

4.4 Public Services

This section details the environmental and regulatory setting of the ConocoPhillips Santa Maria Facility Project (Proposed Project) relevant to public services and utilities. It also identifies significance thresholds and impacts to public services and utilities related to the Proposed Project, as well as proposed mitigations for the significant impacts. The public services and utilities relevant to the Proposed Project include:

- Water supply;
- Sanitary wastewater;
- Solid waste (non-hazardous);
- Energy; and
- Fire protection services.

While preparing the Notice of Preparation, it was determined that the Proposed Project would not cause significant impacts to police protection, libraries, or schools; therefore, this section does not address those public services.

4.4.1 Environmental Setting

This section discusses the environmental setting for the applicable utilities and public services.

4.4.1.1 Water Supply Utility

The Proposed Project Site is within the Santa Maria Valley Management Area served by the Santa Maria Valley Groundwater Basin, which is part of Water Planning Area 7 in the South Coast sub-region of the county. The Santa Maria Valley Groundwater Basin spans approximately 184,000 acres (288 square miles), of which, approximately 61,220 acres (95.7 square miles) is within San Luis Obispo County (Wallace Group 2010a).

As discussed in Section 2.0, Project Description, the Santa Maria Facility (SMF) obtains all of its water from onsite wells. In accordance with the 2005 Santa Maria Groundwater Litigation Stipulation, the SMF owner is not required to participate in the development of supplemental water. Further, the owner has the right to the reasonable and beneficial use of groundwater on its property without limitation, except in the event the mandatory action trigger point is reached, otherwise known as Severe Water Shortage conditions (SCSC 2005).

Although the amount of water taken from the wells for the Project is not directly metered, usage is estimated at approximately 870 gallons per minute (gpm) (ConocoPhillips 2008). The 2008 Average Day Demand was 1,100 acre-feet per year (AF/Y) or 0.98 million gallons per day (MGD) with a build-out capacity of 1,400 AF/Y or 1.25 MGD (Wallace Group 2010b).

Water at the SMF is mainly used for cooling, boiler feed for steam production, and process use, such as coke drum cutting. The SMF currently uses less water than historical levels due to the following infrastructure changes:

- Installation of a reverse osmosis water treatment unit, which requires less water than the water softener unit it replaced; and
- Shutdown of the Carbon Plant that used water for cooling coke from the calcine process and green coke screening.

4.4.1.2 Sanitary Wastewater

As discussed in Section 2.0, Project Description, all water drainage, including storm run-off, is contained onsite. The SMF discharges water to the Pacific Ocean pursuant to waste discharge requirements in Regional Water Quality Control Board Order Number R3-2007-0002, adopted September 7, 2007. The Order serves as the permit under the National Pollutant Discharge Elimination System. The following information is based on this permit and accompanying documents (CRWQCB 2007).

In general, all process wastewater and contaminated storm water from the facility flow to a treatment system consisting of oil and water separators, dissolved air flotation, trickling filter, extended aeration, and secondary clarification. The treated wastewater is discharged to the Pacific Ocean through an outfall terminating 1,700 feet offshore and 27 feet deep. To date, the discharge has neither caused a violation of water quality standards nor a degradation of the marine environment based on past monitoring results.

Under the permit, the SMF can discharge up to 0.57 MGD of treated wastewater from the facility to the Pacific Ocean in dry weather conditions. The treatment system receives 279 gpm (0.40 MGD) of actual dry-weather process water. Flows of typical dry weather discharge from the treatment system to the outfall sump are 266 gpm (0.38 MGD) and flows of typical wet weather discharge from the treatment system to the outfall are approximately 406 gpm (0.58 MGD). Oil is recovered from the wastewater and contact stormwater during treatment.

The facility maintains two separate collection systems—one for process water and contact stormwater and the other for non-contact stormwater. Contact stormwater is precipitation runoff from the oil storage tank dikes and the operating units that potentially contain oil. Process water and contact stormwater are collected in the process water system and then flow by gravity to the water treatment system. Remediated groundwater is also treated in the water treatment system.

Process water is water that comes from the Refinery processes and is collected in various vessels throughout the Refinery. Process water is then put through a process water stripper to remove volatile organics, hydrogen sulfide, and ammonia. After the process water stripper, the water is combined with other oily water, which is then processed through the oily water treatment system. The oily water treatment system includes three oil and water separators, two surge tanks, dissolved air flotation, a trickling filter, an Orbal aeration system, and a secondary clarifier. The system uses equipment to first separate the oil from the water, which includes American Petroleum Institute (API) oil water separators and a dissolved air flotation unit. Next, a biological treatment unit removes any remaining hydrocarbons and ammonia. The discharge

from this treatment system goes into the Pacific Ocean, which is permitted under the National Pollutant Discharge Elimination System permit that sets water quality standards.

As part of the permit, effluent is monitored for compliance with limitations and to determine the amount, if any, that the discharger is contributing to receiving water exceedances above water quality objectives.

Precipitation runoff from streets and unimproved areas not at risk for oil spills is collected in a non-contact stormwater sewer system and flows by gravity to an evaporation pond. This non-contact stormwater is not discharged to the receiving water. Sludge generated during the treatment processes is recycled at the adjacent Carbon Plant coking facility. Figure 2.2-4, in Section 2.0, Project Description, is a flow schematic of the water treatment facility.

4.4.1.3 Solid Waste Disposal

The Proposed Project's expansion includes a 10 percent increase in crude oil throughput and does not include any facility expansion or related construction. Therefore, the Proposed Project is not expected to significantly increase non-hazardous solid waste. Nonetheless, this section analyzes the existing conditions and project impacts for the landfills operated in the County of San Luis Obispo.

San Luis Obispo County Integrated Waste Management Authority

The Proposed Project Site is within the San Luis Obispo Integrated Waste Management Authority (IWMA) jurisdiction. The County of San Luis Obispo consists of seven incorporated cities and numerous unincorporated areas within its 3,304 square miles and has a population of 273,231 people (2010 estimate) (CDF 2010). Each jurisdiction of the County is responsible for its own solid waste management. Solid waste generated in San Luis Obispo County is mostly residential waste, construction wastes, commercial and industrial wastes, and sludge residues (wastes remaining at the end of the sewage treatment process). In most cases, solid waste is hauled directly to major Class III landfills, and the remainder is taken to transfer stations, resource recovery centers, and composting facilities.

According to the Department of Resources Recycling and Recovery (CalRecycle) (formerly the California Integrated Waste Management Board or CIWMB), in 2007 the residents and businesses of San Luis Obispo County disposed of approximately 263,872 tons of solid waste in permitted landfill facilities with a calculated disposal rate (pounds/person/day) of 5.4 percent, which meets the target rate of 7.4 percent. In 2008, the residents and businesses of San Luis Obispo County disposed of approximately 236,892 tons of solid waste with a calculated disposal rate (pounds/person/day) of 4.8 percent, which meets the target rate of 7.4 percent (CalRecycle 2010a).

According to 2004 CalRecycle data, the San Luis Obispo County IWMA utilizes several disposal facilities in multiple jurisdictions including the following counties: Los Angeles, Kern, San Luis Obispo, Kings, Stanislaus, Solana, and Santa Barbara. Of these counties, approximately 99 percent of all solid waste generated by San Luis Obispo County is disposed in San Luis Obispo County landfills (CalRecycle 2004a).

In addition, the CalRecycle 2004 data show that three distinct counties (San Luis Obispo, Santa Barbara, and Monterey) dispose solid waste in San Luis Obispo County Landfills. Of the three counties, San Luis Obispo County is responsible for approximately 93 percent of all solid waste disposed in San Luis Obispo County (CalRecycle 2004b). Table 4.4-1 shows that solid waste is disposed of at three Class III landfills within the County of San Luis Obispo: Cold Canyon, Chicago Grade, and City of Paso Robles. Figure 4.4-1 shows the location of these three landfills.

In 2009, a total of approximately 227,634 tons per day were disposed of at these landfills (CalRecycle 2010b). According to CalRecycle's Solid Waste Information System database, approximately 15.5 million cubic yards remained among landfills in the County (CalRecycle 2010c). During the project operations phase, the Cold Canyon Landfill will probably be the primary landfill serving the Project Site. The San Luis Garbage Company is the franchised garbage and recycling provider for San Luis Obispo.

Table 4.4-1 San Luis Obispo County Class III Landfill Capacity and Usage

Landfill	Permitted Daily Capacity (tons) ^a	2009 Total Solid Waste Disposal (tons) ^b	2009 Average Daily Disposal (tons) ^c	Maximum Permitted Capacity (cubic yards) ^a	Estimated Remaining Permitted Capacity (cubic yards) ^{ad}
Cold Canyon	1,200	136,589	386	10,900,000	1,830,000
Chicago Grade	500	56,757	160	8,950,220	8,329,699
City of Paso Robles	450	34,288	114	6,495,000	5,327,500
Total	2,150	227,634	660	26,345,220	15,487,199

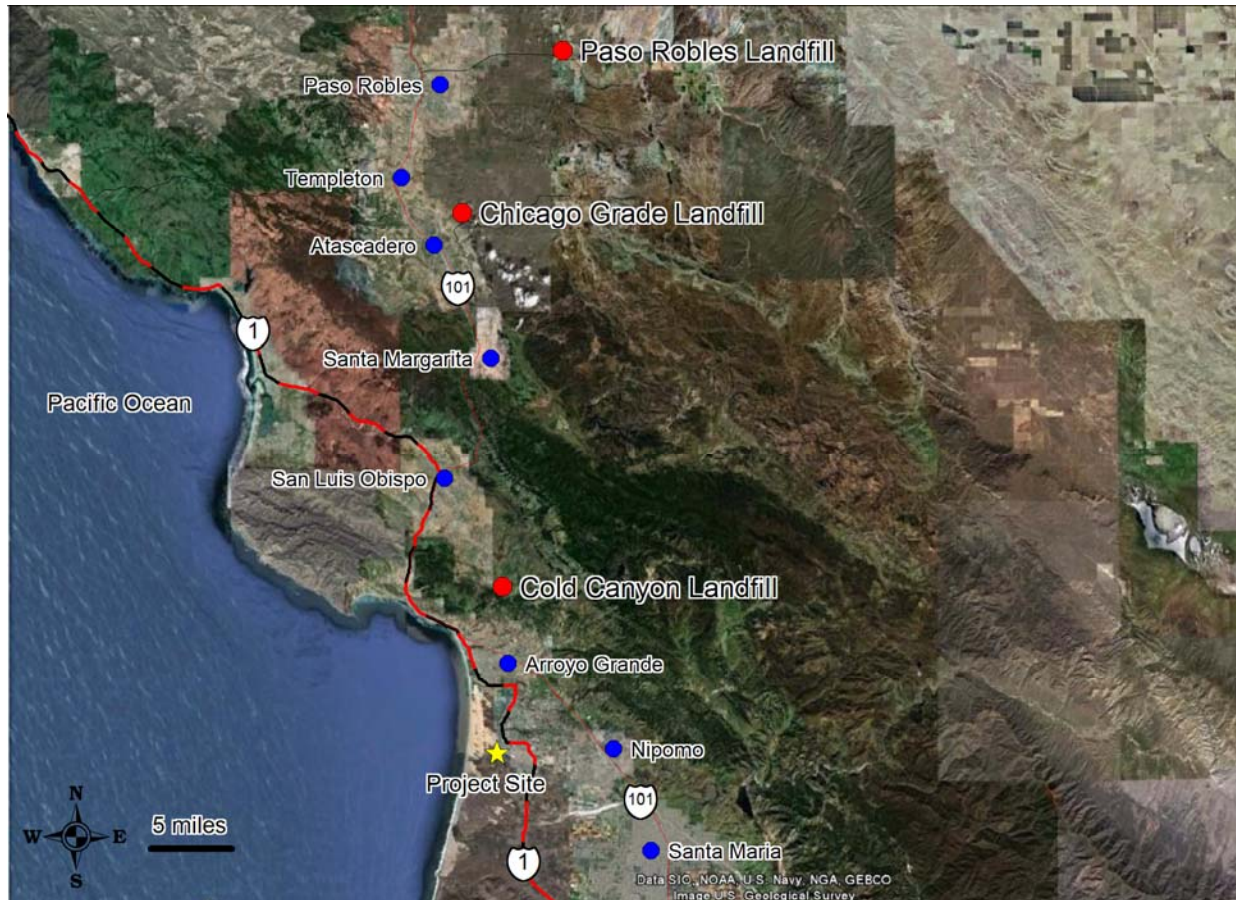
a. Source: CalRecycle 2010c

b. Source: CalRecycle 2010b

c. The average daily disposal for each landfill was found by dividing the 2007 total solid waste disposal by the approximate number of days the landfill opened per year. Excluding holidays, both Cold Canyon and Chicago Grade Landfill landfills are open every day of the year. City of Paso Robles is closed every Sunday and on Holidays. Federal law (5 U.S.C. 6103) establishes 10 legal public holidays a year.

d. The remaining capacity for each landfill was estimated on the following date: Cold Canyon Landfill on June 2, 2010; Chicago Grade Landfill on May 1, 2007; and City of Paso Robles Landfill on May 1, 2007.

Figure 4.4-1 Area Landfills



Cold Canyon Landfill

The Cold Canyon Landfill is approximately 11 miles north of the Project Site on State Route 227. The landfill operates 7 days per week. The Cold Canyon Landfill is a Class III landfill and currently operates on Solid Waste Permit Facility # 40-AA-0004 (issued January 29, 2002). The facility accepts or permits: agricultural waste, construction and demolition waste, dead animals, industrial waste, mixed municipal waste, tires, contaminated soil, green materials, inert waste, and sludge (BioSolids).

As of June 2010, the landfill had a remaining capacity of approximately 1.8 million cubic yards. Under the existing permit, the anticipated closure date for the landfill is January 1, 2012. However, a proposal to expand the landfill is currently undergoing the County of San Luis Obispo environmental review process. Under the proposal, the landfill would expand the disposal-area footprint by approximately 46 acres, increase the total facility allowable tonnage limit by 880 tons per day, and extend the landfill operation date until the year 2040 (SLOC 2009). At this time, this proposal is still under County review.

Chicago Grade Landfill

The Chicago Grade Landfill, open 7 days per week, is a 76.4-acre permitted landfill on a 188-acre parcel at 2290 Homestead Road in Templeton, California. The Chicago Grade Landfill is also a Class III facility and was recently expanded in fall 2007. As shown in Table 4.4-1, the current permitted daily maximum capacity is 500 tons. In 2009, total waste disposal in the landfill was approximately 56,757 tons. The Chicago Grade Landfill accepts or permits: agricultural waste, construction and demolition waste, contaminated soil, food wastes, industrial waste, metals, tires, asbestos, dead animals, green materials, inert waste, mixed municipal waste, and sludge (BioSolids). The landfill is scheduled to close in 2042.

Paso Robles Landfill

The City of Paso Robles owns and operates Paso Robles Landfill, 8.5 miles east of Paso Robles off of State Route 46. As indicated in Table 4.4-1, the Paso Robles Landfill's permitted daily maximum capacity is 450 tons, which was recently expanded from 250 tons in Solid Waste Facility Permit #40-AA-0001 (issued January 23, 2008). In 2009, total waste disposal in the landfill was 34,288 tons; the San Luis Obispo County IWMA was the primary jurisdiction sending materials. The landfill is scheduled to close in 2051.

4.4.1.4 Energy

Appendix F of CEQA requires an EIR to include discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (see Public Resources Code section 21100(b)(3)). According to Appendix F of the State CEQA Guidelines, the goal of conserving energy implies the wise and efficient use of energy including: (1) decreasing overall per capita energy consumption; (2) decreasing reliance on natural gas and oil; and (3) increasing reliance on renewable energy sources.

In 2008, Californians consumed 285,574 gigawatt hours of electricity. As the population in California grows over the next few years, consumption is anticipated to steadily increase at a rate of 1.2 percent annually for electricity and between 0.40 and 0.73 percent annually for natural gas (CEC 2009).

California's main energy sources are electricity, natural gas, and crude oil. In 2008, approximately 46.5 percent of the state's total electricity came from natural gas, 14.9 percent came from nuclear reactions, 9.6 percent came from large (non-renewable) hydroelectric power, 15.5 percent came from coal, and 13.5 percent came from renewable sources (CEC 2010a).

As shown in Table 4.4-2, the County of San Luis Obispo consumed approximately 1,762 million kilowatt-hours of electricity in 2007 and 1,748 million kilowatt-hours of electricity in 2008. During this same time period, the County of San Luis Obispo consumed approximately 81.4 million therms of natural gas in 2007 and 78.7 million therms in 2008 (CEC 2010b, CEC 2010c).

Table 4.4-2 San Luis Obispo County Electricity and Gas Consumption

Land Use	2007		2008	
	Electricity (millions of kWh)	Gas (millions of Therms)	Electricity (millions of kWh)	Gas (millions of Therms)
Non-Residential	1091	40.6	1,064	38.7
Residential	671	40.8	684	40.0
Total	1,762	81.4	1,748	78.7

Sources: CEC 2010b, CEC 2010c

Electricity and Gas Purveyors

Pacific Gas and Electric Company

Pacific Gas and Electric Company (PG&E) currently provides electricity to the Project Site that is not otherwise produced by the power-generating unit at the SMF. PG&E operates a local planning office at 4325 Higuera Street in the City of San Luis Obispo and operates the San Luis Obispo Substation on the corner of Orcutt Road and Johnson Avenue, approximately 19 miles north of the Project Site. PG&E generates electricity from the following sources: (1) PG&E-owned hydropower, gas-fired steam, and nuclear generators; (2) independent generators; and (3) out-of state generators. A network of high-voltage transmission lines carries electricity generated from the power plants to substations. Substations use transformers to decrease the voltage of electricity to connect with the distribution system. Individual services or “drops” connect the distribution system to the industrial, commercial, agricultural, and residential customers. Table 4.4-3 shows kilowatt-hours of electricity consumed in the PG&E planning area from 2001 through 2008. As shown in the table, commercial, industrial, and residential land uses consumed the majority of the kilowatt-hours of electricity in planning area (PG&E 2010).

Under the Proposed Project, electricity purchased from PG&E would increase by a ratio similar to the increase in crude throughput; that is, up to 26,797 megawatt hours per year (MWhr/yr) (assuming onsite generation would be the same as 2007).

Table 4.4-3 PG&E Planning Area Electricity Consumption

Land Use	2001	2002	2003	2004	2005	2006	2007	2008
Agriculture & Water Pump	6,350	6,439	6,324	6,778	5,402	6,010	7,908	7,908
Commercial Building	33,329	34,220	35,243	35,741	35,819	36,943	39,191	39,474
Commercial Other	4,857	4,944	4,682	4,987	5,113	5,407	5,394	5,910
Industry	18,893	18,143	17,954	18,352	18,619	18,561	19,011	18,678
Mining & Construction	2,397	2,283	2,477	2,642	2,863	2,912	3,521	3,461
Residential	29,657	30,537	31,976	32,708	33,106	34,345	34,324	35,321
Streetlight	509	503	516	532	537	542	457	475
Total Usage	95,992	97,069	99,172	101,740	101,459	104,720	109,806	111,227

Source: CEC 2010d

Note: All usage expressed in millions of kilowatt hours (kWh).

Southern California Gas Company

As discussed in Section 2.0, Project Description, the Project Site uses fuel gas produced from the refining operation as a fuel source, primarily to fire heaters and boilers for process heat and steam. When Refinery fuel gas cannot produce the required levels of steam and electricity, surplus gas is purchased from Southern California Gas Company (SCGC). Table 4.4-4 shows the kilowatt-hours consumed by the entire SCGC planning area from 2001 through 2008. The SCGC planning area comprises the entirety of the company's service territory, approximately 20,000 square miles throughout Central and Southern California, including San Luis Obispo, Bakersfield, Ventura, Los Angeles, Palm Springs, and San Clemente (SCGC 2011). Residential, mining, construction, and industrial land uses consumed the majority of the therms in the planning area.

Under the Proposed Project, natural gas purchased from SCGC would increase by a ratio similar to the increase in crude throughput; that is, up to 247 million standard cubic feet (mmscf).

Table 4.4-4 SCGC Planning Area Gas Consumption

Land Use	2001	2002	2003	2004	2005	2006	2007	2008
Agriculture & Water Pump	86	114	102	101	85	87	86	83
Commercial Building	960	1,136	939	968	965	938	948	886
Commercial Other	74	99	77	66	71	88	107	134
Industry	1,636	2,044	1,529	1,569	1,578	1,458	1,527	1,565
Mining & Construction	2,556	2,195	2,608	2,636	2,427	2,536	2,369	2,405
Residential	2,707	2,673	2,558	2,685	2,536	2,544	2,568	2,533
Total Usage	8,019	8,261	7,813	8,025	7,662	7,651	7,605	7,606

Source: CEC 2010e

Note: All usage expressed in millions of therms.

4.4.1.5 Fire Protection Services

The Proposed Project is within a Local Responsibility Area in a High Fire Hazard Zone. This subsection identifies the fire-protection service providers for the Project Area and potential and expected response times from the fire stations, analysis of the adequacy of reliable or adequate fire flow, water pressure, and other fire department resources during a major fire, and an analysis of emergency access routes. The Proposed Project Site is currently under the jurisdiction of the California Department of Forestry and Fire Protection/San Luis Obispo County Fire Department (CAL FIRE), which would continue to serve the site.

California Department of Forestry and Fire Protection / San Luis Obispo County Fire Department

The Proposed Project Site currently receives fire protection and paramedic service from CAL FIRE. CAL FIRE, a California state agency, functions as the San Luis Obispo County Fire Department under a contract with the County. The 573-person CAL FIRE staff for San Luis Obispo County includes 228 full-time firefighters, 275 paid call firefighters, 20 reserve firefighters, 25 lifeguards, and 25 administrative staff (CAL FIRE 2010a).

Fire Station #22 (Mesa Fire Station) at 2391 Willow Road in Arroyo Grande, less than 0.5 miles away, is the jurisdictional station (“first in”) for the Project Site. Station 22 staffs up to 29 firefighter personnel, including one Fire Captain, one Fire Apparatus Engineer, two licensed paramedics, and 25 paid call firefighters dispatched via radio pager (CAL FIRE 2010b).

The next closest station to the Proposed Project is Fire Station #20 (Nipomo Fire Station) at 450 Pioneer Avenue in Nipomo, which is approximately 8 miles away and has an 8-minute response time. Station 20 staffs up to 29 firefighter personnel, including one Fire Captain, one Fire Apparatus Engineer, two licensed paramedics, and 25 paid call firefighters dispatched via radio pager (CAL FIRE 2010c).

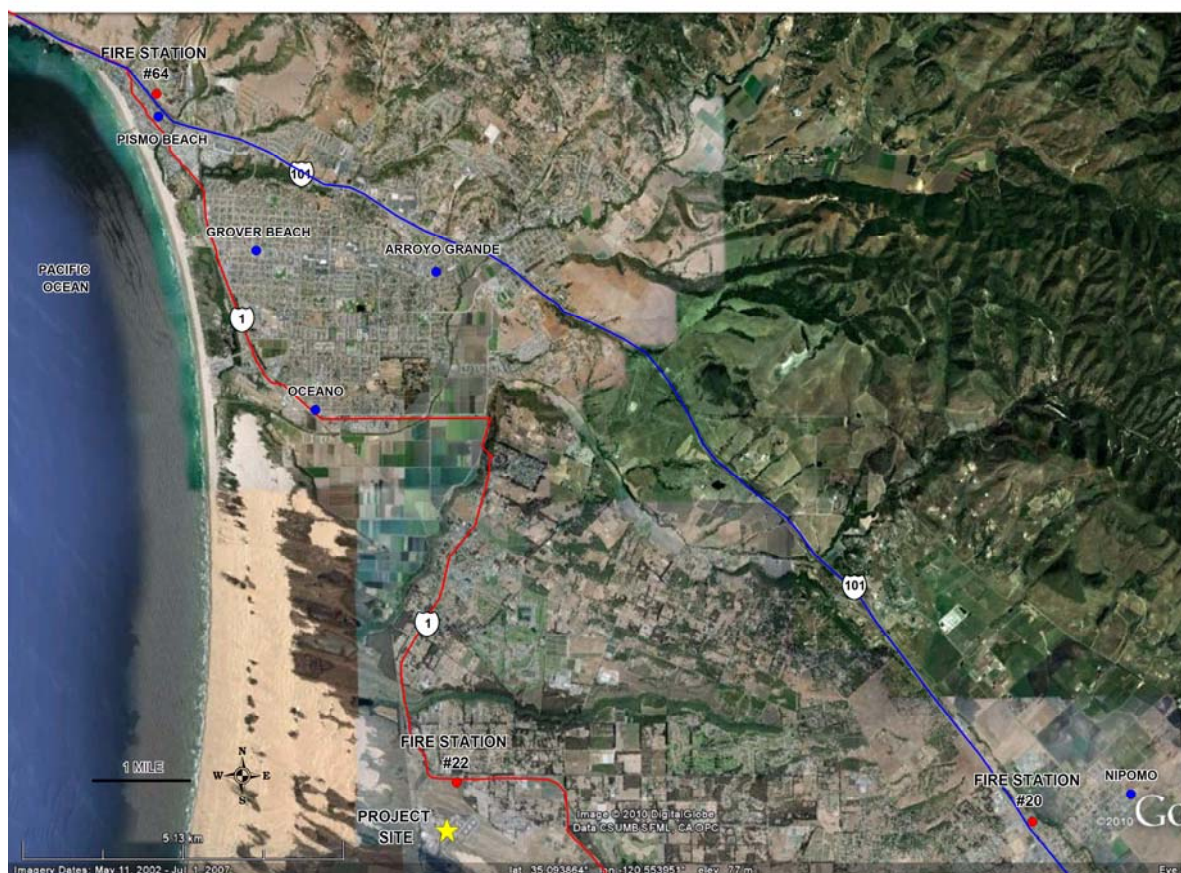
Figure 4.4-2, San Luis Obispo County Fire Stations, shows the proximity of the fire stations to the Proposed Project Site.

The Department operates under a regional approach to providing fire protection and emergency medical services, and emergency response units are dispatched as needed to an incident anywhere in the district's service territory based on distance and availability, without regard to jurisdictional or municipal boundaries. According to CAL FIRE, fire protection appears to be adequate for the existing area (Taylor 2010).

Mutual Aid Agreements

In California, virtually all fire departments are signatories to the California Master Mutual Aid Agreement. This agreement secures assistance across jurisdictional boundaries, when requested, in response to a disaster or an emergency that exceeds local resources. CAL FIRE/San Luis Obispo County is a member to this agreement and acts as the County Coordination Dispatch Center, which, in the event of an emergency, requests assistance from mutual aid companies. As part of this agreement, the counties of Santa Barbara and Ventura are responsible for providing the initial response to fires in the State Responsibility Areas within San Luis Obispo County. CAL FIRE/San Luis Obispo County response teams will assist should the initial attack prove unsuccessful (CAL FIRE 2010d).

In addition to the statewide agreement, cooperative agreements between CAL FIRE, San Luis Obispo County, Los Osos and Avila Community Service Districts, and the City of Pismo Beach provide for a regionalized approach ensuring cost effective, all risk, professional fire protection (CAL FIRE 2010a).

Figure 4.4-2 San Luis Obispo County Fire Stations

Fire Safety Compliance Measures

The San Luis Obispo County Code sets forth state and local fire prevention statutes and regulations to ensure that new developments meet standards for fire-flow, public and private fire hydrants, and roadway access provisions for fire-fighting units. Fire flow, the quantity of water available or necessary for fire protection in a given area, depends on the performance capacity of water lines to supply water during emergencies. Fire flow attributes include line pressure, rate of flow (i.e., gallons per minute), and duration over which prescribed volumes of water can be delivered at designated pressures. The quantity of water necessary for fire protection varies by land use type, life hazard, occupancy, and the degree or level of fire hazard. (SLOC 2010a).

Hazardous Materials

The San Luis Obispo Hazardous Materials Team (HAZMAT Team) is a 30-member, multi-agency team from CAL FIRE, San Luis Obispo City, Arroyo Grande Fire, Paso Robles City, Atascadero Fire, San Luis Obispo County Environmental Health Services Division, and the California Men's Colony. The HAZMAT Team ensures adherence to the laws and regulations of the Occupational Safety and Health Administration, the Environmental Protection Agency, and San Luis Obispo County Environmental Health Services Division in relation to radiological,

biological, and chemical hazards and weapons of mass destruction. As such, each team member is versed in both the technical and regulatory aspects of hazardous materials response (CAL FIRE 2010e).

4.4.2 Regulatory Setting

4.4.2.1 Federal

No federal public service or utility regulations are applicable to the Proposed Project.

4.4.2.2 State

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. CPUC is responsible for ensuring that California utility customers have safe, reliable utility service at reasonable rates; protecting utility customers from fraud; and promoting the health of California's economy. CPUC establishes service standards and safety rules and authorizes utility rate changes, as well as enforcing CEQA compliance for utility construction (CPUC 2010).

Water Control Boards

The State Water Resources Control Board approves and implements the California Ocean Plan (Ocean Plan), which requires control of discharge of waste to ocean waters. Section 3(B) of the Ocean Plan identifies effluent limitations that apply to all publicly owned treatment works and to industries that do not have effluent limitation guidelines established by the U.S. Environmental Protection Agency. The State Water Resources Control Board approved amendments to the plan in 2009 (SWRCB 2009).

The California Regional Water Quality Control Board approves and implements the Water Quality Control Plan for the Central Coastal Basin (Basin Plan). The Basin Plan identifies waste discharge requirements for individuals, communities, or businesses whose waste discharges can affect water quality. In 2009, the California Regional Water Quality Control Board approved a priority list of issues for future amendment consideration (CRWQCB 2009).

Regional Water Quality Control Board Order Number R3-2007-0002, adopted September 7, 2007, identifies discharge requirements for the SMF pursuant to the Ocean Plan, the Basin Plan, and federal code requirements.

CalRecycle

In January 2010, the CalRecycle was established in an effort to streamline state recycling and waste diversion efforts. These responsibilities were formerly administered by the California Integrated Waste Management Board. CalRecycle is now comprised of the Waste Management

Division and the Recycling Division, which manage programs created through the Integrated Waste Management Act (AB 939) (CalRecycle 2010d).

AB 939 required that each County prepare a new Integrated Waste Management Plan and required each city to prepare a Source Reduction and Recycling Element by July 1, 1991. Each source reduction element was to include a plan for achieving a solid waste goal of 25 percent reductions by January 1, 1995, and 50 percent reductions by January 1, 2000.

Senate Bill (SB) 2202 made a number of changes to the municipal solid waste diversion requirements under the Integrated Waste Management Act. These changes included a revision to the statutory requirement for 50 percent diversion of solid waste to clarify that local government should continue to divert 50 percent of all solid waste after January 1, 2000.

Moreover, in 1997, some of the regulations adopted by the State Water Quality Control Board pertaining to landfills (Title 23, Chapter 15) were incorporated with CalRecycle regulations (Title 14) to create Title 27 of the California Code of Regulations.

Fire Protection

California Code Title 8, Division 1 (Department of Industrial Relations) Chapter 4 (Division of Industrial Safety), Subchapter 14 (Petroleum Safety Orders--Drilling and Production), addresses several issues related to confined space and testing of vapor. Article 6, section 6529 addresses issues related to fire and explosions, such as:

- Firefighting equipment should be inspected, tested, and maintained in serviceable condition. A record should be kept recording when fire extinguishers were last inspected, tested, and recharged.
- A plan shall be established and implemented to ensure the safe and orderly evacuation of employees.

Energy

Appendix F of CEQA requires an EIR to include discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (see Public Resources Code section 21100(b)(3)). According to Appendix F of the State CEQA Guidelines, the goal of conserving energy implies the wise and efficient use of energy including:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on natural gas and oil; and
- Increasing reliance on renewable energy sources.

4.4.2.3 County

Public Facilities Fees Ordinance, Title 18 of the San Luis Obispo County Code

The County of San Luis Obispo Public Facilities Fees Ordinance, Title 18 of the County Code, allows the County to collect fees for new development projects within the County to mitigate impacts caused by such projects. The County uses the fees to finance the new development's fair share of public facilities (e.g., parks, libraries, and fire and police stations).

County of San Luis Obispo Public Facilities Financing Plan for Unincorporated Area Facilities

The County of San Luis Obispo Public Facilities Financing Plan for Unincorporated Area Facilities documents the number and cost of new capital facilities required to serve development in unincorporated areas through 2025. One potential source of funding is public facilities fees paid by new developments to fund their fair share of necessary facilities. The Public Facilities Financing Plan identifies the maximum justified level of those fees. The fees finance public capital facilities (including land purchases, construction of buildings, and the purchase of major equipment) and ensure that new development projects contribute their fair share for these facilities. The fees cannot fund employee salaries.

County Fire Standards

San Luis Obispo County, and other jurisdictions in the county, adopted both the California Fire Code and the California Building Code, with amendments, into local ordinance. These local ordinances include but are not necessarily limited to:

- Water requirements;
- Minimum access road requirements;
- Construction requirements;
- Hazard abatement; and
- Turnaround requirements.

San Luis Obispo County General Plan

The San Luis Obispo County General Plan contains two elements that outline the county's goals and policies with respect to public services.

Safety Element

The Safety Element of the General Plan contains the following goals and policies relevant to public services in relation to the Proposed Project:

- Goal S-1: Attain a high level of emergency preparedness.
 - Policy S-1 Response: Support the response programs that provide emergency and other services to the public when a disaster occurs. The focus of response activities is saving lives and preventing injury, and reducing immediate property damage.
 - Policy S-2 Emergency Preparedness: Continue to improve preparedness programs that educate and organize people to respond appropriately to disasters. They include education and awareness programs for individuals, families, institutions, businesses, government agencies and other organizations.
 - Policy S-3 Coordination: Improve coordination among City, County and State programs, and among others working to reduce the risks of disasters. This should also include improved coordination with the news media. This will result in more effective preparedness, response and recovery from disasters.
 - Policy S-4 Information Systems and Research: Expand and keep current the database of safety related information. Knowledge about disasters and the area we live in is growing. New information must be made available to the public and decision makers. Regularly update the GIS data as new information becomes available.
 - Policy S-5 Risk Assessment: Continue investigations that reduce or eliminate long term risks. Risk assessment activities, effectively carried out, can improve the efficiency and reduce the cost of response and recovery from disasters.
- Goal S-4: Reduce the threat to life, structures and the environment caused by fire.
 - Policy S-14 Facilities, Equipment and Personnel: Ensure that adequate facilities, equipment and personnel are available to meet the demands of fire fighting in San Luis Obispo County based on the level of service set forth in the fire agency's master plan.
 - Policy S-15 Readiness and Response: The CDF/County Fire Department will maintain and improve its ability to respond and suppress fires throughout the County.
 - Policy S-16 Loss Prevention: Improve structures and other values at risk to reduce the impact of fire. Regulations should be developed to improve the defensible area surrounding habitation.
- Goal S-6: Reduce the potential for harm to individuals and damage to the environment from aircraft hazards, radiation hazards, hazardous materials, electromagnetic fields, radon, and hazardous trees.
 - Policy S-26 Hazardous Materials: Reduce the potential for exposure to humans and the environment by hazardous substances.

Energy Element

The Energy chapter of the General Plan's Conservation and Open Space Element contains the following goals and policies relevant to public services in relation to the Proposed Project:

- Goal E 3: Energy efficiency and conservation will be promoted in both new and existing development.
 - Policy E 3.1 Use of renewable energy: Ensure that new and existing development incorporates renewable energy sources such as solar, passive building, wind and thermal energy. Reduce reliance on non-sustainable energy sources to the extent possible using available technology and sustainable design techniques, materials, and resources.
 - Policy E 3.2 Energy efficient equipment: Require the use of energy-efficient equipment in all new development, including but not limited to Energy Star appliances, high-energy efficiency equipment, heat recovery equipment, and building energy management systems.
 - Policy E 3.3 Use of renewable energy for water and wastewater: Promote the use of renewable energy systems to pump and treat water and wastewater.
- Goal E 5: Recycling, waste diversion, and reuse programs will achieve as close to zero waste as possible.
 - Policy E 5.1 Source reduction and waste diversion: Encourage source reduction and diversion of solid waste generated to as near zero waste as possible, in order to reduce energy consumption.

San Luis Obispo County Municipal Code

Title 8, Chapter 8.12, Solid Waste Management, regulates wastes handled within the county. This document complies with the California Integrated Waste Management Act of 1989.

Title 8, Chapter 8.66, Discharge of Contaminants into Ocean Waters of the County, and Chapter 8.68, Stormwater Pollution Prevention and Discharge Control, regulate methods to protect the environment from discharge-related contamination.

San Luis Obispo County Integrated Waste Management Authority

Ordinance No. 2008-3 establishes requirements for recycling materials generated from residential facilities, commercial facilities, and special events. These requirements should increase diversion of recyclable materials from landfill disposal, reduce greenhouse gas emissions by recycling more materials, and avoid the potential financial and other consequences of failing to meet and maintain AB 939 requirements (SLOC 2008).

4.4.2.4 Other Codes and Standards

Several codes and standards apply to fire protection and emergency response for facilities such as the one in which the Proposed Project is located.

National Fire Protection Association

The NFPA, established in 1896, publishes numerous codes and standards that cover issues ranging from foam systems to dry cleaning facilities. Several NFPA codes and standards apply to the Proposed Project.

NFPA Standard 11 addresses foam application to protect outdoor atmospheric storage tanks containing flammable and combustible liquids. Fire-fighting foam is an aggregate of air-filled bubbles formed from aqueous solutions and is lower in density than flammable liquids. It is used principally to form a cohesive floating blanket on flammable and combustible liquids and prevents or extinguishes fire by excluding air and cooling the fuel. It also prevents re-ignition by suppressing formation of flammable vapors. Foam is prepared by utilizing a water supply along with a foam concentrate.

Foam for tank fires can be applied through fixed foam discharge outlets permanently fixed to the tank top, by portable hose streams using foam nozzles, or by large-capacity monitor nozzles close to the tank. Foam can be applied to a liquid spill into a dike to suffocate a fire or prevent ignition of the flammable material spill, utilizing either fixed systems, portable systems, or monitors. Foam systems should be inspected annually, including foam performance tests.

For fires on the roof of the tank, NFPA 11 requires a foam supply with a minimum discharge rate of 0.16 gallons per minute per square foot (gpm/ft^2) (for hand-held and foam monitors) and a minimum discharge time of 65 minutes for crude petroleum (section 5). The minimum foam application rate and discharge time for discharge outlets fixed to the tank are $0.10 \text{ gpm}/\text{ft}^2$ and 30 minutes, respectively. For diked areas, foam rates shall be $0.16 \text{ gpm}/\text{ft}^2$ for 30 minutes.

NFPA 11 also requires that fixed foam systems have automatic fire detection (thermal and hydrocarbon detection) and alarms.

NFPA 15, Standard for Water Spray Fixed Systems for Fire Protection, addresses water spray systems and issues such as installation requirements; design requirements, including hydraulic calculations; water supplies; and maintenance.

NFPA 22 addresses the installation of private firewater tanks to supply firewater to a facility.

NFPA 24 and 25 address the installation of private fire service equipment, including service mains and fire hydrants, as well as inspection, testing, and maintenance.

NFPA 30 addresses issues related to flammable and combustible liquids. NFPA 30 addresses fire prevention and risk control, electrical systems, storage in containers, processing facility issues, aboveground storage tanks requirements, and piping systems. NFPA 30 also addresses separation distances from vessels and tanks to property lines and to buildings and structures.

Uniform Fire Code

The UFC addresses issues ranging from egress and emergency escapes to fumigation, hot work, and cryogenic fluids.

Article 9 addresses site access and water supply for buildings, including access road minimum width requirements of 20 feet and all-weather driving capabilities.

Article 79 addresses flammable and combustible liquids issues, including:

- Overfill prevention;
- Automatic shut-off;
- Tank venting;
- Required use of foam systems on crude tanks with on-site storage of foam;
- Diked areas equal to or greater than the largest tank; and
- Well drilling and operations separation distance from storage tanks (25 feet), sources of ignition (25 feet), streets and railways (75 feet), buildings (100 feet), places of assembly and schools (300 feet).

4.4.3 Significance Criteria

The following criteria are based on Appendix G of the California Environmental Quality Act Guidelines. The effects of the Proposed Project on public services, utilities, and service systems would be considered significant if the Proposed Project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times, or other performance objectives for fire protection, police protection, and public schools;
- Be served by a landfill with insufficient permitted capacity to accommodate the Proposed Project's solid waste disposal needs;
- Fail to comply with federal, state, and local statutes and regulations related to solid waste;
- Violate any waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Use a substantial amount of fuel or energy that would:
 - Consume energy beyond PG&E or SCGC capacity to supply or produce;
 - Conflict with adopted energy conservation plans; or
 - Result in the construction or operations of a project that would use non-renewable resources in a wasteful and inefficient manner.
- The Project Site does not contain adequate fire water or fire foam supplies to meet the recommended CCPS, NFPA Standards, and the IRI guidelines or the CAL FIRE requirements;

- The Project equipment layout and access structure do not meet the API, NFPA, UFC, and IRI or CAL FIRE recommendations for equipment spacing and clearances;
- The Project facilities do not have sufficient capabilities in early fire detection according to the NFPA requirements;
- The Project Site is more than 10 miles (15-minute response time) from an emergency response location with fire-fighting capabilities (i.e., a fire station or facility with fire-fighting and emergency response capabilities) or accessibility to the site is difficult or limited causing issues in terms of access, evacuations, and response; or
- The Project Site does not have an emergency response plan.

4.4.4 Project Impacts and Mitigation Measures

This section characterizes the impacts generated by the Proposed Project related to water supply, sanitary wastewater, solid waste (non-hazardous), energy, and fire protection.

4.4.4.1 Water Supply

The Proposed Project is estimated to increase water use at the SMF by approximately one percent. However, even with this increase, demand will remain less than historical peak pumping rates. The SMF obtains all of its water from on-site wells and has the right to the reasonable and beneficial use of groundwater on its property without limitation, except in the event of Severe Water Shortage conditions (Wallace Group 2010b, SCSC 2005). Detailed analysis of water impacts is provided in Section 4.6, Water Resources.

4.4.4.2 Sanitary Wastewater

Impact #	Impact Description	Project Phase	Residual Impact
PS.1	Increased throughput and operations at the Santa Maria Facility would produce increased wastewater.	Operation	Class III

The Proposed Project would not generate large flows of increased wastewater or sewage.

All water drainage, including storm run-off, is contained onsite. The SMF discharges water to the Pacific Ocean pursuant to waste discharge requirements in Regional Water Quality Control Board Order Number R3-2007-0002, adopted September 7, 2007. The Order serves as the permit under the National Pollutant Discharge Elimination System.

All process wastewater and contaminated storm water from the facility flow to a treatment system consisting of oil/water separators, dissolved air flotation, trickling filter, extended aeration, and secondary clarification. The treated wastewater is discharged to the Pacific Ocean through an outfall terminating 1,700 feet offshore and 27 feet deep.

Under the National Pollutant Discharge Elimination System permit, the SMF can discharge up to 0.57 MGD of treated wastewater from the facility to the Pacific Ocean in dry weather conditions. The treatment system receives 279 gpm (0.40 MGD) of actual dry-weather process water. Flows of typical dry weather discharge from the treatment system to the outfall sump are 266 gpm (0.38 MGD) and flows of typical wet weather discharge from the treatment system to the outfall are approximately 406 gpm (0.58 MGD). Oil is recovered from the wastewater and contact stormwater during treatment.

Therefore, the Proposed Project’s impact on public sewer demands due to increased quantities of wastewater would be *less than significant* (Class III).

Mitigation Measures

No mitigation measures beyond the existing National Pollutant Discharge Elimination System permit requirements are required since the impact would be *less than significant* (Class III).

Residual Impacts

The residual impacts associated with increased quantities of wastewater would be considered *less than significant* (Class III).

4.4.4.3 Solid Waste (non-hazardous)

Impact #	Impact Description	Phase	Residual Impact
PS.2	Santa Maria throughput increase operations would generate increased solid wastes.	Operations	Class III

The Proposed Project’s expansion relates to increased crude oil throughput by 10 percent and does not include any facility expansion or related construction. As such, the Proposed Project is not expected to result in significant non-hazardous solid waste increases.

Only insignificant quantities of wastes associated with the throughput increase would be generated. The Project would not need new or physically altered waste handling facilities, and would comply with applicable regulations.

During operations, trash and rubbish would be collected in waste bins and disposed of by a local waste hauler. The Cold Canyon Landfill would probably be the primary landfill serving the Proposed Project if the County approves the proposed landfill capacity increase. If not, both the Chicago Grade and City of Paso Robles landfills have sufficient capacity.

Therefore, based on the remaining capacity of the available landfills, potential impacts would be *less than significant* (Class III). No measures beyond compliance with existing ordinance standards are necessary.

Mitigation Measures

No mitigation measures are required since the impacts would be *less than significant* (Class III).

Residual Impacts

The residual impacts associated with solid waste generation would be considered *less than significant* (Class III).

4.4.4.4 Energy

Appendix F of CEQA requires an EIR to include discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (see Public Resources Code section 21100(b)(3)). According to Appendix F of the State CEQA Guidelines, the goal of conserving energy implies the wise and efficient use of energy including: (1) decreasing overall per capita energy consumption; (2) decreasing reliance on natural gas and oil; and (3) increasing reliance on renewable energy sources.

The SMF uses fuel gas produced from the refining operation as a fuel source, primarily to fire heaters and boilers for process heat and steam. When Refinery fuel gas cannot produce the necessary levels of steam and electricity, surplus gas is purchased from the Southern California Gas Company. Electrical requirements at the SMF are similarly met by the power generating unit and purchases from Pacific Gas and Electric Company.

Impact #	Impact Description	Project Phase	Residual Impact
PS.3	Impacts from increased electricity consumption at the Santa Maria Facility due to throughput increase operations.	Operations	Class III

In 2009, the SMF generated 20,732 MWhr of electricity onsite and purchased 23,273 MWhr of electricity from Pacific Gas and Electric Company. Under the Proposed Project, electricity purchased from Pacific Gas and Electric Company would most likely remain the same or decrease since the Refinery would generate more produced gas if crude throughput rates were higher (see Section 2.0, Project Description).

The use of electricity would not require upgrades to the current electrical facilities.

Since increased crude oil throughput would not increase the Refinery's use of electricity from the power grid, the Proposed Project would not substantially increase demand and the impacts on electrical energy resources would be *less than significant*.

Mitigation Measures

No mitigation measures are necessary since the impacts on electrical generation would be *less than significant* (Class III).

Residual Impacts

The impacts of throughput increase operations on electrical generation would be *less than significant* (Class III).

Impact #	Impact Description	Phase	Residual Impact
PS.4	Increased fossil fuel consumption and production (diesel, gasoline, and natural gas) at the Santa Maria Facility could thereby decrease availability.	Operations	Class III

In 2009, the SMF generated 2,185 mmscf of natural gas onsite and purchased 397 mmscf of natural gas from the Southern California Gas Company. The Proposed Project would increase onsite refinery fuel gas production to 3,171 mmscf per year and the amount of natural gas purchased from Southern California Gas Company would most likely remain the same or decrease. The use of diesel fuel and flaring are not expected to increase with the throughput increase.

Therefore, the proposed throughput increase would not substantially increase consumption and production (thereby decreasing availability) and the impacts on energy resources would be *less than significant*.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

The impact of throughput increase operations on increased fossil fuel use would be *less than significant* (Class III).

4.4.4.5 Fire Protection

Impact #	Impact Description	Phase	Residual Impact
PS.5	Throughput increase at the site could impact fire protection and emergency response.	Operations	Class III

The proposed throughput increase at the SMF would not increase fire risk and fire-fighting requirements. The Applicant proposes to utilize the existing fire protection system at the SMF to provide a level of protection for the Proposed Project. The increased throughput would not produce additional impacts on area fire-fighting capabilities since the resources required to address emergencies at the SMF under the Proposed Project would be the same as under the current operations. Impacts would therefore be *less than significant* (Class III).

4.4.5 Other Issue Area Mitigation Measure Impacts

No mitigation measures are anticipated to produce additional impacts on public services. Therefore, the mitigation measures would not result in additional significant impacts, and additional analysis or mitigation is not required.

4.4.6 Cumulative Impacts and Mitigation Measures

The cumulative projects discussed in Section 3.0, Cumulative Projects Description, include construction and use of additional housing units, retail establishments, and a hospital expansion. None of these projects would contribute to unacceptable strains on the water supply, solid waste disposal systems in the area, the electricity supply, or fire fighting response capabilities. Therefore, there would be no cumulative significant impacts.