10(C), which provides an analysis of potential geologic hazards and standard compliance relevant to the project.
Federal and State Occupational Safety and Health Administration Regulations	**Consistent.** See Section 3.10(C), which provides an analysis of potential geologic hazards and standard compliance relevant to the project.
California Building Code	**Consistent.** See Section 3.10(C), which provides an analysis of potential geologic hazards and standard compliance relevant to the project.
California Seismic Hazards Mapping Act	**Consistent.** See Section 3.10(C), which provides an analysis of potential geologic hazards and standard compliance relevant to the project.
Traffic and Transportation	
County of Stanislaus General Plan Circulation Element Adopted 2016	**Consistent**. See Section 3.11(A) for a discussion of compliance with applicable transportation plans.

Table 13. Applicable Laws, Regulations, Ordinances, and Standards

Applicable Laws, Regulations, Ordinances, and Standards	Project Consistency
2022 Regional Transportation Plan & Sustainable Communities Strategy Plan, Stanislaus Council of Governments, Adopted 2022	**Consistent**. See Section 3.11(A) for a discussion of compliance with applicable transportation plans.
Governor's Office of Planning and Research (OPR) has clarified in its Technical Advisory on Evaluating Transportation Impacts in CEQA, \ December 2018	**Consistent.** See Section 3.11(B) for analysis of VMT impacts consistent with OPR Technical Advisory.
Visual Resources	
Stanislaus County General Plan	**Consistent.** See Section 3.12 for relevant analysis.
Water Resources	
Clean Water Act (CWA) – Section 404	**Consistent**. See Section 3.13(A). The site was previously regulated under CWA Section 404 for the construction of the Marshall substation. The permit was terminated in 2009. It is anticipated that a Construction General Permit under Section 404 of the CWA would be required for the proposed project.
Clean Water Act – Section 401	**Consistent.** See Sections 3.13(A) and 3.13(E). It is not anticipated that certification per Section 401 of the CWA would be needed.
Clean Water Act – Section 402 / Porter-Cologne Water Quality Control Act	**Consistent.** Compliance with the Construction General Permit will be required because land disturbance will be greater than 1 acre.

Table 14 provides a list of anticipated permits, leases, and approvals outside of DWR.

Table 14. Anticipated Permits, Leases, and Approvals

Agency	Permit, Lease, and/or Approval
California Department of Transportation (Caltrans)	If applicable, the project's contractor will complete and submit an application for a Transportation Permit that is required to obtain special permits for the movement of vehicles/loads exceeding statutory limitations on the size, weight, and loading of vehicles contained in Division 15 of the California Vehicle Code from Caltrans.
Stanislaus County	If applicable, the contractor will prepare a Temporary Traffic Control Plan per the Work Area Traffic Control Handbook (WATCH) and/or follow the requirements of an Encroachment and/or Transportation Permit per Stanislaus County Public Works.
San Joaquin Valley Air Pollution Control District	Authority to Construct or Permits to Operate.

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