5.17 Utilities and Service Systems

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Sanger Substation Expansion Project (proposed project) proposed by Pacific Gas and Electric Company (PG&E, or the applicant) with respect to utilities and service systems.

5.17.1 Environmental Setting

The proposed project would be part of PG&E's existing electrical system that serves the metropolitan area of Fresno County, California. The Sanger Substation expansion area, powerline reconfiguration, and microwave telecommunication tower work would be located within unincorporated Fresno County. The installation of microwave dish antennas at the Fence Meadows Communications Site would be located within the Sierra National Forest.

Water Supply

Sierra National Forest

Water in the Sierra National Forest comes directly from surface and groundwater in the Forest's 28 watersheds. Most is used off-Forest for irrigation in the San Joaquin Valley. Approximately 6,700 acre feet are used in the Forest annually. The most important uses of water are non-consumptive, including the generation of electricity through hydropower (USFS 1991).

Fresno County

Water in Fresno County is supplied through complex systems of local groundwater and surface water management and delivery. Water supply is managed by a combination of public and private water agencies, including the United States Department of the Interior Bureau of Reclamation, cities, water and flood control districts, local irrigation districts, and utility companies. The 15 incorporated cities within Fresno County have municipal water systems, and approximately 370 entities provide domestic water in the unincorporated county (Fresno County 2000a). Private wells are used to pump groundwater in rural parts of Fresno County. The Consolidated Irrigation District provides irrigation water to the majority of the agricultural lands in the proposed project vicinity (Provost and Pritchard Engineering Group, Inc. 2010). The only surface water feature in the project vicinity is a bermed agricultural ditch that adjoins the private road north of the Sanger Substation expansion area (Provost and Pritchard Engineering Group, Inc. 2010). Currently, row crops that are planted in the proposed substation expansion area require 18.2 acre-feet (5.9 million gallons) of water per year of irrigation from an on-site groundwater well; this water demand would cease prior to the onset of proposed project construction.

City of Sanger

Water required for construction of the proposed project may be supplied by the City of Sanger. Groundwater is the sole source of water supply for the City of Sanger. Currently, there is no limit to the quantity of water that the City of Sanger may extract (Mulligan 2016). As cited in the 2005 Urban Water Management Plan, the City of Sanger is capable of producing 14,458 acre-feet (4.7 billion gallons) of water per year from eight wells. Due to mechanical issues and calcification of well casings, actual capacity may be slightly less (Mulligan 2016). Current demand is 5,364 acre-feet (1.7 billion gallons) of water per year (City of Sanger 2016a).

City of Fowler

Water required for construction of the proposed project may be supplied by the City of Fowler. Groundwater is the sole water supply for the City of Fowler and the city has six active wells and one on

standby with the state. Currently, there is no limit to the quantity of water that the City of Fowler may extract, and the maximum daily production is approximately 3.1 billion gallons per year (Weisser 2016a). In 2015, the city pumped 1,692 acre-feet (551,500 million gallons) of water and 2,011 acre-feet (655,400 million gallons) in the previous year (Weisser 2016b).

Sunnyside Farms

Current water use at the expanded substation site (currently Sunnyside Farms) is for row crops, which use about 2.6 acre-feet per acre per year. With about 7 acres in the expansion area, use across the expansion area is about 18.2 acre-feet per year. Water is obtained from a groundwater well at the site (PG&E 2015).

Wastewater

All incorporated cities within Fresno County are served by local sewage collection and treatment systems. Fresno County owns and operates 11 wastewater treatment facilities on behalf of water works districts and county service areas. Rural areas that are not served by centralized wastewater systems typically rely on individual septic systems for wastewater treatment and disposal. Accumulated solids pumped from the proposed project site may be disposed of at the Fresno-Clovis Regional Wastewater Reclamation Facility. The Fresno-Clovis Regional Wastewater Reclamation Facility's capacity is 80 million gallons per day, and currently, on average, the Facility receives 68 million gallons of wastewater per day (City of Sanger 2016b).

Stormwater

The proposed project area is located in a level agricultural field 5 miles west of the Kings River. The proposed project area is not served by an existing stormwater drainage system. Rainwater runoff from the existing Sanger Substation percolates into the soil or drains to nearby roadside ditches. There is also a retention pond at the existing substation site, which may collect rainwater and runoff from the substation area during heavy rain events.

Solid Waste Disposal

Waste Management, Inc., located at 4333 E. Jefferson Avenue in Fresno, California, provides solid waste collection and recyclable material processing services to the proposed project area (Waste Management, Inc. 2016). Table 5.17-1 provides details about the two closest landfills to the project area.

Table 5.17-1 Landfills Serving the Project Area

Landfill	Maximum Throughput (Tons/Day)	Maximum Permitted Capacity (Cubic Yards)	Remaining Capacity Cubic Yards/ Date	Expected Closing Date	Location	Wastes Accepted
City of Clovis Landfill	2,000	7,800,000	7,740,000 / August 01, 2012	2047	15.3 miles northwest of substation expansion area.	Industrial and municipal waste
American Avenue Disposal Site	2,200	32,700,000	29,358,535 /July 29, 2005	2031	29.2 miles southwest of substation expansion area.	Agricultural, asbestos, construction/ demolition, industrial, mixed municipal, and tires; treated wood waste

Source: CalRecycle 2016a, 2016b.

The Fresno County Resources Division is responsible for developing, implementing, and administering a range of county-wide solid waste management programs, including the County's Business Waste Assessment Program and Recycling Market Development Zone Program (Fresno County 2016).

Electricity and Natural Gas

Electrical power and natural gas service in Fresno County is provided by PG&E. The existing Sanger Substation is a part of the Central Valley 115-kilovolt transmission system that supplies hydro- and natural-gas-generated electricity to other substations in the region.

5.17.2 Regulatory Setting

Federal

The Sierra National Forest's Land and Resource Management Plan (LRMP) contains goals and management direction which enable the U.S. Forest Service (USFS) to manage the Forest for a mix of activities, allow use and protection of resources, fulfill its legislative requirements and address Regional and National issues. The LRMP does not contain regulations applicable to the project related to utilities and service systems in the Sierra National Forest.

State

Integrated Waste Management Act

The Integrated Waste Management Act of 1989 (Assembly Bill 939) requires cities and counties to reduce, by 50 percent, the amount of solid waste disposed of in landfills by the year 2000 and beyond. The Waste Management Plan and Waste Log required as part of the Fresno County's Construction and Demolition Debris Recycling Program are designed to assist with the county's compliance with the state mandate and provide builders with a means of documenting the waste reduction requirements included in the California Green Building Standards Code (Fresno County 2016). The California Department of Resources Recycling and Recovery (CalRecycle) reports that in 2006 unincorporated Fresno County's Biennial Review Status for solid waste diversion was "Compliance Fulfilled," indicating that the county's compliance schedule has been fulfilled. CalRecycle has not approved a diversion rate for the county due to inaccurate base year data or other issues (CalRecycle 2006).[1]

Local

County of Fresno Water Conservation Ordinance

The 2014 County of Fresno Water Conservation Ordinance (Chapter 14.01 "Water Conservation") establishes regulations for the conservation of water under specific stages of water conservation severity including Normal Water Conservation, Water Conservation Stage Two (Significant Water Shortage Emergency Condition), Water Conservation Stage Three (Critical Water Shortage Emergency Condition), and Water Conservation Stage Four (Severe Water Shortage Emergency Condition). Regulations include:

- Restricted and under some conditions prohibits watering lawns, ground cover, and landscaping.
- Requires that sprinklers must be adjusted to not allow any water to flow into any street.

[1] Beginning with reporting year 2007 jurisdiction annual reports, diversion rates are no longer determined and reported by CalRecycle (CalRecycle 2012).

- Construction operations receiving water supplied by the County shall not use water for any purpose other than those required by the regulatory agency.
- Restricted and regulated washing of vehicles and mobile equipment (Fresno County 2014).

County of Fresno General Plan

The Fresno County General Plan contains several policies and implementation programs relating to water supply and water use, wastewater collection, treatment, and disposal, and landfills, transfer stations, and solid waste processing facilities. Specifically, the following goals are relevant to the proposed project:

- ***Goal PF-C:*** *To ensure the availability of an adequate and safe water supply for domestic and agricultural consumption*
- ***Goal PF-D:*** *To ensure adequate wastewater collection and treatment and the safe disposal of wastewater*
- ***Goal PF-F:*** *To ensure the safe and efficient disposal or recycling of solid waste generated in the county in an effort to protect the public health and safety (Fresno County 2000b).*

5.17.3 Environmental Impacts and Assessment

Applicant Proposed Measures

The applicant has not incorporated applicant proposed measures into the proposed project to specifically minimize or avoid impacts on public utilities and service systems. A list of all project APMs is included in Table 4-5.

Impacts on Utilities and Service Systems

Table 5.17-2 includes the significance criteria from Appendix G of the California Environmental Quality Act Guidelines' utilities and services section to evaluate the environmental impacts of the proposed project.

Table 5.17-2 Utilities and Service Systems Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐

Table 5.17-2 Utilities and Service Systems Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

a. Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Construction

LESS THAN SIGNIFICANT IMPACT

Substation project construction activities would generate minimal wastewater during the 24- to 30-month construction period. Construction activities at the Fence Meadow Repeater Station would also generate minimal wastewater during the approximately one-week construction period. Construction crews would use portable toilets during construction activities, which would generate a small amount of wastewater. Given ~~that~~ the small number of construction workers, ~~would be from the local area,~~ there would be a negligible~~, if any, net~~ change in wastewater generated and treated in the area due to the proposed project. The small amount of wastewater generated would be pumped by qualified contractors and disposed of in accordance with applicable regulations and codes. Although construction of the proposed project would generate wastewater, construction of the proposed project would not exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board. Impacts would be less than significant.

Operation and Maintenance

NO IMPACT

Operation of the expanded Sanger Substation, reconfigured power lines, and microwave dish antennas would not result in any new wastewater generation. The proposed project would not exceed wastewater treatment requirements established by the Central Valley Regional Water Quality Control Board. Operations and maintenance activities would be similar to current activities. There would be no impact during operation and maintenance.

b. Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Construction

NO IMPACT

Substation project construction activities would generate minimal wastewater during the 24- to 30-month construction period. Construction activities at the Fence Meadow Repeater Station would also generate minimal wastewater during the approximately one-week construction period. Construction crews would use portable toilets during construction activities, which would generate a small amount of wastewater. Given ~~that~~ the small number of construction workers, ~~would be from the local area,~~ there would be a negligible~~, if any, net~~ change in wastewater generated and treated in the area. The small amount of wastewater generated would be pumped by qualified contractors and disposed of at existing facilities. No construction of new water or wastewater treatment facilities or expansion of existing facilities would be required. There would be no impact.

Operation and Maintenance

NO IMPACT

Operation of the expanded Sanger Substation, reconfigured power lines and microwave dish antennas would not result in any new wastewater generation. Operations and maintenance activities would be similar to current activities. Operation of the proposed project would not therefore result in construction of new water or wastewater treatment facilities or expansion of existing facilities. There would be no impact during operation and maintenance.

c. Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Construction

LESS THAN SIGNIFICANT IMPACT

PG&E would construct a stormwater detention basin on the expanded substation site. Runoff would drain from the substation site into the stormwater retention basin and then would filter through soils or would evaporate. The new basin would be designed to have capacity to handle all runoff from the expanded substation pad. Impacts from construction of the detention basin, such as sedimentation, are included and fully addressed by resource area within this IS/MND. Stormwater drainage from the proposed project site would be fully contained and percolated into the ground on site; therefore, stormwater would not be connected to or exceed the capacity of the existing, local storm drainage system, and no construction or alteration of stormwater facilities would be required. Impacts would be less than significant with mitigation, as addressed in other resource sections of this IS/MND.

There would be no change to storm water drainage facilities and therefore no impact related to new or expanded storm water drainage facilities at the Fence Meadow Repeater Station site.

Operation and Maintenance

NO IMPACT

Operation and maintenance of the proposed project would not require construction or alteration of stormwater drainage facilities beyond the onsite stormwater retention basin being constructed as part of the proposed project at the substation site. During operation, the stormwater retention basin would reduce impacts associated with stormwater such that no additional facilities would be needed. No facilities would be constructed at the Fence Meadow Repeater Station site. Therefore, there would be no impact.

d. Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Construction

LESS THAN SIGNIFICANT IMPACT

During the 24- to 30-month substation construction period, a total of approximately 1 million gallons of water would be used for dust suppression, compaction, concrete work, and fire protection services on the construction site. Potable water would also be brought on site for the 30-person construction crew's consumption. All water would be trucked in from outside sources in the project vicinity. PG&E anticipates that the water required for expansion of the substation would be purchased from the City of Sanger or the City of Fowler through hydrant meters. Water may also be purchased through a water use agreement from Sunnyside Farms, the current landowner of the substation expansion area. The City of Sanger is capable of producing 4.7 billion gallons of water per year from eight wells and the current demand is 1.7 billion gallons of water per year (City of Sanger 2016a). The City of Fowler is capable of producing approximately 3.1 billion gallons of water per year and pumped 551,500 million gallons of water in 2015 (Weisser 2016b). As previously stated, neither the City of Sanger nor the City of Fowler have a limit to the amount of water they may pump, and given the proposed project's temporary water needs of approximately 1 million gallons of water during construction, the proposed project would not exceed the supply of these providers. Sunnyside Farms would also have sufficient existing water entitlements and resources. Given that current demand is 5.9 million gallons per year on the expansion area for row crops, and the proposed projects' need is 1 million gallons over 24 to 30 months, there would be a decrease in water need at the substation expansion parcel if Sunnyside Farms water supply is used. For work at the Fence Meadow Repeater Station, there would be no ground disturbance and therefore no dust suppression water needs. No other water would be needed for construction at the repeater station. The construction crews would likely bring potable water to the site. For the one-week long construction period at Fence Meadow Repeater Station, negligible potable water would be used. Impacts related to water supply entitlements and resources would be less than significant.

Operation and Maintenance

NO IMPACT

Operation and maintenance of the expanded substation would not require water. Furthermore, the current water demands for the irrigation of eggplant crops that are planted in the proposed substation expansion area would cease prior to the onset of construction, resulting in a net reduction of 5.9 million gallons of water per year at the project site. There would be no adverse impact during operation and maintenance of the proposed project.

e. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Construction

LESS THAN SIGNIFICANT IMPACT

Project construction activities would generate minimal wastewater during the 24- to 30-month construction period. Construction crews would use portable toilets during construction activities, which would generate a small amount of wastewater. Given ~~that~~ the small number of construction workers~~, would be from the local area,~~ there would be a negligible ~~if any net~~ change in wastewater generated and treated in the area. The small amount of wastewater generated would be pumped by qualified contractors and disposed of at existing facilities. There would be a less than significant impact.

Operation and Maintenance

NO IMPACT

Operation of the expanded Sanger Substation, reconfigured power lines, and antenna system would not result in any new wastewater generation. Operations and maintenance activities would be similar to existing activities. Operation of the proposed project would therefore not result in construction of new water or wastewater treatment facilities or expansion of existing facilities. There would be no impact during operation and maintenance.

f. Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Construction

LESS THAN SIGNIFICANT

Project activities that would generate solid waste include demolition and removal of the existing Sanger Substation and wood poles, installation of new tubular steel poles, and installation of the telecommunications lines. Solid waste would include vegetation, rock, scrap wood and metal, materials removed from the existing transmission lines and poles, excavated soil, and other construction debris, and trash in general. Vegetative debris removed during construction would be chipped and mulched on site and reused during post-construction restoration activities. Construction and demolition waste materials, such as towers, poles and conductors, would be recycled to the maximum extent practical. The wood poles that would be removed during construction would be salvaged for reuse by PG&E, recycled, or disposed of in a Class I hazardous waste landfill (American Avenue Disposal Site) that is licensed to receive treated wood poles. Project construction would be served by landfills in the area (refer to Table 5.17-3). The American Avenue Disposal Site has an approximate available capacity of 29,000,000 cubic yards and is intended to operate until 2031, which indicates it has more than sufficient capacity to accommodate the proposed project's treated wood poles and other solid waste disposal needs. Impacts would be less than significant.

Operation and Maintenance

NO IMPACT

Solid waste generated during project operation and maintenance would include replaced parts and equipment, vegetation materials cleared during routine maintenance, and minimal domestic trash (e.g.,

glass, paper, plastic, packing materials, etc.) from maintenance workers, which would be removed and taken off site for disposal. These are the same types of wastes that are currently generated by operation and maintenance of the substation and existing power lines, and it is reasonable to expect they would be generated in similar quantities as current operation and maintenance. There would be no impact.

g. Would the project comply with federal, state, and local statutes and regulations related to solid waste?

Construction

NO IMPACT

The proposed project would generate a negligible amount of solid waste during construction, of which materials would be recycled whenever practicable. The proposed project would have to comply with the California Integrated Waste Management Act of 1989 (Assembly Bill 939), which requires local jurisdictions in California to reduce, by 50 percent, the amount of solid waste disposed of in landfills by the year 2000 and beyond. During project construction and operation, the applicant would dispose of all waste in accordance with published federal, state, or local standards relating to solid waste; therefore, no impact would occur under this criterion.

Operation and Maintenance

NO IMPACT

Solid waste generated during project operation and maintenance would include replaced parts and equipment, vegetation materials cleared during routine maintenance, and minimal domestic trash (e.g., glass, paper, plastic, packing materials, etc.) from maintenance workers, which would be removed and taken off site for disposal. These are the same types of wastes that are currently generated by operation and maintenance of the substation and existing power lines. Waste would be disposed of according to applicable regulations. There would be no impact.

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