4.10 LESS THAN SIGNIFICANT ISSUES

This section provides analysis to supplement the conclusions of the certified 2010 Final Mitigated Declaration (Appendix B) for the site selection of the Fire Station 10 Project and its less than significant impacts. Provided first is a discussion of those resources identified in the Final Mitigated Declaration as having no potential to be adversely affected by the proposed Project, and these include: agricultural and forestry resources; mineral resources; and recreational resources. Those resources with which the Project may adversely, but not significantly impact are discussed in more detail below and include: air quality; energy conservation; greenhouse gases (GHGs); hydrology and water quality; and utilities and service systems.

4.10.1 Resources with No Potential to Be Adversely Affected

4.10.1.1 Agricultural and Forestry Resources

The Final Mitigated Negative Declaration did not identify any significant impacts to agricultural or timber resources and none are anticipated to result from implementation of the Project. As discussed in the Final Mitigated Declaration, the Project site is currently undeveloped but was previously developed as a service station (constructed in 1968 and demolished in 1993). Before the service station, the Project site was part of a much larger agricultural operation back when the Ellwood Mesa was under agricultural production. No such agricultural activities have occurred on-site in decades. The State has designated the property as "Urban and Built-Up Land" pursuant to its Farmland Mapping and Monitoring Program (FMMP 2018). As mapped by the United Stated Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), soils on-site consist of Milpitas-Positas fine sandy loam with a soil capability classification of IIIe (NRCS 2018a). Class III soils are considered to have severe limitations for agricultural production that reduce the choice of plants and/or require special conservation practices. A sub-capability designation of "e" denotes soils that are subject to erosion and have slow or very slow permeability. As such, such soils are not considered prime soils for agricultural production (NRCS 2018b). There are no forest resources on-site or within the Project vicinity. Therefore, implementation of the proposed Project would not adversely affect the quality or quantity of agricultural or timber resources either in the Project vicinity or citywide.

4.10.1.2 Mineral Resources

The Final Mitigated Negative Declaration did not identify any significant impacts to mineral resources and none are anticipated. As discussed in the Final Mitigated Declaration and previously stated above, from 1968 to 1993 the subject property was the site of a former service station. Before that it was part of larger agricultural operations in the Ellwood area. Since 1993 the site has been left in an undeveloped condition. There no known mineral resources of importance to the region or the state on-site and the Project site is not designated under the City's General

Plan/Coastal Land Use Plan (GP/CLUP) as an important mineral resource recovery site. Therefore, implementation of the proposed Project would not have any adverse effect on mineral resources.

4.10.1.3 Population/Housing

The Final Mitigated Negative Declaration did not identify any significant impacts to population and/or housing and none are anticipated to result from implementation of the Project. As discussed in the Final Mitigated Negative Declaration, staffing for the fire station would potentially involve the hiring and assignment to Fire Station 10 of approximately nine more full-time firefighters by the County, which would have a negligible effect on area employment. Hiring of nine new full-time employees may have potential to foster economic or population growth within the City or County; however, such impacts are discussed more fully in Section 6.0, *Other CEQA Considerations.* Further, the Project site is currently undeveloped and construction of the fire station at this location would not result in the loss of any existing housing or displacement of current City residents. Therefore, implementation of the proposed Project would not significantly adversely affect population or housing within the City. As no Project specific potentially significant population impacts would occur as a result of Project implementation, Project contributions to cumulative population and housing impacts would not be considered significantly adverse.

4.10.1.4 Recreation

The Final Mitigated Negative Declaration did not identify any significant impacts to recreation and none are anticipated. No established recreational uses are located on the proposed Project site. The Project site is located adjacent to the Sandpiper Golf Club, but construction of a new fire station would not directly or indirectly affect the quality or quantity of existing recreational opportunities of the golf course, or other recreational opportunities in the Project vicinity or Citywide, including coastal access. Therefore, implementation of the proposed Project would not adversely affect recreational resources in the Project vicinity or citywide.

4.10.2 Resources with Potentially Less Than Significant Impacts

4.10.2.1 Air Quality

Existing Setting

This section discusses the existing air quality conditions related to the Project area, which consists of the western Goleta area, including criteria pollutant levels and emissions. The California Air Resources Board (CARB) has divided California into 15 regional air basins according to topographic drainage features. Each basin is further divided into air pollution control districts (APCDs), which are responsible for managing and enforcing air quality regulations within their districts.

The City and proposed Project are located in the South-Central Coast Air Basin (SCCAB), which is comprised of the three counties of San Luis Obispo, Santa Barbara, and Ventura. The SCCAB is separated into three districts, each comprising the area of the respective county: San Luis Obispo County APCD, Santa Barbara County APCD (SBCAPCD), and Ventura County APCD. Being within the City of Goleta and County of Santa Barbara, the proposed Project is within the jurisdiction of SBCAPCD.

Topography and Meteorology

Meteorological and topographical influences that may affect air quality in the Project area include the semi-permanent, high pressure cell that lies off the Pacific Coast, which leads to limited rainfall (approximately 16 inches per year), warm dry summers, and relatively cold dry winters. Maximum summer temperatures average approximately 76 degrees Fahrenheit (°F). During winter, average minimum temperatures are approximately 44°F.

Temperature inversions result when cool, stable air lies below warmer air aloft. Inversions also tend to confine horizontal flow through passes and valleys that are below the inversion height. Surface temperature inversions (0 to 500 feet) are most frequent during the winter, and subsidence inversions (1,000 to 2,000 feet) are most frequent during the summer. Inversions are an increase in temperature with height and are directly related to the stability of the atmosphere. Inversions act as a cap to the pollutants that are emitted below or within them, and ozone concentrations are often higher directly below the base of elevated inversions than they are at the earth's surface. For this reason, elevated monitoring sites will occasionally record higher ozone concentrations than sites at lower elevations. Generally, the lower the inversion base height and the greater the rate of temperature increase from the base to the top, the more pronounced effect the inversion will have on inhibiting vertical dispersion.

Santa Ana winds are northeasterly winds that occur primarily during fall and winter, but occasionally in spring. These are warm, dry winds blown from the high inland desert that descend the slopes of a mountain range. Wind speeds associated with the Santa Ana winds are generally 15 to 20 miles per hour, though wind speeds can sometimes exceed 60 miles per hour. During Santa Ana conditions, pollutants emitted in the County are moved out to sea. These pollutants can then be moved back onshore into the County in what is called a "post-Santa Ana condition."

Poor air quality is usually associated with air stagnation (high stability and restricted air movement). Therefore, it is reasonable to expect a higher frequency of pollution events in the southern portion of the County where light winds are frequently observed, as opposed to the northern part where the prevailing winds are usually strong and persistent.

Sensitive Receptors

Individuals with pre-existing health problems, those who are close to the emissions source, or those who are exposed to air pollutants for long periods of time are considered more sensitive to air pollutants than others. Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because the very young (children under the age of 14), the elderly (over the age of 65), and the infirm are more susceptible to respiratory infections and other air quality-related health problems than the general public. Residential land uses are considered sensitive to poor air quality because people in residential areas are often at home for extended periods and are therefore subject to extended exposure to the type of air quality present at the residence. Recreational land uses offer individuals a location to exercise and are therefore considered moderately sensitive to air pollution. Vigorous exercise places a high demand on the human respiratory function and poor air quality could add potentially detrimental stresses to the respiratory function.

Within the Project area, sensitive receptors potentially affected by the Project would include the multi-family Hideaway residential development located directly adjacent to and east of the Project site. The Sandpiper Golf Course is also located south of the Project site, directly across Hollister Avenue. However, the Sandpiper Golf Course is not considered a sensitive receptor.

Ambient Air Monitoring

The SBCAPCD is responsible for monitoring air quality in the County portion of the SCCAB to determine whether pollutant concentrations meet state and national air quality standards. The SBCAPCD has 18 air monitoring stations in the County. Monitoring stations measure a number of different variables including wind direction, wind speed, outdoor temperature, relative humidity, barometric pressure, solar radiation total hydrocarbons, ozone (O_3), nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO_2), hydrogen sulfide (H_2S), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and particulate matter less than 10 microns in diameter (PM_{10}). The stations are categorized as Prevention of Significant Deterioration (PSD) stations or State and Local Air Monitoring Stations (SLAMS). PSD stations are used to determine baseline air quality and the impacts of specific operations. SLAMS measure urban and regional air quality.

Santa Barbara Air Quality Attainment

Depending on whether or not ambient air quality standards (AAQS) are met or exceed, Santa Barbara County is classified as being in “attainment,” in which ambient air quality does not exceed the adopted numerical air quality standard, or “non-attainment,” in which ambient air quality exceeds the adopted numerical air quality standard. In April 2016, the County was designated unclassifiable/attainment for the 2008 federal 8-hour ozone standard. In 2006, the State of California implemented a statewide 8-hour ozone standard of which the

County is currently in violation. The County is also in violation of the state standard for PM10, and designated as unclassifiable/attainment for the federal PM2.5 standard and unclassified for the state PM2.5 standard based on 2015 monitoring data (SBCAPCD 2017).

Common Air Pollutants

The following is a general description of the physical and health effects from the governmentally regulated air pollutants.

Ozone (O_3). O_3 occurs in two layers of the atmosphere. The layer surrounding the Earth's surface is the troposphere. The troposphere extends approximately 10 miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" ozone) layer extends upward from about 10 to 30 miles and protects life on Earth from the sun's harmful ultraviolet rays (UV-B). "Bad" ozone is a photochemical pollutant, and is formed from complex chemical reactions involving volatile organic compounds (VOCs), nitrogen oxides (NO_x), and sunlight; therefore, VOCs and NO_x are ozone precursors. VOCs and NO_x are emitted from various sources throughout the County. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems (e.g., forests and foothill plant communities) and damages agricultural crops and some human-made materials (e.g., rubber, paint, and plastics). Societal costs from ozone damage include increased healthcare costs, the loss of human and animal life, accelerated replacement of industrial equipment, and reduced crop yields.

Carbon Monoxide (CO). CO is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. At high concentrations, CO can reduce the oxygen-carrying capacity of the blood and cause headaches, dizziness, and unconsciousness.

Nitrogen Dioxide (NO_2). Nitrogen oxides are a family of highly reactive gases that are a primary precursor to the formation of ground-level O_3, and react in the atmosphere to form acid rain. NO_2 (often reported as total nitrogen oxides, NO_x) is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations).

NO_2 can irritate and damage the lungs, and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Coarse Particulate Matter (PM_{10}). PM_{10} refers to suspended particulate matter, which is smaller than 10 microns or 10 one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate the lungs and can potentially damage the respiratory tract. On June 19, 2003, CARB adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (Senate Bill [SB] 25).

Fine Particulate Matter ($PM_{2.5}$). Due to recent increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both state and federal $PM_{2.5}$ standards have been created. Particulate matter primarily affects infants, children, the elderly, and those with pre-existing cardiopulmonary disease.

On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to CARB's increasing concerns that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current state standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Reactive Organic Gases (ROGs) *and Volatile Organic Compounds* (VOCs). Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Regulatory Setting

The following is a brief summary of the regulatory context under which air quality is managed at the federal, state, and local levels. Within the City, air quality issues are addressed through the efforts of federal, state, regional, and local government agencies. These agencies work together and individually to improve air quality through legislation, regulations, policy making, education, and numerous related program.

Both the state and the federal governments have established AAQS for several different pollutants, a summary of which is provided in Table 4.10-1. For some pollutants, separate standards have been set for different time periods. Most standards have been set to protect public health. However, for other pollutants, standards have been based on some other value (e.g., protection of crops, protection of materials, or avoidance of nuisance conditions).

Table 4.10-1. Current Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standard[1]	Federal Standards[2]
		Standard	Primary Standard
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	N/A
	8 Hours	0.070 ppm (137 µg/m^3)	0.070 ppm (147 µg/m^3)
Particulate Matter (PM_{10})	24 Hours	50 µg/m^3	150 µg/m^3
	Annual Arithmetic Mean	20 µg/m^3	N/A
Fine Particulate Matter ($PM_{2.5}$)	24 Hours	No Separate State Standard	35 µg/m^3
	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
	8 Hours	9 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)
Lead (Pb)	30 days average	1.5 µg/m^3	N/A
	Calendar Quarter	N/A	1.5 µg/m^3
	Rolling 3-Month Average	N/A	0.15 µg/m^3
Sulfur Dioxide (SO_2)[8]	1 Hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)
	3 Hours	N/A	N/A
	24 Hours	0.04 ppm (105 µg/m^3)	N/A

ppm = parts per million
µg/m^3 = micrograms per cubic meter
Source: California Air Resources Board 2016.

Federal

Federal Clean Air Act. The federal Clean Air Act (CAA) was passed in 1963 and amended in 1990, and was the first comprehensive federal law to regulate air emissions from stationary and mobile sources. Among other things, the law authorizes the USEPA to establish National AAQS (NAAQS), which help to ensure basic health and environmental protection from air pollution. The federal CAA also

gives the USEPA the authority to limit emissions of air pollutants coming from sources like chemical plants, utilities, and steel mills.

Federal Clean Air Act Amendments. In 1990, the U.S. Congress adopted the federal Clean Air Act Amendments (CAAA), which updated the nation's air pollution control program. The CAAA established a number of requirements, including new deadlines for achieving federal clean air standards. The USEPA is the federal agency charged with administering the CAAA and other air quality-related legislation. As a regulatory agency, USEPA's principal functions include setting NAAQS; establishing minimum national emission limits for major sources of pollution; and promulgating regulations. The CAAA require USEPA to approve state implementation plans (SIPs) to meet and/or maintain the NAAQS. California's SIP is comprised of plans developed at the regional or local level.

State

California Air Resources Board. The California Air Resources Board (CARB), a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets California ambient air quality standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. CARB is responsible for the control of vehicle emission sources, while the local air district is responsible for enforcing standards and regulating stationary sources.

California Clean Air Act. CARB ensures implementation of the California Clean Air Act (CCAA) and responds to the federal CAA. CARB is responsible for the control of vehicle emission sources, while the local air district is responsible for enforcing standards and regulating stationary sources.

Local

Santa Barbara County Air Pollution Control District. SBCAPCD monitors air quality and regulates stationary emission sources in the County. As a responsible agency under CEQA, SBCAPCD reviews and approves environmental documents prepared by other lead agencies or jurisdictions to reduce or avoid impacts on air quality and to ensure that the lead agency’s environmental document is adequate to fulfill CEQA requirements. As a concerned agency, the SBCAPCD comments on environmental documents and suggests mitigation measures to reduce air quality impacts.

County of Santa Barbara Clean Air Plan. The federal CAAA of 1990 and the CCAA of 1988 mandate the preparation of CAPs that provide an overview of air quality and sources of air pollution, and identify pollution-control measures needed to meet federal and state air quality standards. The SBCAPCD and the Santa Barbara County Association of Governments (SBCAG) are responsible for

formulating and implementing the CAP for the County. The CAP provides an overview of the regional air quality and sources of air pollution, and identifies the pollution-control measures needed to meet clean-air standards. The schedule for plan development is outlined by state and federal requirements, and is influenced by regional air quality. CAPs affect the development of SBCAPCD rules and regulations and other programs. They also influence a range of activities outside the district including transportation planning, allocation of monies designated for air-quality projects, and more.

The SBCAPCD 2016 Ozone Plan is the 3-year update to the County AQAP required by the state to show how SBCAPCD plans to meet the state 8-hour O3 standard. The 2016 Ozone Plan builds upon and updates the 2013 CAP and includes an inventory of O3 precursory emissions in the County, the most prevalent of which in the County are reactive organic compounds (ROCs) and NOx. The 2016 Ozone Plan focuses on reducing ozone precursor emissions through predicting vehicle activity trends and implementation transportation control measures which would serve to reduce mobile-source emissions, the primary source of ROC and NOx emissions in the County. The 2016 Ozone Plan satisfies both state and federal planning requirements and was adopted by the SBCAPCD Board in October 2016.

Impact Analysis

Methodology and Significance Thresholds

CEQA Guidelines Appendix G. In accordance with Appendix G of the 2017 CEQA Guidelines, impacts would be potentially significant if the proposed project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for O_3 precursors);
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Create objectionable odors affecting a substantial number of people.

City of Goleta Environmental Thresholds and Guidelines Manual. Pursuant to the City's *Environmental Thresholds and Guidelines Manual*, a significant adverse impact may occur when a project, individually or cumulatively, triggers either one of the following:

- Interferes with progress towards the attainment of the ozone standard by releasing emissions which equal or exceed the established long-term quantitative threshold for NO_x and ROC; and/or

- Equals or exceeds the state or federal ambient air quality standard for any criteria pollutant (as determined by modeling).

SBCAPCD Scope and Content of Air Quality Sections in Environmental Documents. In addition to CEQA and City of Goleta thresholds of significance for impacts to air quality, SBCAPCD has prepared a *Scope and Content of Air Quality Sections in Environmental Documents* (2011) with separate adopted thresholds of significance. Under these thresholds, a project will not have a significant impact on air quality, either individually or cumulatively, if operation of the project will:

- Emit (from all project sources, both stationary and mobile) less than the daily trigger for offsets or Air Quality Impact Analysis set in the APCD New Source Review Rule, for any pollutant (i.e., 240 lbs/day for ROC or NO_x; and 80 lbs/day for PM_{10}); and
- Emit less than 25 lbs/day of NO_x and ROC from motor vehicle trips only; and
- Not cause or contribute to a violation of any California or National AAQS (except ozone); and
- Not exceed the APCD health risk public notification threshold adopted by the Board (10 excess cancer cases in a million for cancer risk and a Hazard Index of more than one (1.0) for non-cancer risk); and
- Be consistent with the latest federal and state air quality plans for Santa Barbara County.

The SBCAPCD does not have adopted operational thresholds for CO emissions as it is an attainment pollutant. Further, the SBCAPCD has not adopted quantified thresholds of significance for temporary (e.g., construction-related) emissions. However, as provided in SBCAPCD's Scope and Content of Air Quality Sections in Environmental Documents, CEQA requires that short-term impacts, such as exhaust emissions from construction equipment and fugitive dust generated during grading, be discussed and quantified in the environmental document. For the purpose of quantifying and discussing short-term construction related emissions, SBCAPCD uses 25 tons/year for ROC or NO_x as a guideline for determining significance of construction impacts.

The analysis of air quality impacts follows the guidance provided in the SBCAPCD *Scope and Content of Air Quality Sections in Environmental Documents* (2011). The EIR utilizes SBCAPCD thresholds of significance because they are more current than City thresholds, having most recently been adopted as part of the update of the APCD's *Scope and Content of Air Quality Sections in Environmental Documents* in 2014 whereas the City thresholds (which are based on the former County thresholds) are dated 2002.

Project Air Pollutant Emissions

For the purpose of estimating short-term and long-term Project emissions, the California Emissions Estimator Model (CalEEMod) v. 2016.3.2, a statewide land use emissions computer model designed to quantify criteria pollutant and GHG emissions recommended for use by SBCAPCD was used. Project details from Section 2, *Project Description,* were used to inform the assumptions provided in the CalEEMod program. The inputs and results of the program model runs for the Project are provided in Appendix H. Model results were then compared against SBCAPCD's numerical thresholds for criteria pollutants.

Construction Emissions. Construction emissions are estimated using CalEEMod which estimates emissions from each phase of construction, including demolition, excavation and site preparation, building construction, and architectural coating. Emission estimates are based on the types and amount of equipment that would be used in Project construction, the level of excavation required, the square footage of demolished buildings, the removal of demolition debris and soil, the size and type of new construction, construction schedule, and the vehicle trips generated.

Project construction would temporarily increase diesel emissions and would generate particulate matter (dust). Construction equipment within the Project area that would generate VOCs and NOx emissions could include graders, excavators, dump trucks, cranes, and bulldozers. It is assumed that all construction equipment used would be diesel powered and meet a minimum Tier 2 emission standard, providing a conservative estimate of construction vehicle emissions. Construction activity for the Project would be conducted 5 days a week beginning in June 2019 and ending in September 2020 as follows:

- Site Preparation – 43 days
- Grading – 43 days
- Building Construction – 219 days
- Paving – 21 days
- Architectural Coating – 22 days

Operational Emissions. Operational emissions associated with the Project are estimated using CalEEMod for mobile source, area, and energy emissions. Mobile emissions would be generated by the motor vehicle trips to and from the Project area. Area source emissions would be generated by consumer products, architectural coating, and landscape maintenance equipment. Energy source emissions would result from electricity and natural gas consumption for space and water heating. To determine if an air quality impact would occur, the increase in emissions over existing site emissions from the Project itself are compared with the SBAPCD regional thresholds.

Project Impacts and Mitigation Measures

AQ-1: ***Short-term Construction Emissions. Construction of the Project would result in the generation of short-term air pollutant emissions that would be below the Santa Barbara County Air Pollution Control District (SBCAPCD) guideline threshold of 25 tons/year for ROC or NO_x construction-related emissions***.

Construction activities for the Project would include site preparation, grading, building construction, paving, and architectural coating. Temporary construction air pollutant emissions would be generated through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Project site. In addition, fugitive dust emissions would result from earthwork and construction activities. The site paving and finishing phase involving the application of architectural coatings (i.e., paints) and other building materials would release VOCs. A summary of the estimated construction emissions modeled for the Project are presented in Table 4.10-2. Construction emissions generated by the Project would not exceed adopted SBCAPCD criteria pollutant thresholds. This would result in a *temporarily adverse, but less than significant* (Class III) impact to regional air quality.

Table 4.10-2. Total Estimated Daily Construction Emissions

Air Pollutant	SBCAPCD Threshold	Maximum Estimated Construction Emissions (lbs/day) (S/W)	Exceeds Threshold?
NO_x	25	19.51 (S)	No
ROG	25	13.51 (S)	No
CO	-	14.28 (S)	NA
SO_x	-	0.02 (S/W)	NA
PM_{10}	-	8.44 (S/W)	NA
$PM_{2.5}$	-	4.94 (S/W)	NA

S = Summer; W = Winter
Refer to Appendix H for CalEEMod output sheets; overall emissions based on rounded totals.

Mitigation Measures and Residual Impact

As impacts would be less than significant, no mitigation measures are required. The residual impact on air quality would be *adverse, but less than significant* (Class III).

Impact AQ-2: ***Long-term Operational Emissions. Operation of the Project would result in the generation of long-term air pollutant emissions from area sources, energy use, and vehicular trips to and from the site that would be below the threshold of significance for ROC, NO_x, and PM_{10} adopted by SBCAPCD for both stationary and mobile source emissions.***

Long-term operation of the Project would generate air pollutant emissions. Operational emissions from the Project include those generated by vehicle trips (mobile emissions), the operation of equipment (energy emissions), use of consumer products and appliances, and the use of landscaping maintenance equipment (area source emissions). A summary of the estimated operational emissions modeled for the Project are presented in Table 4.10-3. Operational emissions generated by the Project would not exceed adopted SBCAPCD criteria pollutant thresholds. Further, operation of the Project would not emit more than 25 pounds per day of an ozone precursor, nor contribute enough peak hour trips to create a CO "hotspot", as the Project would only result in an increase of an estimated 29 average daily trips (ADT) (ATE 2017; Appendix G). Given these low levels of emissions, operation of the Project would not cause or contribute to a violation of any adopted AAQS. Therefore, long-term operational emissions of the Project are *adverse, but less than significant* (Class III). Detailed emissions calculations for the Project are included in Appendix H.

Table 4.10-3. Total Estimated Daily Operation Emissions

Air Pollutant	SBCAPCD Threshold	Maximum Estimated Construction Emissions (lbs/day)	Exceeds Threshold?
NO_x	25	7.37	No
ROG	25	2.97	No
CO	-	6.73	NA
SO_x	-	0.01	NA
PM_{10}	80	0.39	No
$PM_{2.5}$	-	0.39	NA

Refer to Appendix H for CalEEMod output sheets; overall emissions based on rounded totals.

In addition, as part of the Project, the Santa Barbara County Fire Department intends to utilize a generator during emergency situations such as earthquakes or wildfires when power supplies to proposed Station 10 are interrupted. The estimated 150-kilowatt (kW) emergency generator would be run on diesel fuel. It is assumed that staff would test this generator for periods of 30 minutes once a month and 2 hours once a year to ensure operational reliability during emergency events.

An air toxics Health Risk Assessment (HRA) screening was conducted by the SBCAPCD for the proposed diesel-fired internal combustion engine (DICE) (Carly Barham, SBCAPCD 6/22/18; see DEIR Comment C)." The HRA screening was conducted using the USEPA-recommended screening model, AERSCREEN, with the Hotspots Analysis and Reporting Program (HARP) software, Version 2 (Build 17320). Cancer risk and chronic non-cancer Hazard Index (HI) risk values were calculated and compared to significance thresholds for cancer and chronic non-cancer risk adopted by the District's Board of Directors. The calculated risk values

and applicable thresholds are summarized in Table 4.10-4 (calculations are provided in Appendix H, Section 10.1).

~~The SBCAPCD Rule 802 New Source Review Best Available Control Technology (BACT) Thresholds (SBCAPCD 2016) were used to determine the significance of emissions associated with the emergency generator since it would be operating on a periodic, temporary basis during emergency situations. Emissions from the emergency generator were estimated using CalEEMod software and are determined to be below the thresholds, as summarized~~ in Table 4.10-4.[1] ~~Therefore, emissions are not expected to contribute to or cause an exceedance of adopted thresholds of significance or AAQS and would be considered *adverse, but less than significant* (Class III).~~

Table 4.10-4. Maximum daily Estimated Emissions for Emergency Generator

Pollutant	C_{annual} at MEIR ($\mu g/m^3$)	Cancer Risk (per million)	Chronic Non-Cancer Risk (Hazard Index)
Diesel PM	0.00670	5.08	0.001

~~Duration~~	~~Source~~	~~Pollutant (lbs/day)~~			
		~~ROC, SO_x, and NO_x (sum)~~	~~CO~~	~~PM_{10}~~	~~$PM_{2.5}$~~
~~Temporary (emergency only)~~	~~Emergency Generator (Diesel)~~	~~10.0~~	~~6.70~~	~~0.39~~	~~0.39~~
~~**SBCAPCD PST BACT Threshold**~~		~~**120**~~	~~**500**~~	~~**80**~~	~~**55**~~
~~**Significant?**~~		~~**NO**~~	~~**NO**~~	~~**NO**~~	~~**NO**~~

The inhabited spaces of the fire station would be located approximately 120 feet from the emergency generator, while the nearest residences of the Hideaway residences would be located approximately 315 feet from the emergency generator. Based on utilization of CARB "Hot Spots" Stationary Diesel Engine Screening Risk Assessment, that distance from the generator would result in an estimated increased cancer risk of ~~four~~ 5.08 in one million ~~for fire station employees and two in one million~~ for the nearest Hideaway residences sensitive receptors, below the CARB cancer risk threshold of significance of 10 in one million. The cancer and chronic non-cancer risks at the maximally exposed

[1] Generator-specific emissions calculations can be located in Section 10.1 in Appendix H.

individual worker (MEIW) are lower.[2] Because the primary source of concern for the Project is operation of the emergency diesel generator and the cancer effects from diesel PM generally drive the risk from diesel engines, chronic and acute non-cancer risks of the Project are not are expected to exceed SBCAPCD public health risk notification thresholds and are not considered in this analysis. ~~This~~ The SBCAPCD analysis assumes a conservative, non-emergency annual operation time of ~~10~~ 50 hours (for maintenance and testing), rather than planned operations of 30 minutes monthly (6 hours annually).~~, and an additional 2-hour test every year for a total of 8 hours.~~ Therefore, even with assuming an extremely conservative assumption of emergency diesel generation testing activity, potential impacts on air quality would be *adverse, but less than significant* (Class III).

Although this screening-level analysis identifies further health risk analysis would not be required and associated impacts are not considered to be significant, SBCAPCD may determine though its permit review process that additional screening health risk assessment will be required for the proposed Project.

In addition to potentially hazardous stationary source emissions, the Project has the potential to result in increased hazardous health risk from mobile source emissions. However, since traffic counts in this area (6,200 ADT) are well below CARB's definitions of high-traffic urban roads (100,000 ADT) and rural roads (50,000 ADT) (ATE 2017; CARB 2005), the overall impacts to the fire station from emissions associated with high traffic roadways would be *adverse, but less than significant* (Class III).

Mitigation Measures and Residual Impact

As impacts would be less than significant, no mitigation measures are required. The residual impact on air quality would be *adverse, but less than significant* (Class III).

Impact AQ-3: *Generation of Obnoxious or Objectionable Odors. Construction or operation of the Project would not result in generation of objectionable odors that would affect a substantial number of people.*

The proposed Project would involve the development of a new City fire station, a land use not typically associated with odor issues. Land uses that have the potential to generate considerable odors typically include, wastewater treatment plants, landfills, animal facilities, composting stations, and chemical plants. Further, operation of the site would not involve any activities that are considered to generate substantial objectionable odors. Construction of the site may, however, involve the installation of asphalt pavement which is known to generate odors which may be objectionable to some receptors. However, paving phases of

[2] The cancer risk was determined from the CARB "Hot Spots" stationary diesel engine screening risk assessment tables for a 175 horsepower generator with an emission factor of 1.0 gallons/grams per break horsepower-hour at 50% load and an urban (worst case) setting (CARB 2010).

construction would be temporary and localized to the site. Therefore, odor related impacts would be *temporarily adverse, but less than significant* (Class III).

Mitigation Measures and Residual Impact

As impacts would be less than significant, no mitigation measures are required. The residual impact on air quality would be *adverse, but less than significant* (Class III).

AQ-4: *Consistency with Applicable Air Quality Plans. Implementation of the proposed Project would not exceed Ozone Plan projections or result in inconsistency with applicable air quality plans or policies.*

Consistency with the applicable air quality plan, such as the County Ozone Plan or other regional air quality planning documents, is required under CEQA. In the County, consistency with the Ozone Plan means that stationary and vehicle emissions associated with the proposed Project are accounted for in the Ozone Plan's emissions growth assumptions. The Ozone Plan generally relies on the land use and population projections provided in the latest SBCAG Regional Growth Forecast 2010-2040 (SBCAG 2012).

The proposed Project would involve the development of a City fire station with no associated residential development. The Project would not result in additional growth in regional population. The Project is consistent with growth projections and is therefore considered to be consistent with the 2016 Ozone Plan. Impacts are therefore considered *adverse, but less than significant* (Class III).

Mitigation Measures and Residual Impact

As impacts would be less than significant, no mitigation measures are required. The residual impact on air quality would be *adverse, but less than significant* (Class III).

Cumulative Impacts

The Region of Influence for evaluating cumulative impacts on air quality includes the entire air basin and those proposed projects which would incrementally affect AAQS for particulate matter and ozone within the SCCAB.

Development projects would be subject to air quality standards and rules contained in the SBCAPCD and policies within the City's GP/CLUP, Goleta Municipal Code (GMC), and Ordinances. This would ensure adverse, but less than significant cumulative impacts related to air quality.

4.10.2.2 Energy Conservation

Existing Setting

Due to the larger geographic and regional context of energy services and supplies, information is not readily available for City-specific energy demand. Therefore, the discussion of existing conditions below provides a general overview of the larger regional (County and/or state) area energy supplies, demands, and services. Within the City, energy supplies include electricity, natural gas, petroleum and transportation fuel, and renewable resources (e.g., solar, wind, and other renewable sources of energy).

Electricity and Natural Gas

The City receives electricity services from Southern California Edison (SCE), and natural gas services from the Southern California Gas Company (SoCalGas). Within the SCE service territory, electrical power is generated by natural gas (26 percent) and renewable sources (25 percent), with the majority of its supply sources associated with non-traceable electrical transactions (41 percent) (California Energy Commission [CEC] 2016a).[3] Within the larger County, electricity and natural gas consumption in 2016 for non-residential uses was approximately 2,067 gigawatt hours (GWh) and 69.7 million therms, respectively (CEC 2018). In 2007, operation of City-owned municipal facilities resulted in commitment of a total 3.0 GWh of electrical supplies (City of Goleta 2012). Facilities and infrastructure providing electrical and natural gas service include transmission, distribution, and communication lines that span all throughout the City and County.

Petroleum and Transportation Fuel

The California Department of Transportation (Caltrans) reported that approximately 24.4 million automobiles, 5.6 million trucks, and 880,588 motorcycles were registered in the state in 2016, resulting in a total estimated 334.7 billion vehicle miles traveled (VMT) (Caltrans 2016) and 15.3 billion gallons of gasoline consumed (CEC 2017). Within the County, an estimated 3.5 billion vehicle miles were traveled in 2015-2016, accounting for approximately 1.0 percent of the state's total VMT (Caltrans 2017).

Renewable Resources

The state strongly supports production and use of renewable energy sources, including solar photovoltaic (PV), wind, hydrologic, and biomass. For example, in-state operating capacity of renewable resources was 26,300 mega-watts (MW) as of October 31, 2016. This total includes a little more than 5,200 MW of self-generation capacity, almost 5,100 MW of which is self-generation solar PV. The state's renewable energy portfolio includes wind (6,000 MW), solar PV (13,000

[3] "Non-traceable electrical transactions" means electricity from transactions that are not traceable to a specific generation source.

MW), geothermal (2,700 MW), small hydrologic (1,800 MW), solar thermal (1,300 MW) and biomass (1,300 MW) (CEC 2016b).

Regulatory Setting

Federal

Energy Policy Act of 2005. The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under the Act, consumers and businesses can obtain federal tax credits for purchasing fuel efficient appliances and products, including buying hybrid vehicles, building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

State

California Energy Commission. The California Energy Commission CEC was created in 1974 to serve as the state's primary energy policy and planning agency. The CEC is tasked with reducing energy costs and environmental impacts of energy use - such as greenhouse gas emissions - while ensuring a safe, resilient, and reliable supply of energy.

State of California Integrated Energy Policy (SB 1398). In 2002, the Legislature passed Senate Bill 1389, which required the California Energy Commission (CEC) to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels, for the California Energy Policy Report. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for Zero Emission Vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicles miles traveled and accommodate pedestrian and bicycle access.

California Global Warming Solutions Act of 2006 (AB 32). Assembly Bill 32 (Health and Safety Code Sections 38500–38599; AB 32), also known as the California Global Warming Solutions Act of 2006, commits the state to achieving year 2000 GHG emission levels by 2010 and year 1990 levels by 2020. To achieve these goals, AB 32 tasked the California Public Utilities Commission and CEC with providing information, analysis, and recommendations to the California Air Resources Board regarding ways to reduce GHG emissions in the electricity and natural gas utility sectors.

California Code of Regulations (CCR) Title 24. Title 24 of the CCR is known as the California Building Standards Code. The 2016 California Building Standards Code went into effect January 1, 2017 and includes the following:

CCR Title 24, Part 6 comprises the California Energy Code, which was first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to increase the baseline energy efficiency requirements. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

CCR Title 24, Part 11 comprises the California's Green Building Standards Code (CALGreen), which establishes mandatory green building code requirements as well as voluntary measures (Tier 1 and Tier 2) for new buildings in California. The mandatory provisions in CALGreen will reduce the use of VOC-emitting materials, strengthen water efficiency conservation, increase construction waste recycling, and increase energy efficiency. Tier 1 and Tier 2 are intended to further encourage building practices that minimize the building's impact on the environment and promote a more sustainable design.

Clean Energy and Pollution Reduction Act of 2015 (SB 350). The Clean Energy and Pollution Reduction Act (SB 350) was passed by California Governor Brown on October 7, 2015, and establishes new clean energy, clean air, and greenhouse gas reduction goals for the year 2030 and beyond. SB 350 establishes a greenhouse gas reduction target of 40 percent below 1990 levels for the State of California, further enhancing the ability for the state to meet the goal of reducing greenhouse gas emissions by 80 percent below 1990 levels by the year 2050.

Renewable Portfolio Standard (SB 1070 and SB 107). Established in 2002 under SB 1078, the state's Renewables Portfolio Standard (RPS) was amended under SB 107 to require accelerated energy reduction goals by requiring that by the year 2010, 20 percent of electricity sales in the state be served by renewable energy resources. In years following its adoption, Executive Order S-14-08 was signed, requiring electricity retail sellers to provide 33 percent of their service loads with renewable energy by the year 2020. In 2011, SB X1-2 was signed, aligning the RPS target with the 33 percent requirement by the year 2020. This new RPS applied to all state electricity retailers, including publicly owned utilities, investor-owned utilities, electrical service providers, and community choice aggregators. All entities included under the RPS were required to adopt the RPS 20 percent by year 2020 reduction goal by the end of 2013, adopt a reduction goal of 25 percent by the end of 2016, and meet the 33 percent reduction goal by the end of 2020. In addition, the Air Resources Board, under Executive Order S-21-09, was required to adopt regulations consistent with these 33 percent renewable energy targets.

Local

City of Goleta General Plan/Coastal Land Use Plan Conservation Element (2006). The 2006 GP/CLUP Conservation Element has adopted policies related to energy conservation to preserve and protect the environment from new development within the City.

The following are City General Plan Conservation Element policies which would apply to the Project:

- Conservation Element Policy 13.3 encourages new development incorporate renewable energy sources and allows that special consideration be given to the incorporation of renewable energy sources that do not have adverse effects on the environment or adjacent residential uses.
- Conservation Element Policy 13.4 requires the City implement energy conservation measures for all new City-owned facilities or for existing City-owned facilities that the time of major improvement. Such measures include, but are not limited to, energy-efficient lighting, solar hot water systems, and landscaping with drought-tolerant species.

City of Goleta Municipal Code (GMC). Title 15 of the GMC establishes regulations for the construction of new buildings. Included in Title 15 are several chapters governing energy and energy conservation regulations within the City. These include: Chapter 15.12, *Green Building Code,* which adopts the 2016 California Green Building Code and all applicable regulations; Chapter 15.13, *Energy Efficiency Standards,* which establishes mandatory energy efficiency requirements in exceedance of the 2008 Building Energy Efficiency Standards; and, Chapter 15.15, *Energy Code,* which adopts in its entirety the 2016 California Energy Code.

Energy Efficiency Action Plan (EEAP). A component of the City's CAP, the EEAP was adopted by the City in September 2012 and serves to provide a comprehensive guiding policy document for all City-related operations as they relate to energy efficiency and serves the assist the State of California in meetings its GHG and energy efficiency goals as provided in AB 32. The EEAP identifies energy demands associated with operation of City municipal facilities and policies for increasing energy efficiency and conservation of the City's municipal buildings. The EEAP identified construction of a new 9,000 sf LEED Silver certified fire station building as an unfunded future City action.

Impact Analysis

Methodology and Significance Thresholds

CEQA Guidelines Appendix F. In accordance with Appendix F of the 2017 CEQA Guidelines, implementation of the proposed project may have a significant adverse impact on energy supplies if it would:

- Use large amounts of fuel or energy in an unnecessary, wasteful, or inefficient manner.
- Constrain local or regional energy supplies, affect peak and base periods of electrical or natural gas demand, require or result in the construction of new electrical generation and/or transmission facilities, or necessitate the

expansion of existing facilities, the construction of which would cause significant environmental effects.

- Conflict with existing energy standards, including standards for energy conservation.

City of Goleta Environmental Thresholds and Guidelines Manual. The City of Goleta *Environmental Thresholds and Guidelines Manual* does not have thresholds of significant relating to energy supplies or energy conservation.

Project Impacts and Mitigation Measures

Impact EC-1: ***Increased Demand for Energy Resources. Construction and operation of the Project would result in a net increase in regional energy demand. However, the Project includes several energy conserving design features and net increases in demand would not constitute wasteful or inefficient use of supplies, nor would increases in demand from the Project constrain existing supplies or services.***

Electricity and Natural Gas. Construction of the Project would require commitment of electrical supplies for the operation of construction equipment; however, associated demands would be temporary in nature and constitute a highly negligible increase in existing electricity supplies. Implementation of the proposed Project would result in the long-term commitment of additional energy resources, including consumption of electricity and natural gas through operation of the Project. As summarized in Table 4.10-5, operation of the Project is estimated to result in the demand for 164,524 kilo-watt hours per year (kWh/yr) of electricity, and 106,024 therms per year (therms/yr) of natural gas based on CalEEMod modeling results (see Appendix H).

Table 4.10-5. Estimated Project Electricity and Natural Gas Demands

Proposed Land Use	Theoretical Conventional Energy Project[1]	
	Electricity Demand (kWh/yr)	Natural Gas Demand (therms/yr)
Fire Station[2]	162,284	106,024
Parking Lot	2,240	0
Total	**164,524**	**106,024**

[1] Theoretical Conventional Energy Project refers to 'unmitigated' demand for energy supplies excluding the Project's proposed energy conservation features.
[2] Modeled as 'Government (Civic Center)' in CalEEMod.
Source: See Appendix H, CalEEMod Worksheets, Section 5.0 Energy Details.

The Project's long-term commitment of electricity and natural gas supplies would represent a net increase in regional demands by less than 0.008 percent and 0.16 percent, respectively. Increases in regional electricity and natural gas supplies of this proportion would represent a highly incremental and negligible increase in

demand which could readily be accommodated by existing regional supplies without having the effect of added stress or constrain upon these supplies. Further, as discussed in Section 2.6.9, Project Sustainable Design Features, the proposed Project would be designed to Leadership in Energy and Environmental Design (LEED) Silver standards that would incorporate various features to further reduce electrical energy consumption beyond those estimated in Table 4.10-5. Based on the Project's estimated energy demands compared to regional and statewide demand and service capacity, the Project is not anticipated to substantially adversely affect existing electricity and/or natural gas supplies necessitating the expansion of existing facilities. Nor would construction and operation of the Project result in the use irreversible commitment of a large amount of such supplies in an unnecessary, wasteful, or inefficient manner. Therefore, impacts to electricity and natural gas resources are considered *adverse, but less than significant* (Class III).

Petroleum and Transportation Fuel (Construction). The primary resource consumed during Project construction would include diesel fuel for the operation of diesel powered construction equipment. The total construction fuel consumption is calculated below as the sum of specific total fuel consumption calculated for each piece of equipment used in each phase of construction. To calculate total fuel consumption for specific equipment, Section 3.0, Construction Detail in the CalEEMod Worksheets located in Appendix H provides detailed construction phasing, construction equipment used in each phase, total number of days worked, equipment horsepower, equipment load factor, and equipment quantities. Total fuel consumption is then based on a fuel consumption factor of 0.05 gallons per horsepower per hour (gal/hp/hr) for diesel engines as derived from SCAQMD CEQA Handbook Table A9-3E. Calculation of fuel consumption involves the following steps:

Total Fuel Consumption = Fuel Consumption Rate x Duration

Where: Duration = Quantity of Equipment x Hours of Operation of Equipment each Day x Total Number of Days Worked

Where: Fuel Consumption Rate = Equipment Horse Power x Equipment Load Factor x Fuel Consumption Factor

Using detailed inputs of Project construction phasing and equipment details provided in Appendix H Section 3.0, Construction Details, the total fuel to be required during construction of the Project is conservatively estimated to be 26,587 gallons (Table 4.10-6). Refer to detailed calculations of Project Construction Fuel Consumption included as Attachment A in Appendix H. Based on statewide fuel demands, commitment of additional diesel fuel demands from construction of the Project would result in an increase in statewide fuel demand by less than 0.001 percent. Given Project construction would result in negligible increases in fuel demand over a short-term, impacts from increased fuel consumption from construction of the Project are considered *adverse, but less than significant* (Class III).

Table 4.10-6. Estimated Construction Fuel Demand

Construction Phase	Fuel Consumption (gallons of fuel)[1]
Site Preparation	3,423
Grading	2,804
Building Construction	18,814
Paving	1,300
Architectural Coating	247
Total	**26,587**

[1] Estimated fuel consumption conservatively assumes operation of equipment approximately 8 hours per day for the entire duration of the construction phase.
Source: Appendix H, Attachment A.

Petroleum and Transportation Fuel (Operation). Operation of the Project would result in the daily consumption of vehicle fuel as station employees and visitors of the station would travel to and from the Project site. In addition, vehicle fuel would be consumed during emergency response operations, and diesel fuel would be consumed for operation of the emergency generator. As provided in Table 4.10-7, operation of the Project is anticipated to result in the generation of an additional 54,896 annual VMT, or less than 0.002 percent of the County's annual VMT. Based on average fuel economy by mode of transportation, operation of the Project would result in a long-term annual fuel demand of 3,223 gallons of transportation fuel. In addition, utilizing calculations for estimated construction equipment fuel consumption from above, operation of the proposed emergency diesel generator would result in consumption of an additional estimated 788 gallons of diesel fuel per year, for a net total Project operational fuel demand of 4,011 gallons per year. Estimated Project operational fuel demands would represent a highly negligible increase (>0.001 percent) in statewide fuel demands. Based on the Project's incremental increase in petroleum and transportation fuel demands compared to regional and statewide demands, the Project is not anticipated to substantially adversely affect existing fuel supplies necessitating the expansion of existing facilities, nor would construction and operation of the Project result in the use of a large amount of fuel in an unnecessary, wasteful, or inefficient manner. Therefore, impacts to petroleum and transportation fuel resources from operation of the Project are considered *adverse, but less than significant* (Class III).

Table 4.10-7. Estimated Operational Fuel Consumption

Trip Type	Estimated ADT[1]	Average Trip Length (miles)[2]	Annual VMT[3]	Average Fuel Economy (miles/gallon)[4]	Total Annual Fuel Consumption (gallons/year)
Staff Trips	6	6.6	14,454	23.2	623
Fire Engine Calls	10	2.5	9,125	7.3	1,250
Misc. Trips	6	6.6	14,454	23.2	623
Public Meeting Room	7	6.6	16,863	23.2	727
Total Vehicle Fuel Demand	*29*	*--*	*54,896*	*--*	*3,223*
Emergency Diesel Generator Operation					*788*
Total Operational Fuel Demand					**4,011**

[1] Estimated ADT as provided in Appendix G.
[2] Average Trip Length based on assumed average trip length for Commercial-Work trips from CalEEMod. Average trip length for the 'Fire Engine Calls' category based on average travel distance within the proposed Fire Station 10 5-minute response area.
[3] Annual VMT = Estimated ADT x Average Trip Length x 365 days/year.
[4] Average fuel economy based on average 2014 U.S. vehicle fuel efficiency (mpg) from Table 4-12: Average Light Duty Vehicle, Long Wheel Base Fuel Consumption and Travel, and Table 4-13: Single-Unit 2-Axle 6-Tire or More Truck Fuel Consumption and Travel of the National Transportation Statistics.
Source: Appendix H, Section 4.2, Trip Summary Information and Attachment A; Appendix G; Bureau of Transportation Statistics 2017.

Mitigation Measures and Residual Impact

As impacts would be less than significant, no mitigation measures are required. The residual impact on air quality would adverse, but less than significant (Class III).

Impact EC-2: ***Consistency with Energy Conservation Policies. The Project would include several energy conservation design features which would meet or exceed applicable City-adopted energy conservation standards. The Project would not result in inconsistency with any City, State, or Federal standards or policies adopted for energy conservation.***

Consistency with existing energy standards, including policies and programs adopted by the City or under the EEAP, is required under Appendix F, Energy Conservation, of the CEQA Statutes and Guidelines. For projects within the City, compliance with the California Energy Code, Green Buildings Standards, and the City's Energy Efficiency Standards would result in consistency with existing energy standards.

As discussed under Impact EC-1 above, the Project would result in the irreversible long-term commitment of energy supplies during operation of the fire station, particularly electrical supplies. As discussed above and in Section 2.6.9, *Project Sustainable Design Features*, the proposed Project would be designed to LEED Silver standards that would incorporate various features to reduce the Project's potential to result in the wasteful or inefficient use of energy resources and promote the conservation of energy supplies, consistent with identification in the City's EEAP of construction of a future City-owned fire station developed to LEED Silver fire station certification. Given the Project consists of a new City-maintained municipal structure and would involve discretionary actions requiring agency review and approval, the Project be subject to compliance with all local, state, and federal policies designed to reduce wasteful energy consumption, and improve overall energy conservation and sustainability. Further, as analyzed under Impact GHG-2 in Section 4.10.2.3, *Greenhouse Gas Emissions*, the Project would be consistent with all applicable measures of the CAP, including adopted building energy efficiency standards. Therefore, implementation of the Project is considered to have *no impact* to the environment with regard to consistency with existing adopted energy conservation policies or program (Class IV).

Mitigation Measures and Residual Impact

As impacts would be less than significant, no mitigation measures are required. The residual impact on air quality would adverse, but less than significant (Class III).

Cumulative Impacts

The Region of Influence for evaluating cumulative impacts on energy resources include the service are of associated private utility providers with past, present, and reasonably probable projects which would have the potential to contribute towards significant increases in regional energy demands or the wasteful, inefficient irreversible commitment of energy resources. Therefore, all related projects that would generate new demand for energy resources within the City and region would be within the Region of Influence.

The proposed Project would contribute incrementally to adverse effects on energy resource demand and conservation when considering the cumulative impact of concurrently planned development within the City. Like the Project, other cumulatively considered development identified in Table 3-1 of Section 3.0, *Related Projects*, consist of discretionary actions requiring agency approval and are required to comply with local, regional, state, and federal policies relating to energy use and conservation. For instance, local projects involving the development of new buildings must be designed to CALGreen and the 2016 California Energy Code. Further, these projects are/would be operated and maintained by private utilities companies such as SCE and SoCal Gas, which plan for anticipated growth. Electric and natural gas services are provided upon demand from consumers and expanded as needed to meet demand, consistent with

applicable local, state, and federal regulations. Therefore, it is not anticipated that the Project contribution to cumulative impacts generated by the projects identified in Table 3-1, along with other projects with the region or the service area of these utility providers, would result in a significantly considerable wasteful use of energy resources, such that the Project, and other cumulative projects, would have a cumulative effect on energy conservation.

4.10.2.3 Greenhouse Gas Emissions

Existing Setting

Climate Change and Greenhouse Gases

The natural process through which heat is retained in the troposphere is called the "greenhouse effect." The greenhouse effect traps heat in the troposphere through a three-fold process, summarized as follows: short wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long wave (thermal) radiation; and GHGs in the upper atmosphere absorb this long wave radiation and emit this long wave radiation into space and toward the Earth. This "trapping" of the long wave radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

The most abundant GHGs are water vapor and carbon dioxide (CO2). Many other trace gases have greater ability to absorb and re-radiate long wave radiation; however, these gases are not as plentiful. For this reason, and to gauge the potency of GHGs, scientists have established a Global Warming Potential for each GHG based on its ability to absorb and re-radiate long wave radiation.

The following is a general description of some of the principle GHGs.

Water Vapor (H2O). Although water vapor has not received the scrutiny of other GHGs, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers, and transpiration from plants, contribute 90 percent and 10 percent of the water vapor in our atmosphere, respectively.

The primary human-related source of water vapor comes from fuel combustion in motor vehicles; however, this is not believed to contribute a significant amount (less than one percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change (IPCC) has not determined a Global Warming Potential for water vapor.

Carbon Dioxide (CO2). CO2 is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, the concentration of CO2 in the atmosphere has increased 36 percent. CO2 is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.

Methane (CH4). CH4 is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The U.S. Environmental Protection Agency (USEPA) adopted Global Warming Potential of methane is 21.

Nitrous Oxide (N2O). N2O is produced by both natural and human-related sources. Primary human-related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The USEPA adopted Global Warming Potential of N2O is 310.

Hydrofluorocarbons (HFCs). HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is growing, as the continued phase out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) gains momentum. The USEPA adopted Global Warming Potentials of HFCs range from 140 for HFC-152a to 11,700 for HFC-23.

Perfluorocarbons (PFCs). PFCs are compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semi-conductor manufacturing. PFCs are potent GHGs with a Global Warming Potential several thousand times that of CO2, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years). The USEPA adopted Global Warming Potentials of PFCs range from 6,500 to 9,200.

Sulfur hexafluoride (SF6). SF6 is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. SF6 is the most potent GHG that has been evaluated by the IPCC with a Global Warming Potential of 23,900. However, its global warming contribution is not as high as the Global Warming Potential would indicate due to its low mixing ratio compared to CO2 (4 parts per trillion [ppt] of SF6 versus 365 ppm of CO2).

In addition to the six major GHGs discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric O3 depletors; therefore, their gradual phase out is currently in effect. The following is a listing of these compounds.

Hydrochlorofluorocarbons (HCFCs). HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a

consumption cap and gradual phase out of HCFCs. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The Global Warming Potentials of HCFCs range from 93 for HCFC-123 to 2,000 for HCFC-142b.

1,1,1 trichloroethane. 1,1,1 trichloroethane, or methyl chloroform, is a solvent and degreasing agent commonly used by manufacturers. The Global Warming Potential of methyl chloroform is 110 times that of CO2.

Chlorofluorocarbons (CFCs). CFCs are used as refrigerants, cleaning solvents, and aerosol spray propellants. CFCs were also part of the USEPA's Final Rule (Federal Register [FR], volume 57, page 3374) for the phase out of O3-depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the atmosphere, contributing to the greenhouse effect. CFCs are potent GHGs with Global Warming Potentials ranging from 4,600 for CFC 11 to 14,000 for CFC 13.

Regulatory Setting

The following is a brief summary of those federal, state, and local regulations which address both climate change and GHG emissions.

Federal

U.S. Environmental Protection Agency (U.S. EPA). The U.S. EPA is responsible for implementing federal policy to address global climate change. The federal government administers a wide array of public-private partnerships to reduce U.S. GHG emissions. These programs focus on energy efficiency, renewable energy, methane and other non-CO2 gases, agricultural practices, and implementation of technologies to achieve GHG reductions.

Massachusetts v. Environmental Protection Agency. In *Massachusetts v. Environmental Protection Agency et al. (2007) 549 U.S. 497*, the U.S. Supreme Court held that GHGs are pollutants under the CAA and directed the U.S. EPA to decide whether the gases endangered public health or welfare. On December 7, 2009, the U.S. EPA issued an Endangerment Finding under Section 202(a) of the CAA, opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the CAA.

On May 13, 2010, the U.S. EPA issued a Final Rule that took effect on January 2, 2011, setting a threshold of 75,000 MT CO_2e per year for GHG emissions from major industrial facilities. The U.S. EPA has not yet adopted thresholds for other GHG sources, although carbon pollution standards have been proposed to cut carbon pollution from existing and new power plants, the largest source of GHG emissions in the U.S.

To date, Congress has not enacted any legislation requiring economy-wide mandatory reductions in GHG emissions. Several different “cap-and-trade” proposals, which would require such reductions, have been introduced in Congress, but none of them have been passed by either branch of Congress, let alone become law. All such plans would place caps on the total amount of GHG which can be emitted during future years, and allow emitters to buy and sell emission credits. However, such plans vary widely on what caps they would place on emissions and how quickly such caps would come into effect, as well as how their specific mechanisms would work.

International Protocols. In 1988, the United Nations established the IPCC to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In June 1992, the U.S. joined other countries in the United Nations Framework Convention on Climate Change (UNFCCC) agreement with the goal of stabilizing GHG emissions. The treaty itself set no binding limits on GHG emissions for individual countries and contains no enforcement mechanisms. In that sense, the treaty is considered legally non-binding. Instead, the treaty provides a framework for negotiating specific international treaties (called "protocols") that may set binding limits on GHGs.

The Kyoto Protocol was the first treaty made under the UNFCCC on December 1, 1997 and was the first international agreement that commits signatories to reduce GHG emissions. The Protocol sets emissions targets for developed countries which are binding under international law. The Kyoto Protocol has had two commitment periods, the first of which lasted from 2005-2012, and the second 2012-2020. The U.S. has not ratified the Kyoto Protocol. It has been estimated that if the commitments outlined in the Kyoto Protocol were met, global GHG emissions could have been reduced by an estimated 5 percent from 1990 levels during the first commitment period of 2008–2012.

In December 2009, international leaders from 192 nations met in Copenhagen to address the future of international climate change commitments post-Kyoto, but no binding agreements were reached. Many of the industrialized countries that ratified the Kyoto Protocol have not and/or are not expected to meet their targets. However, countries did ratify the Copenhagen Accord, a nonbinding agreement. The Copenhagen Accord, a voluntary agreement between the U.S., China, India, and Brazil, recognizes the need to keep global temperature rise to below 2°C and obligates signatories to establish measures to reduce GHG emissions and to prepare to provide help to poorer countries in adapting to climate change.

Representatives from 194 U.N. member states, including business leaders and nongovernment organizations, met in Cancun, Mexico in December 2010 to participate in the United Nations Climate Change Conference (COP-16). In all, approximately 12,000 participants met to work out the language and reduction targets of a new agreement. The result was the Cancun Agreements, a voluntary agreement similar to the Copenhagen Accord, but with broader U.N. member nation support. Under the Cancun Agreements, countries agree to keep

temperature rise below 2°C above pre-industrial levels and developed countries are urged to make more aggressive emission cut pledges.

The UNFCCC met again in December 2011 in Durban, South Africa to continue deliberating on a treaty to replace the Kyoto Protocol, which ended in 2012. The conference agreed to a legally binding agreement comprising all countries, which will take effect in 2020. There was also progress regarding the creation of a Green Climate Fund (GCF) for which a management framework was adopted.

The UNFCCC Paris Agreement brings nations into a common cause to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change (UNFCCC 2017). After joining the Paris Agreement in September 2016, the U.S. left the Paris Agreement in June 2017.

State

California Air Resources Board. The California ARB, a part of the California Environmental Protection Agency (Cal EPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, ARB conducts research, sets state AAQS, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. ARB has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts. ARB has also recently adopted a statewide GHG emissions limit for 2020 (427 million metric tons of CO_2e), an emissions inventory, and requirements to measure, track, and report GHG emissions by major industries.

Executive Order S-30-15. California Governor Brown announced on April 29, 2015 through Executive Order B-30-15 a new statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. This order acts as an intermediate goal to achieving 80 percent reductions by 2050 as outlined in Executive Order S-3-05 below.

Executive Order S-3-05. California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels.
- By 2020, California shall reduce GHG emissions to 1990 levels.
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

Based on recent case law, the GHG reduction targets of Executive Order S-30-15 are not required to be utilized as thresholds of significance for determining environmental impacts from a Project's GHG emissions (*Cleveland National Forest Foundation v. San Diego Association of Governments, July 13, 2017*).

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. The California Global Warming Solutions Act of 2006 (AB 32) recognizes that California is a major contributor to U.S. GHG emissions. AB 32 acknowledges that such emissions cause significant adverse impacts to human health and the environment, and therefore must be identified and mitigated where appropriate. AB 32 also establishes a state goal of reducing GHG emissions to 1990 levels by 2020 – a reduction of approximately 30 percent from projected state emission levels and 15 percent from current state levels, with even more substantial reductions required in the future.

California ARB has adopted the Climate Change Scoping Plan, which outlines the state's strategy to achieve the 2020 GHG limit set by AB 32. This Scoping Plan proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify energy sources, save energy, create new jobs, and enhance public health.

Senate Bill (SB) 375. The passage of SB 375 (Steinberg, Chapter 728, Statutes of 2008) on September 30, 2008 created a process whereby local governments and other stakeholders must work together within their region to achieve the GHG reductions specified in AB 32 through integrated development patterns, improved transportation planning, and other transportation measures and policies. Under SB 375, the California ARB is required to set regional vehicular GHG reduction targets for 2020 and 2035. On September 23, 2010, the California ARB adopted the vehicular GHG emissions reduction targets that require a 7 to 8 percent reduction by 2020 and between 13 to 16 percent reduction by 2035 relative to emissions in 2005 for each metropolitan planning organization (MPO). Additionally, SB 375 required that those targets be incorporated within a Sustainable Communities Strategy (SCS), a newly required element within the MPO's Regional Transportation Plan (RTP).

Santa Barbara California Association of Governments (SBCAG) is the MPO for the County of Santa Barbara, which includes the City of Goleta. The GHG reduction targets for the County and consistency with AB 32 is addressed in the County's Energy and Climate Action Plan (ECAP).

Senate Bill (SB) 97. SB 97, passed in 2007, amends CEQA to establish that GHG emissions and their effects are appropriate subjects for CEQA analysis, and directs the OPR to develop draft CEQA Guidelines for evaluating and mitigating GHG emissions and global climate change effects. In March 2010, the California Office of Administrative Law codified into law CEQA amendments that provide regulatory guidance with respect to the analysis and mitigation of the potential effects of GHG

emissions, as found in CEQA Guidelines Section 15183.5. The California Natural Resources Agency adopted the Guidelines in January 2009.

However, neither a threshold of significance nor any specific mitigation measures are included or provided in these CEQA Guidelines Amendments. The Guidelines require a lead agency to make a good-faith effort based on the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. The Guidelines give discretion to the lead agency whether to: 1) use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; and/or 2) rely on a quantitative analysis or performance-based standards. Further, the Guidelines identify three factors that should be considered in the evaluation of the significance of GHG emissions:

1. The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting;

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

Executive Order S-13-08. Executive Order S-13-08, the Climate Adaptation and Sea Level Rise Planning Directive, provides clear direction for how the state should plan for future climate impacts. The first result is the 2009 California Adaptation Strategy (CAS) report which summarizes the best known science on climate change impacts in the state to assess vulnerability and outlines possible solutions that can be implemented within and across state agencies to promote resiliency.

California Code of Regulations (CCR) Title 24. Title 24 of the CCR is known as the California Building Standards Code. The 2016 California Building Standards Code went into effect January 1, 2017 and includes the following:

CCR Title 24, Part 6 comprises the California Energy Code, which was first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to increase the baseline energy efficiency requirements. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

CCR Title 24, Part 11 comprises CALGreen, which establishes mandatory green building code requirements as well as voluntary measures (Tier 1 and Tier 2) for new buildings in California. The mandatory provisions in CALGreen will reduce the use of VOC-emitting materials, strengthen water efficiency conservation, increase construction waste recycling, and increase energy efficiency. Tier 1 and Tier 2 are

intended to further encourage building practices that minimize the building's impact on the environment and promote a more sustainable design.

Senate Bill (SB) 32 and Assembly Bill (AB) 197. SB 32 and AB 197 were both approved by Governor Jerry Brown on September 8, 2016 and became effective on January 1, 2017. SB 32 establishes a new target for GHG emissions reductions at 40 percent of 1990 levels by 2030. AB 197 is paired with SB 32, and is a measure that increases legislative oversight over the California ARB, in order to ensure strategies to lower emissions favor those most impacted by climate change.

Local

Santa Barbara County Air Pollution Control District. SBCAPCD monitors air quality and regulates stationary emission sources in the County. As a responsible agency under CEQA, SBCAPCD reviews and approves environmental documents prepared by other lead agencies or jurisdictions to reduce or avoid impacts on air quality and to ensure that the lead agency's environmental document is adequate to fulfill CEQA requirements. As a concerned agency, the SBCAPCD comments on environmental documents and suggests mitigation measures to reduce air quality and GHG impacts.

City of Goleta Climate Action Plan (CAP). The federal CAAA of 1990 and the CCAA of 1988 mandate the preparation of CAPs that provide an overview of air quality and sources of air pollution, and identify pollution-control measures needed to meet federal and state air quality standards. The CAP, adopted by the City in July 2014, provides an overview of the regional GHG emissions and outlines a framework of quantified and non-quantified measures to reduce community GHG emissions by 2020 and 2030 and serves as a Qualified GHG Reduction Strategy consistent with State CEQA Guidelines. The measures identified in this plan are intended to achieve targeted GHG emissions reductions through increasing energy and water efficiency for buildings and expanding alternative transportation choices. Consistent with state objectives outlined in AB 32, the City added Conservation Element Implementation Action 5 (CE-IA-5) to its 2006 GP/CLUP in 2009 to develop a Greenhouse Gas Reduction Plan supporting state implementation of AB 32. While CE-IA-5 does not specify a reduction target, the City has decided to use a target of 11 percent below 2007 emissions for 2020 emissions targets, and 26 percent below 2020 levels for 2030. The CAP is intended to address City activities, as well as activities and projects subject to ministerial and/or discretionary approval by the City.

Impact Analysis

Methodology and Significance Thresholds

CEQA Guidelines Appendix G. In accordance with Appendix G of the 2017 CEQA Guidelines, implementation of the proposed project may have a significant adverse impact on GHGs if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

City of Goleta Environmental Thresholds and Guidelines Manual. The City of Goleta *Environmental Thresholds and Guidelines Manual* does not have thresholds of significant relating to "Greenhouse Gas Emissions" or climate change.

Santa Barbara County Air Pollution Control District CEQA Guidelines. At this time, the SBCAPCD does not have thresholds of significance for GHG emissions that would apply to the proposed Project. SBCAPCD amended its Environmental Review Guidelines (2015) to include GHG thresholds for stationary source land uses including "equipment, processes and operations that require an SBCAPCD permit to operate," of which the proposed Project does not apply.

The significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a CAP). Given neither the City nor the SBCAPCD have adopted quantitative GHG emissions thresholds for area sources, the Project is analyzed for consistency with the CAP. In addition, in order to provide a quantitative evaluation of the significance from anticipated GHG emissions associated with the Project, the anticipated GHG emissions from the project are also compared to the San Luis Obispo County Air Pollution Control District (SLOAPCD) Greenhouse Gas Thresholds, as adopted in 2012. The SLOAPCD GHG thresholds are the most recently adopted quantitative thresholds for area sources in the SCCAB, and as such, are an appropriate comparison for the Project.

Based on the adopted SLOAPCD methodology, three thresholds can be used to evaluate the level of significance of GHG emissions impacts for residential and commercial projects. The three thresholds are summarized in Table 4.10-8 below.

Table 4.10-8. SLOAPCD GHG Significance Determination Criteria

GHG Emissions Source Category	Operational Emissions
For Land Use Development Projects including: Residential, Commercial, and Public Land Use and Facilities	Compliance with Qualified GHG Reduction Strategy OR Bright-Line Threshold of 1,150 MT of CO_2e/year OR Efficiency Threshold of 4.9 MT of CO_2e/SP[1]/year

SP = Service Population (residents + employees)
Source: SLOAPCD 2012.

The Project is an approximate 11,600 square feet, two-story fire station. Given the proposed Project is not directly service oriented in terms of the SLOAPCD GHG efficiency threshold, the bright-line threshold is considered most applicable to the Project. Therefore, the Project would have a potentially significant contribution to GHG emissions if it would result in greater than 1,150 MT of CO_2e/year.

Project Greenhouse Gas Emissions

For the purpose of estimating Project GHG emissions, the CalEEMod v. 2016.3.2, a statewide land use emissions computer model designed to quantify criteria pollutant and GHG emission recommended for use by SBCAPCD was used. Project details from Section 2, *Project Description,* were used to inform the assumptions provided in the CalEEMod program. The inputs and results of the program model runs for the Project are provided in Appendix H. Model results were then compared against SLOAPCD's numerical bright-line thresholds for GHG emissions from public land use development projects. The Project's consistency with the GHG reduction targets and strategies of the CAP are also identified.

Construction Emissions. Construction equipment typically uses fossil fuels, which generates GHGs such as carbon dioxide, methane, and nitrous oxide. Methane may also be emitted during the fueling of heavy equipment. The raw materials used to construct new buildings can sequester carbon; however, demolition of structures can result in the gradual release of the carbon stored in waste building materials as those materials decompose in landfills. Since the exact nature of the origin or make-up of the construction materials is unknown, only operation of construction vehicles and equipment is considered in the analysis of construction GHG emissions.

Based on current SLOAPCD methodology for determining project GHG emissions, GHGs emitted during construction are amortized over an estimated 25-year project lifetime.

Operational Emissions. Operational GHG emissions associated with the Project are estimated using CalEEMod for mobile source, area, and energy emissions.

Mobile GHG emissions would be generated by the motor vehicle trips to and from the Project area. Area source emissions would be generated by consumer products, architectural coating, and landscape maintenance equipment. Energy source emissions would be generated by emissions resulting from electricity and natural gas consumption for space and water heating. To determine if an impact would occur from Project GHG emissions, the increase in emissions over existing site emissions from the Project itself are compared with the SLOPCD numerical thresholds and the Project is compared for consistency with the City CAP.

Although no significant impacts were identified, the Final Mitigated Negative Declaration provided two recommended mitigation measures for incorporation. These recommended measures included additional energy conservation measures to be incorporated into the design and operation of the fire station to improve energy conservation and recommendation for acquisition of LEED certification, both of which would ensure further reduction in Project operational GHG emissions. Since preparation of the Final Mitigated Negative Declaration in 2010, the proposed Project, as analyzed in this EIR, has undergone changes in the implementation and design of the fire station which has resulted in incorporation of many of these features proposed in these recommended mitigation measures. These changes have included incorporation of energy efficiency improvements and water conservation measures and revisions to the design of the Project consistent with LEED Silver standards. As such, revisions in the design of the Project since preparation of the Final Mitigated Negative Declaration has demonstrated incorporation of these recommended GHG measures, and incorporation of such mitigation is not required for the proposed Project.

Project Impacts

Impact GHG-1: ***Project GHG Emissions. The Project would generate temporary, as well as long-term operational GHG emissions, which would incrementally contribute to climate change, but would not exceed applicable quantified GHG emissions thresholds***.

Construction Emissions. Construction of the Project would result in the generation of GHG emissions as a result of operation of construction equipment. Construction activities would occur over an estimated 16-month period and would generate an estimated 174.89 MT CO_2e/year net new annual GHG emissions (Table 4.10-9), primarily from use of off-road construction equipment during building construction phases of the Project. Per SLOAPCD methodology, maximum annual construction emissions for the Project would be approximately 7.0 MT CO_2e/year when amortized for the life of the Project (25 years).

Table 4.10-9. Estimated Construction GHG Emissions

Construction Phase		GHG Emissions (MT CO_23/year)	Total Annual GHG Emissions (MT CO_2e/year)
Year 2019 Construction	Site Preparation	34.41	136.25
	Grading	32.79	
	Building Construction	69.05	
Year 2020 Construction	Building Construction	158.60	174.89
	Paving	13.14	
	Architectural Coating	3.15	
Maximum Annual GHG Emissions from Construction			*174.89*
Amortized over 25 Years			**7.0**

Refer to Appendix H for CalEEMod output sheets; overall emissions based on rounded totals.

Operational Emissions. Direct operational emissions of the Project would result from use of electricity and natural gas for utilities as a result of operational activities, operation of the emergency generator for regular tests and in the event of emergency situations, irrigation of landscaping, and consumption of vehicle fuel from increased vehicle trips. A summary of the annual GHG emissions from Project operation is provided in Table 4.10-10. As shown, operation of the Project would generate a total of 103.09 MT CO_2e/year.

Table 4.10-10. Estimated Operational GHG Emissions

Source Category	GHG Emissions (MT CO_2e/year)
Area	0.00
Energy	58.30
Mobile	0.20
Waste	8.25
Water	30.75
Total	**103.09**

Refer to Appendix H for CalEEMod output sheets; overall emissions based on rounded totals.

Total Project GHG Emissions. The total annual GHG emissions generated by the Project, as determined per SLOAPCD methodology, is summarized in Table 4.10-11. As shown, maximum annual amortized construction emissions plus total operational emissions would equate to an estimated 110.09 MT CO_2e/year, which is well below SLOAPCD's bright-line threshold adopted for determining cumulative significance of land use development projects on global climate change. Therefore, the Project's quantifiable impact from GHG emissions on global climate change would be *adverse, but less than significant* (Class III).

Table 4.10-11. Total Project GHG Emissions

Category	Project Annual GHG Emissions (MT CO_2e/year)
Maximum Annual Construction (Amortized)	7.0
Total Operational	103.09
Total	**110.09**
Above Bright-Line Threshold?	***No***

Refer to Appendix H for CalEEMod output sheets; overall emissions based on rounded totals.

Mitigation Measures. No mitigation measures would be required.

Residual Impact. Impacts would be less than significant without mitigation.

Impact GHG-2: ***Consistency with City of Goleta Climate Action Plan. Implementation of the proposed Project would be consistent with applicable policies of the City of Goleta Climate Action Plan and would consistent with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions***.

As previously discussed in Section 4.10.2.3.2, the City of Goleta adopted the CAP in July 2014, which serves as the applicable Qualified GHG Reduction Strategy consistent with State CEQA Guidelines. The CAP outlines a programmatic approach to review the potential from GHG-related impacts associated with new development within the City. Any project-specific environmental document that relies on the CAP for its cumulative impacts analysis must identify specific measures applicable to the project and demonstrate the project's incorporation of the measures. The measures and strategies identified in the CAP primarily apply to City actions, though some measures and strategies are directly applicable to new land use development projects. Table 4.10-9 describes the Project's consistency with those CAP measures which are applicable to the Project.

As indicated in Table 4.10-12, the Project would be consistent with all applicable strategies and measures of the CAP. Being consistent with the City CAP, the Project is therefore considered consistent with objectives of Executive Orders S-3-05 and S-30-15, AB 32, and SB 375. Therefore, the Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions and which are applicable to the proposed Project, and impacts would be *adverse, but less than significant* (Class III).

Cumulative Impacts

Region of Influence

As previously discussed, climate change occurs at a global scale, with new generators of GHG emissions cumulatively contributing towards the globally

changing climate. As such, the Regional of Influence for evaluating cumulative impacts on climate change is worldwide. Therefore, all global actions which may generate new GHG emissions and contribute towards climate change would be within the Region of Influence.

Impact Assessment

As previously discussed, GHG emissions are a cumulative issue contributing to global climate change. As such, the analysis of Project impacts from GHG emissions is cumulative in nature. Given the estimated GHG emissions would be below SLOAPCD's quantified thresholds for evaluating impacts of the proposed land use development on GHGs and global climate change, as discussed under Impact GHG-1, per SLOAPCD methodology, the proposed Project would not result in cumulatively considerable contribution to a cumulatively significant impact to global climate change. Further, as demonstrated under Impact GHG-2, the Project would be consistent with all applicable plans, policies, and regulations pertaining to reducing global GHG emissions.

Table 4.10-12. Project Consistency with Applicable CAP Measures

CAP Strategy	Project Consistency
Building Energy Efficiency	
BEE-1. Continue implementation of the Residential and Commercial Building Code that Exceeds Title 24 Standards by 15 percent effective through Code Expiration (July 2014).	Consistent. The proposed Project would comply with and exceed the Chapter 15.13, *Energy Efficiency Standards,* of the Goleta Municipal GMC by also complying with the 2016 California Energy Code, as adopted in Section 15.15, *Adoption of the California Energy Code,* of the GMC, which updates and exceed the energy efficiency requirements of the 2008 California Energy Code. Further, the proposed Project would be constructed and designed to the LEED Silver Certification standards that would incorporate various resource-efficient project sustainability design features to reduce energy consumption achieve further reductions in building and site energy use.
Renewable Energy	
RE-1. Continue implementation of Ordinance Requiring Construction of Solar-Ready Buildings.	Consistent. The proposed Project would comply with City adopted Green Building Standards for Compliance proposed in addition to the requirements of CALGreen+, which include requirement for construction of solar-ready projects.

Table 4.10-12. Project Consistency with Applicable CAP Measures (Continued)

CAP Strategy	Project Consistency
Water Consumption	
WR-1. Continue Compliance with SB x7-7: Reduce Per Capita Urban Water Use.	Consistent. The proposed Project would include water conservation strategies that would reduce indoor and outdoor water use by at least 20 percent, consistent with per capita urban water use reduction requirements established under SB x7-7.
Municipal Measures	
M-1. Develop a Water Conservation Plan for City Operations.	Consistent. The proposed Project includes indoor and outdoor water conservation features and measures, including incorporation of drought-tolerant landscaping and installation of low-flow plumbing features, to conserve water and achieve a minimum reduction in water use of 20 percent, which would exceed 15 percent reduction targets of CAP Municipal Measure M-1.

4.10.2.4 Hydrology and Water Quality

Existing Setting

Regional Setting

The Project site is located in western Goleta and within the California Coastal Zone approximately 0.5-mile from the Pacific Ocean. The site is located within the Goleta Hydrologic Subarea of the South Coast Hydrologic Unit of the Central Coast Basin, which generally includes the areas south of the Santa Ynez Mountains between Point Arguello and the City of Carpinteria (CCRWQCB 2016). The region has a Mediterranean climate with warm, dry summers and cool, often wet winters. The average precipitation in the South Coast Hydrologic Unit is nearly 18 inches per year, the most of which occurs between November and March (County of Santa Barbara 2013).

Project Site

Existing conditions of the site remain relatively unchanged since preparation of the Final Mitigated Declaration in 2010 (Appendix B). As discussed therein, the Project site is located at an elevation of 120 feet above mean sea level.

Site Surface Drainage and Runoff Quantity. Based on previous site assessments, the site is underlain by sand and silty sand from the surface to approximately 30 feet below grade. The sight is currently vegetated by eucalyptus trees and

nonnative grasses with no impervious surfaces. The site topography has an average slope of 1.4 percent and generally slopes toward the south, with the exception of a small area in the northeast corner of the property that slopes north towards the UPRR right of way. During rainfall events, storm water runoff sheet flows southeasterly and southerly until draining into the Hollister Avenue right-of-way, where it is then conveyed easterly in a gutter until entering a drainage inlet and subsequent storm drain approximately 880 feet down Hollister Avenue (Flowers & Associates, Inc. 2017; Appendix I). In the northeast corner of the site, runoff from a small area flows northward over an exposed embankment down to the UPRR tracks. This has caused significant erosion and localized head cutting into this portion of the property. This railroad embankment is very steep and heavily eroded along the entire parcel frontage. Table 4.10-13 provides a summary of the existing runoff generated during pre- and post-Project conditions during rainfall events of variable magnitude. Detailed hydraulic calculations are provided in the Drainage Analysis prepared by Flowers & Associates, Inc. for the proposed Project (Appendix I).

Table 4.10-13. Existing Site Estimated Storm Water Runoff

Storm Return Period	Estimated Pre-Project Peak Flows (cfs)	Estimated Post-Project Peak Flows (cfs)	Difference (cfs)
2-year	0.72	0.71	-0.01
5-year	1.47	0.21	-1.26
10-year	2.01	1.47	0.54
25-year	2.71	1.74	0.97
50-year	3.22	1.94	1.28
100-year	3.72	2.11	1.61

Source: Flowers & Associates, Inc. 2017; Appendix I.

Surface Water Quality. There are no streams or other water bodies on or adjacent to the site. The nearest water features to the site is Devereux Creek which bisects the Hideaway residential development, located approximately 700 feet west of the Project site and separated by the Hideaway residential development.

Flooding and Hydrologic Hazards. The Project site is not located within a designated flood hazard area, including those defined by the Federal Emergency Management Agency (FEMA). Although the site is located within the CZ of the City, the site is not located within a tsunami inundation area, as mapped by the University of Southern California for the California Emergency Management Agency (California Department of Conservation 2009).

Regulatory Setting

Federal

Clean Water Act. In 1972, the Federal Water Pollution Control Act (later referred to as the Clean Water Act [CWA]) was amended to require that the discharge of pollutants into waters of the U.S. from any point source be effectively prohibited unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. In 1987, the CWA was again amended to require that the USEPA establish regulations for the permitting of storm water discharges (as a point source) by municipal and industrial facilities and construction activities under the NPDES permit program. The regulations require that Municipal Separate Storm Sewer System (MS4) discharges to surface waters be regulated by an NPDES permit.

The CWA requires states to adopt water quality standards for water bodies and have those standards approved by USEPA. Water quality standards consist of designated beneficial uses for a particular water body (e.g., wildlife habitat, agricultural supply, and fishing), along with water quality criteria necessary to support those uses. Water quality criteria include quantitative set concentrations, levels, or loading rates of constituents—such as pesticides, nutrients, salts, suspended sediment, and fecal coliform bacteria—or narrative statements that represent the quality of water that support a particular use.

Section 303 of the CWA requires that the state adopt water quality standards for surface waters. When designated beneficial uses of a particular water body are being compromised by water quality, Section 303(d) of the CWA requires identifying and listing that water body as impaired. Once a water body has been deemed impaired, a TMDL must be developed for each impairing water quality constituent. A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (often with a “factor of safety” included, which limits the total load of pollutants to a level well below that which could cause the standard to be exceeded). Once established, the TMDL is allocated among current and future dischargers into the water body.

Direct discharges of pollutants into waters of the U.S. are not allowed, except in accordance with the NPDES program established in Section 402 of the CWA. Non-point source discharges to storm water are regulated under storm water NPDES permits for municipal storm water discharges, industrial activities, and construction activities. These permits require development and adherence to Storm Water Pollution Prevention Plans (SWPPP).

Under Section 404 of the CWA, the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into waters of the U.S., which are those waters that have a connection to interstate commerce, either direct via a tributary system or indirect through a nexus identified in the USACE regulations.

Under Section 401 of the CWA, the SWRCB must certify all activities requiring a 404 permit. The RWQCB regulates these activities and issues water quality certifications for those activities requiring a 404 permit.

State

Porter-Cologne Water Quality Control Act. The federal CWA places the primary responsibility for the control of water pollution and planning the development and use of water resources, with the individual states; however, it does establish certain guidelines for the states to follow in developing their programs.

California's primary statute governing water quality and water pollution is the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), which grants the SWRCB and RWQCBs broad powers to protect water quality and is the primary vehicle for implementation of California's responsibility under the CWA. The Porter-Cologne Act grants the SWRCB and RWQCBs the authority and responsibility to adopt plans and policies, regulate discharges to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, oil, or petroleum product.

State Water Quality Control Board. The SWRCB is responsible for statewide regulation of water resources. SWRCB's mission is to "ensure the highest reasonable quality for waters of the state, while allocating those waters to achieve the optimum balance of beneficial uses." SWRCB thus has joint authority over water allocation and water quality protection. SWRCB supports the efforts of the individual RWQCBs, of which there are nine statewide. These are semiautonomous and consist of Board members appointed by the Governor and confirmed by the Senate. Regional boundaries are based on watershed, and water quality requirements are based on the unique differences in climate, topography, geology, and hydrology for each watershed. The City of Goleta and County of Santa Barbara are located within the jurisdiction of the Central Coast Regional Water Quality Control Board (CCRWQCB).

Each RWQCB makes critical water quality decisions for its region, including setting standards, issuing waste discharge requirements, determining compliance with those requirements, and taking appropriate enforcement actions. Water quality standards are defined in each RWQCB's respective Basin Plan. Basin plans must conform to the policies set forth in the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) and established by SWRCB in its state water policy. The Porter-Cologne Act also provides that an RWQCB may include in its region a regional plan with water discharge prohibitions applicable to particular conditions, areas, or types of waste. The RWQCBs are also authorized to enforce discharge limitations, take actions to prevent violations of these limitations from occurring, and conduct investigations to determine the status of quality of any of the waters of the state within their region. Civil and criminal penalties are also applicable to

persons who violate the requirement of the Porter-Cologne Act or SWRCB/RWQCB orders.

Water Quality Control Plan, Central Coast Basin (Basin Plan). The Central Coast RWQCB has adopted a Water Quality Control Plan (Basin Plan) for its region of responsibility, which includes the City of Goleta and County of Santa Barbara. The RWQCB has delineated water resource area boundaries based on hydrological features. For purposes of achieving and maintaining water quality protection, specific beneficial uses have been identified for each of the hydrologic areas described in the Basin Plan. The Basin Plan also establishes implementation programs to achieve water quality objectives to protect beneficial uses and requires monitoring to evaluate the effectiveness of the programs. These objectives must comply with the state anti-degradation policy (SWRCB Resolution No. 68-16), which is designed to maintain high-quality waters while allowing some flexibility if beneficial uses are not unreasonably affected.

Beneficial uses of water are defined in the Basin Plan as those necessary for the survival or wellbeing of humans, plants, and wildlife. Examples of beneficial uses include drinking water supplies, swimming, industrial and agricultural water supply, and the support of freshwater and marine habitats and their organisms.

The Basin Plan has established narrative and numeric water quality objectives that, in the Regional Board's judgment, are necessary for the reasonable protection of beneficial uses and for the prevention of nuisances. If water quality objectives are exceeded, the RWQCB can use its regulatory authority to require municipalities to reduce pollutant loads to the affected receiving waters. The RWQCB utilizes water quality criteria in the form of "scientific information developed by the USEPA regarding the effect a constituent concentration has on human health, aquatic life, or other uses of water" to develop its water quality objectives.

Discharge Permits. On September 2, 2009, SWRCB adopted the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit; Order 2009-0009-DWQ; NPDES No. CAS000002). In accordance with NPDES regulations, the state of California requires that any construction activity disturbing 1 acre or more of soil comply with the Construction General Permit. To obtain authorization for proposed storm water discharges pursuant to this permit, the landowner (discharger) is required to submit a Permit Registration Documents, including a Notice of Intent (NOI), risk assessment, site map, SWPPP, annual fee, and signed certification statement to SWRCB. Dischargers are required to implement Best Management Practices (BMPs) meeting the technological standards of Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or eliminate storm water pollution. BMPs include programs, technologies, processes, practices, and devices that control, prevent, remove, or reduce pollution. Permittees must also maintain BMPs and conduct inspection and sampling programs as required by the permit. Dischargers

are also required to comply with monitoring and reporting requirements to ensure that discharges comply with the numeric action levels and numeric effluent limitations specified in the permit.

Local

Stormwater Technical Guide for Low Impact Development. The Stormwater Technical Guide for Low Impact Development, adopted by the County of Santa Barbara in February 2014, establishes a guide for compliance with Post Construction Requirements (PCRs) adopted by the CCRWQCB in July 2013. In addition to detailing the requirements of the PCRs, the Stormwater Technical Guide for Low Impact Development interprets, clarifies, and adds to the PCRs. To assist project applicants in meeting these requirements, the City adopted the County's Stormwater Technical Guide for Low Impact Development in March 2014.

City of Goleta Storm Water Management Plan. Approved by the CCRWQCB in February 2010, the City's Storm Water Management Plan (SWMP) is a comprehensive program to establish and implement BMPs to reduce the discharge of storm water pollutants into water bodies and to provide and improve water quality within the City. Per the SWMP, the City is identified as having a MS4 requiring coverage under the NPDES General Permit for Storm Water Discharges from Small MS4s, Water Quality Order No. 2003-0005-DWQ and CA2000004 (General Permit). An outline of the implementation progress of the SWMP is provided the Annual Report. The most recent Annual Report submitted for the City's SWMP to the CCRWQCB in August 2013.

Goleta General Plan/Coastal Land Use Plan Conservation Element (2006). The GP/CLUP Conservation Element has adopted policies to prevent the degradation of the quality of groundwater basins and surface waters in and adjacent to the City.

The following are City General Plan Conservation Element policies which would apply to the Project:

- Conservation Element Policy 10.1 establishes that all new development shall not result in the degradation of water quality of groundwater or surface water, and urban runoff pollutants shall not be discharged or deposited such that these resources are adversely affected.
- Conservation Element Policy 10.2 requires new development to be sited and designed to protect water quality and minimize impacts to coastal water through incorporating measures to protect important areas of benefit to water quality, limiting impervious surface area, and limiting land disturbance.
- Conservation Element Policy 10.3 requires new development to minimize impacts to water quality from runoff from nonpoint sources, consistent with the City's SWMP and the CCRWQCB. The policy also requires all BMPs be designed in accordance with applicable standards.

- Conservation Element Policy 10.6 establishes storm water requirements, including requirement for use of BMPs, for various types of development. For commercial uses, which are most applicable to the proposed development, development shall use BMPs to control polluted runoff from structures, parking, and loading areas. Outdoor materials storage and trash storage areas shall be designed using BMPs to prevent storm water contamination from stored materials, loose trash, and debris.
- Conservation Element Policy 10.7 requires new development to protect natural beneficial water quality features of a site and requires preparation and implementation of Drainage Plans and Stormwater Management Plans for construction and post-development phases of the project.
- Conservation Element Policy 10.8 requires new development to provide for ongoing maintenance of BMP measures and establishes responsibilities for the maintenance and inspection of BMPs for a development.
- Conservation Element Policy 10.9 requires landscaping be designed to control erosion and shall consist of native or drought-tolerant noninvasive plants to minimize the need for fertilizers, pesticides, herbicides, and excessive irrigation.

Impact Analysis

Methodology and Significance Thresholds

CEQA Guidelines Appendix G. In accordance with Appendix G of the 2017 CEQA Guidelines, implementation of the proposed Project may have a significant adverse impact on hydrology and water quality if it would:

- Violate any water quality standards or 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 (e.g., the production rate of pre-existing nearby wells would drop a level which would not support existing land uses or planned uses for which permits have been granted).
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the site or area, including through the alteration of a course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

- Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantially additional sources of polluted runoff.
- Otherwise substantially degrade water quality.
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows.
- Exposure people or structures to significant loss, injury or death involving flooding, including flooding as a result of the failure or a levee or dam.
- Inundation by seiche, tsunami, or mudflow.

City of Goleta Environmental Thresholds and Guidelines Manual. The City's *Environmental Thresholds and Guidelines Manual* specifies the following significance thresholds relating to hydrology and water resources:

Hydrology and Drainage. The Project would result in a significant impact to surface hydrology and drainage if it would:

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate of amount of surface runoff in a manner that would result in flooding, increased erosion, or increased sedimentation on- or off-site.
- Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or increase runoff into naturally drained areas without storm drains.

Surface Water and Groundwater Quality. The Project would result in a significant surface water or groundwater impact if its construction or operation results in:

- Be located within an urbanized area of the County and the project construction or redevelopment individually or as a part of a larger common plan of development or scale would disturb more than one (1) or more acres of land.
- Increase the amount of impervious surfaces on a site by 25 percent or more.
- Result in channelization or relocation of a natural drainage channel.
- Discharge pollutants that exceed the water quality standards set forth in the applicable NPDES permit, the RWQCB's Basin Plan or otherwise impair the beneficial uses of a receiving waterbody.
- Result in a discharge of pollutants into a "impaired" waterbody that has been designated as such by the SWRCB or the RWQCB under Section 303(d) of the Federal Water Pollution and Control Act (i.e., the CWA).

- Result in a discharge of pollutants of concern to a receiving water body, as identified by the RWQCB.
- Substantially degrade groundwater quality.
- Result in failure to comply with the City's Stormwater Program.

As discussed in the Final Mitigated Declaration, the proposed Project would not place housing or new structures within a 100-year flood hazard area or area subject to inundation by hydrologic hazard. In addition, the Project would not expose people or structures to a significant risk of loss, injury, or death from hydrologic hazards. As such, associated impacts are considered non-existent (Class IV) and are not further discussed in this section.

As further identified in the Final Mitigated Declaration, the project site lies within the West Sub-basin of the Goleta Groundwater Basin which is not an area where significant recharge to groundwater supplies used for urban and agricultural use typically occurs. Groundwater in this area of the Goleta Groundwater Basin is generally quite deep and not suitable as a source of potable water. Therefore, project impacts related to groundwater supply and recharge are be considered less *adverse, but less than significant* (Class III), and are not further discussed.

Further, the Final Mitigated Declaration identified mitigation measures necessary for the Project to reduce impacts to hydrology and water quality. Since preparation of the Final Mitigated Declaration in 2010 (Appendix B), the proposed Project has undergone revisions in the design and list of proposed measures incorporated into the Project to reduce effects on the environment and/or ensure consistency with City plans and policies. These measures which are incorporated into the proposed Project as design features or have been completed for the Project since release of the Final Mitigated Declaration include many of the measures identified as required mitigation measures in the Final Mitigated Declaration. As further discussed below, several of the mitigation measures identified in the Final Mitigated Declaration are no longer applicable to the proposed Project, as comparable or improved measures have been incorporated into the design of the Project.

Project Impacts

Impact HWQ-1: Project Construction. ***Project grading and construction activities would subject soil surfaces to erosion with the potential to discharge sediments and various pollutants into receiving waters. However, compliance with National Pollutant Discharge Elimination System NPDES requirements would minimize discharge of pollutants and ensure appropriate management of site runoff during construction of the Project.***

The proposed Project would involve construction of a new 11,600 square foot, two-story fire station. Project implementation would include construction of landscape and hardscape surfaces. Construction of the Project would require grading of the site, estimated at approximately 1,350 cubic yards of cut and 2,250 cubic yards of

fill, which could result in erosion of soils and sedimentation. During storm events, runoff could carry pollutants such as oils, chemicals, sediments, and construction debris offsite and degrade water quality. The presence and use of large construction machinery within close proximity of the creek has the potential to result in a spill of fluids, such as oil, gasoline, and hydraulic fluids, which could be mobilized by storm water runoff. In addition, soil erosion could result in the creation of on-site rills and gully systems, clog existing and planned drainage channels, breach erosion control measures, and transport soil into down-gradient areas. Soil movement would occur in these exposed graded or excavated areas, as well as in unprotected drainage culverts or basins.

Impacts would be minimized during all phases of Project construction through compliance with required state and local regulations described in Section 4.10.2.4.2, *Regulatory Setting*, including the Construction General Permit. Implementation of and compliance with the requirements of the Construction General Permit would ensure the construction site and activities are managed to effectively control site runoff through BMPs, BAT, BCTs, and a SWPPP. Given the Project would be subject to full compliance with regulations adopted for the purpose of protecting water quality from construction activities, impacts from construction of the Project on hydrology and water quality are considered *adverse, but less than significant* (Class III).

The Final Mitigated Declaration (Appendix B) identified several mitigation measures required to reduce impacts to hydrology and water quality from potential discharge of polluted runoff. However, the current design of the proposed Project, design of proposed bioretention basins and storm water controls, compliance with the December 2017 Stormwater Control Plan, and requirement for compliance with existing standards and regulations relating to runoff and water quality would effectively ensure implementation of those measures identified in the Final Mitigated Declaration, without requiring further mitigation.

Mitigation Measures and Residual Impact

As impacts would be less than significant, no mitigation measures are required. The residual impact on hydrology and water quality would be *adverse, but less than significant* (Class III).

Impact HWQ-2: ***Site Drainage. The Project would alter on-site drainage patterns and increase impermeable surfaces, increasing site runoff. Implementation of the Project would include construction and design of on-site storm water drainage facilities that would manage storm water runoff consistent with the City's Storm Water Management Plan***.

A Drainage Analysis was prepared by Flowers & Associates in December 2017 (Appendix I) which analyzed the drainage characteristics of the proposed Project. In addition, a Stormwater Control Plan was also prepared by Flowers & Associates in May 2017 (Appendix I) for the proposed Project, which identified on-site storm

water control measures implemented into the design of the Project. As discussed in the Drainage Analysis, total impervious surface area is estimated to be approximately 84 percent of the site after completion of the Project, which would substantially reduce infiltration and increase sheet flow on the site. However, due to the amount of increased hardscape proposed for the site, storm water control measures and LID design strategies have been proposed and incorporated into the design of the Project which would manage site runoff.

As discussed in Section 2.5.4, *Stormwater Drainage and Utilities,* all proposed on-site impervious surface development would drain to storm water control measures consisting of a 2,500-square-foot bioretention basin or to a 3,000-square-foot permeable paver parking lot, both of which would be capable of receiving calculated site storm water runoff and would reduce overall quantity of runoff (Appendix I; see Table 4.10-13). The bioretention basin will utilize the sand/compost planning medium specified in the Santa Barbara County's Technical Guide and the CCRWQCB 's Post Construction Requirements and is designed to exceed storm water storage volume capacity by over 1,000 cubic feet, as calculated for the site by the Central Coast Region Stormwater Control Measure Sizing Calculator. As further provided in the Drainage Analysis and Stormwater Control Plan, the Project's proposed storm water control measures are designed to achieve and exceed storm water treatment requirements. Given the Project would include construction of storm water control measures in conformance with existing regulations and which would exceed storm water treatment requirements, impacts of the Project from storm water runoff are considered *adverse, but less than significant* (Class III).

Mitigation Measures and Residual Impact

As impacts would be less than significant, no mitigation measures are required. The residual impact on hydrology and water quality would be *adverse, but less than significant* (Class III)

Impact HWQ-3: ***Water Quality. Project operations would result in the potential to adversely affect water quality due to polluted runoff and sedimentation, but proposed on-site storm water control measures would manage, retain, and treat site runoff, ensuring polluted urban runoff does not leave the site or adversely affect quality of receiving waters.***

Operation of the proposed Project would involve the use of fuel and oil/grease that would result from on-site vehicle and equipment maintenance and washing of emergency vehicles, and "household" cleaners and chemicals associated with building maintenance. However, the Project would be subject to federal, state, and local regulations pertaining to the storage and use of any hazardous materials/waste, including obtaining appropriate permits, training, and agency inspections. In addition, as discussed under impact HWQ-2 above, the Project would include implementation of a number of BMPs and LID measures designed to reduce potential for discharge of pollutants from runoff. Implementation of the

Project would include construction and operation of storm water control measures and other water quality engineering controls, including a bioretention basin designed to meet the standards of applicable storm water control regulations, which would receive runoff from the site that may contain any pollutants and treat runoff in exceedance of applicable storm water treatment requirements. Implementation of these Project features and adherence with applicable regulations would ensure the Project does not result in the discharge of polluted runoff such that water quality may be adversely affected. Therefore, potential long-term water quality impacts to both surface water and groundwater, along with potential impacts associated with violation of any water quality standards or waste discharge requirements, would be considered *adverse, but less than significant* (Class III).

Mitigation Measures and Residual Impact

As impacts would be less than significant, no mitigation measures are required. The residual impact on hydrology and water quality would be *adverse, but less than significant* (Class III)

Cumulative Impacts

The Region of Influence for evaluating cumulative impacts on hydrology and water quality include those areas with past, present, and reasonably probable projects which would have the potential to contribute towards an exceedance of established water quality standards for the local hydrologic area, particularly to those of local creeks and water bodies such as Bell Creek, Devereux Creek, and the Pacific Ocean.

Cumulative hydrology and water quality impacts result from increased impervious surface runoff, accelerated erosion, and pollutant loading generally associated with urban and rural development. Most of the proposed project's contribution to cumulative hydrology and water quality impacts would occur during the construction phase. Similar to the proposed Project, all other pending projects within the Region of Influence would also be subject to site-specific requirements for storm water management during construction and post-construction, along with all other applicable federal, state, and local regulations governing development and the protection of water quality. Other pending projects would also undergo the same drainage design review by the City and RWQCB to ensure project implementation would occur in compliance with adopted policies and regulations, including requirements for implementations of BMPs, LID measures, and a SWPP. Given the Project would implement appropriate storm water control measures and would be subject to compliance with federal, state, and local regulations pertaining to water quality, the Project would not contribute significantly to a cumulatively considerable impact to regional water quality and hydrology.

4.10.2.5 Utilities and Service Systems

Existing Setting

Water Supply and Demand

Water services within the City are provided by the Goleta Water District (GWD), whose service area covers approximately 29,000 acres extending from the Santa Barbara city limits in the east to unincorporated areas of the County to the west. The GWD service area is bounded by the Pacific Ocean to the south and the foothills of the Santa Ynez Mountains to the north. The GWD service area includes the unincorporated communities of the Eastern Goleta Valley and Isla Vista, the University of California, Santa Barbara, and the Santa Barbara Municipal Airport. In 2017, the GWD provided water services to approximately 87,000 residents within its services area (GWD 2018).

Table 4.10-14 provides a summary of the current and projected water supplies and demands for the GWD. As shown, water supplies for the GWD under normal conditions are primarily comprised of surface water entitlements from the Cachuma Water Project (70.2 percent), imported supplies from the State Water Project (13.9 percent), local groundwater (8.3 percent), recycled water (7.6 percent). Currently, the GWD does not rely on any supplies provided through State Water Project allocation purchases. Under drought conditions, such as those experienced in 2011-2015, the GWD becomes much more reliant on local groundwater supplies. Currently, the GWD is projected to have a surplus of 150 acre feet per year (AFY) (GWD 2017).

Table 4.10-14. Current and Project Water Supply/Demand for GWD

Supply Source	Current Conditions (2017)			Future Conditions (2035)		
	Normal Year (AFY)	Single Dry Year (AFY)	Multiple Dry Years (AFY)	Normal Year (AFY)	Single Dry Year (AFY)	Multiple Dry Years (AFY)
Surface Water	9,811[1]	9,322	3,884	9,849	9,322	3,941
State Water (Import)	1,942	2,427	3,381	2,493	3,197	2,347
Groundwater	1,160	1,923	5,750	2,449	3,839	9,928
Recycled Water	1,061	985	985	1,225	1,137	1,137
Allocations	0	0	0	219	0	0
Total Supply	**13,974**	**14,657**	**14,000**	**16,235**	**17,495**	**16,903**
Total Demand	**13,824**	**14,657**	**14,657**	**16,351**	**17,495**	**17,495**
Net Surplus (Deficit)	***150***	***0***	***(657)***	***(116)***	***0***	***(592)***

[1] While the GWD's annual entitlement to Cachuma Project Water is 9,322 AFY, the long-term average reflected above includes unused carryover supplies from previous years and excess water that becomes available when Cachuma Reservoir spills (on average, every 3 years); and is therefore higher than the entitlement amount.
Source: GWD 2017.

Wastewater

Wastewater services within the Project area are provided by the Goleta West Sanitary District (GWSD) which serves approximately 6,100 connections to over 35,000 persons. The GWSD operates and maintains approximately 62 linear miles of sewer lines and two pump stations. Wastewater within the GWSD services area is conveyed to the regional Full Secondary Treatment Plan that is owned by the Goleta Sanitary District (GSD), and which has a treatment capacity of 7.64 million gallons per day (MGD) as permitted under the NPDES permit issued by the U.S. EPA in concurrence with the CCRWQCB. As of 2013, the GSD wastewater treatment plant had an average daily dry weather flow of 4.8 MGD, with an unused treatment capacity of 2.84 MGD (GSD 2013). The GWSD is one of several public agencies which are contractual users of the plant and has a treatment capacity right of 40.78 percent, or 3.11 MGD. As of 2016, GWSD influent flows equated to only 1.7 MGD, allowing for a remaining unused treatment capacity of 1.41 MGD (GWSD 2016).

At the Project site, a 6-8" trunk line is located along the Hollister Avenue corridor which collects and conveys wastewater collected from development along Hollister Avenue and from development located farther to the west, including the Ritz-Carlton Bacara Resort. The GWSD's wastewater collection system is in good condition with few major repairs, while the districts two pump stations are in good condition and well maintained, and have adequate capacity to meet current and projected needs for the next ten years (GWSD 2018).

Solid Waste

Solid waste services, including refuse, recycling, and greenwaste collection, in the City and Project vicinity are provided by MarBorg Industries. All non-hazardous waste collected in the City is transported to and handled at the South Coast Recycling and Transfer Station (SCRTS) and the Tajiguas Landfill, both of which are operated and maintained by the County of Santa Barbara Public Works Department, Resource Recovery & Waste Management Division (RRWMD). The SCRTS serves as a central collection point for a large portion of the non-hazardous waste collected in the South Coast region of the County and is capable of processing 550 tons per day (tpd) of waste, and is home to a recycling center capable of processing 200 tpd of recyclable waste (County of Santa Barbara Public Works Department 2018a). The Tajiguas Landfill serves the South Coast, Santa Ynez, and New Cuyama Valleys regions of the County and is a Class III waste management unit capable of processing up to 1,500 tpd of nonhazardous municipal waste (CalRecycle 2018; County of Santa Barbara Public Works Department 2018b). Based on current waste disposal rates, disposal capacity of the landfill is expected to be reached, and the facility closed, in 2023. However, in July 2016, the County Board of Supervisors approved the Tajiguas Resource Recovery Project, which would modify current waste management operations at the landfill through the addition of a Materials Recovery Facility, a Dry Fermentation Anaerobic Digester Facility, and a Compost Management Unit which

would result in a 60 percent reduction in waste disposal, extending the anticipated closure date to the year 2036 (RRWMD 2018).

Regulatory Setting

Federal

Water Supply

There are no federal regulations that pertain to potable water services or resources.

Wastewater

Clean Water Act. The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and gives the USEPA the authority to implement pollution control programs, such as setting wastewater standards for industry. The statute's goal is to regulate all discharges into the nation's waters and to restore, maintain, and preserve the integrity of those waters. The CWA sets water quality standards for all contaminants in surface waters and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit is obtained under its provisions. The CWA mandates permits for wastewater and stormwater discharges, requires states to establish site-specific water quality standards for navigable bodies of water, and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The CWA also funds the construction of sewage treatment plants and recognizes the need for planning to address nonpoint sources of pollution.

Solid Waste

There are no federal regulations that pertain to solid waste services or resources.

State

Water Supply

California Governor's Drought Declarations. California Governor Brown on January 17, 2014 proclaimed a State of Emergency and directed state officials to take all necessary actions to make water immediately available. On April 25, 2014, the Governor issued an EO to speed up actions necessary to reduce harmful effects of the drought, and he called on all Californians to redouble their efforts to conserve water. On December 22, 2014 Governor Brown issued EO B-28-14 extending directives to the Department of Water Resources and the Water Board to take actions necessary to make water immediately available through May 31, 2016 and to extend CEQA suspensions for certain water supply projects. On April 1, 2015, the governor issued EO B-29-15. Key provisions include ordering the

State Water Resources Control Board (SWRCB) to impose restrictions to achieve a 25 percent reduction in potable urban water usage through February 28, 2016.

On May 9, 2016, the governor issued EO B-37-16, establishing longer-term water conservation measures through the end of January 2017, which include monthly water use reporting, strengthened urban drought contingency plans, elimination of wasteful water use practices, and mandated adjustments to emergency water conservation regulations and restrictions during extended drought conditions. These extended water conservation measures recognize differing water supply conditions for many communities, and require that communities develop water efficiency measures and conservations plans specific to the conditions of their respective water supply. The Governor's drought declaration also calls upon local urban water suppliers and municipalities to implement their local water shortage contingency plans immediately in order to avoid or forestall outright restrictions that could become necessary later in the drought season. EO B-40-17, signed on April 7, 2017 ended the drought state of emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne, where emergency drinking water projects will continue to help address diminished groundwater supplies. However, the EO maintains water reporting requirements and prohibitions on wasteful practices. Further, EO B-37-16, and the associated water use efficiency framework, remains in effect (SWRCB 2018).

Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Act of 1969 (Cal Water Code §13000 et seq.) is the water quality control law for California. The act established the SWRCB and divided the state into nine regional basins, each under the jurisdiction of a RWQCB. The SWRCB is the primary state agency responsible for the protection of California's water quality and groundwater supplies. The RWQCBs carry out the regulation, protection, and administration of water quality in each region. Each RWQCB is required to adopt a water quality control plan or basin plan that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water quality conditions and problems.

Urban Water Management Planning Act. The Urban Water Management Planning Act (California Water Code Division 6, Part 2.6, Sections 10610 et seq.) was developed due to concerns over potential water supply shortages throughout California. It requires information on water supply reliability and water use efficiency measures. Urban water suppliers are required, as part of the Act, to develop and implement UWMPs to describe water supply, service area demand, population trends and efforts to promote efficient use and management of water resources. An UWMP is intended to serve as a water supply and demand planning document that is updated every 5 years to reflect changes in the water supplier's service area including water supply trends, and conservation and water use efficiency policies. Specifically, municipal water suppliers that serve more than 3,000 customers or provide more than 3,000 AFY must adopt an UWMP.

2009 Water Conservation Act (SB x7-7). SB x7-7 was enacted in November 2009, requiring all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita urban water use by December 31, 2020 through water use targets for urban water suppliers, water management plans, and best management practices. Urban retailers can achieve the SB x7-7 goal using one of four specified methods:

a. Option 1: 80 percent of baseline use (reduction of 20 percent).
b. Option 2: Sum of specified performance standards.
c. Option 3: 95 percent of California Department of Water Resources Hydrologic Region target from draft 20x2020 plan.
d. Option 4: A flexible alternative designed to adjust to local circumstances.

Urban retail water suppliers must monitor and report compliance on an individual or regional basis. Individual urban retail water suppliers are not required to achieve a reduction in urban per capita water use greater than 20 percent. Compliance with the water reduction target is required for continued state water grants and loan eligibility. After 2021, failure of urban retail water suppliers to meet their targets establishes a violation of law for administrative or judicial proceedings.

Wastewater

State Water Resource Control Board Order No. 2006-0003. The SWRCB General Waste Discharge Requirement for Sanitary Sewer Systems (SWRCB Order No. 2006-0003) requires wastewater agencies to evaluate and rehabilitate sewer systems, with a target of zero sewer overflows.

Health and Safety Code Section 17921.3. Requires low-flush toilets and urinals in all buildings, including commercial, residential, institutional, and industrial buildings.

Solid Waste

AB 341. This state law was enacted in 2011 and amends the Public Resources Code relating to solid waste to set a goal for the state to recycle 70 percent of waste by year 2020. The bill identifies composting of organic materials as a method of attaining this goal.

Public Resources Code Division 30, Part 2, Chapter 4, Section 41701. The Division and Chapter of the Public Resources Code requires all jurisdictions in the state to plan and manage disposal capacity for waste that cannot be reduced, recycled, or composted.

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. The California Global Warming Solutions Act of 2006 sets a goal of reduction of all GHGs generated in the state to 1990 levels by year 2020. CARB has adopted a

scoping plan that includes recycling and landfill methane capture as key components to achieve reductions in GHGs.

Local

Water Supply

City of Goleta Coastal Zoning Ordinance (CZO). CZO Chapter 35, Article II, Section 35-60.5 requires prior to approval of a project that there are adequate public services, including but not limited to fire protection, water supply, sewage disposal, and police protection to serve the project.

Goleta Water District Ordinance No. 91-01, *The SAFE Water Supplies Ordinance of 1991.* In 1991, voters of the GWD passed the SAFE Water Supplies Ordinance which sets forth conditions the GWD must meet in order to approve new or additional water connections. Specifically, the ordinance prohibits the GWD from releasing potable water to new or additional service connections except when all of the following conditions are met:

1. The GWD is receiving 100 percent of its deliveries normally allowed from Cachuma.
2. The GWD has met legal obligations in the Wright Judgement.
3. There is no water rationing.
4. The GWD has met its obligation to the Annual Storage Commitment to the Drought Buffer.

GWD Water Conservation Plan (2010). The GWD on December 23, 1994 became a participant of the California Urban Water Conservation Council (CUWCC) Memorandum of Understanding Regarding Urban Water Conservation in California (MUO). The Water Conservation Plan was prepared by the GWD to serve as an interim plan for achieving state-mandated water conservation measures and compliance with the CUCWCC MOU BMPs which were updated and adopted in July 2009. The GWD Water Conservation Plan includes policies, programs, regulations, and strategies for achieving increased water conservation. At the time of preparation of the Water Conservation Plan, the GWD was in the process of restructuring and updating the GWD operating budget, and in 2013, a Technical Report on Optimizing the Goleta Water District Water Conservation Program was prepared to assess if the restructure and optimizations remain the optimal strategy for achieving state-mandated water conservation requirements. The 2013 report highlighted a number of strategies for the GWD to develop as part of its conservation program to improve water conservation and compliance with state-mandated water conservation requirements.

Wastewater

City of Goleta Inland Zoning Ordinance. Section 35-317.7(1)(d) of Article 3, Chapter 35 of the GMC requires prior to approval of a project that there are adequate public services, including but not limited to fire protection, water supply, sewage disposal, solid waste, and police protection to serve the project.

Solid Waste

Goleta Municipal Code, Chapter 8.10, Integrated Waste Management. Chapter 8.10 of the GMC establishes rules, regulations, and standards for the collection, handling, disposal, and management of municipal solid wastes. In March 2013, Chapter 8.10 was amended to require a minimum diversion of 65 percent of all construction and demolition waste for any project involving the construction of new structures.

City of Goleta Inland Zoning Ordinance. Section 35-317.7(1)(d) of Article 3, Chapter 35 of the GMC requires prior to approval of a project that there are adequate public services, including but not limited to fire protection, water supply, sewage disposal, solid waste, and police protection to serve the project.

Impact Analysis

Methodology and Significance Thresholds

CEQA Guidelines Appendix G. In accordance with Appendix G of the 2017 CEQA Guidelines, impacts to utilities and service systems would be potentially significant based upon the following thresholds of significance:

Water Supply. The Project would result in a significant impact related to water supplies if it would:

- Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Have insufficient water supplies available to service the project from existing entitlements and resource, or results the need new or expanded entitlements.

Wastewater. The Project would result in a significant impact related to wastewater if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the orientation of which could cause significant environmental effects.
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Solid Waste. The Project would result in a significant impact related to solid waste if it would:

- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Fail to comply with federal, state, and local statues and regulations related to solid waste.

City of Goleta Environmental Thresholds and Guidelines Manual. The City's *Environmental Thresholds and Guidelines Manual* specifies the following significance thresholds relating to utilities and service systems:

> *Water Supply.* The City has adopted thresholds pertaining to groundwater supply for projects involving groundwater wells. The Project does not involve groundwater wells; therefore, these City thresholds are not applicable.
>
> *Wastewater.* The City has not adopted any thresholds for impacts related to sewer service, wastewater treatment, or storm water drainage facilities.
>
> *Solid Waste.* The City's *Environmental Thresholds and Guidelines Manual* provides both project-specific and cumulative thresholds for solid waste generation from discretionary development. A project would result in a significant impact on the City's landfill capacity if it would generate more than 196 tons of solid waste per year, after a 50 percent reduction credit is given due to recycling efforts. If a project would generate more than 40 tons per year of solid waste, the project is considered to have a cumulatively significant contribution, as the project-specific threshold is based on a cumulative growth scenario.

The Final Mitigated Negative Declaration prepared for the Fire Station 10 Project in 2010 identified a number of potentially significant impacts related to utilities and service systems, and included a number of mitigation measures required to reduce impacts to a less than significant degree. These mitigation measures included requirement for receipt of a Connection Permit from the GWSD, a Can and Will Serve letter from the GWD, requirement for use of recycled water for landscape irrigation, minimization of outdoor and indoor water use, use of reclaimed/non-potable water for construction dust suppression, and reuse/recycling of construction debris. Since preparation of the Final Mitigated Negative Declaration

in 2010, the proposed Project, as analyzed in this EIR, has undergone changes in the implementation and design of the fire station which has resulted in incorporation of many of these features. Further, several of the features identified in the Final Mitigated Negative Declaration as required mitigation would be addressed or required through existing regulations, such as required compliance with GMC Chapter 8.10 which would require a minimum diversion of 65 percent of construction and demolition waste. Similarly, compliance with the GWD and GWSD standard procedures for review of a Project for determination of adequate service availability and issuance of appropriate Can and Will Serve letters would also be required. For these reasons and given no significant impacts to utilities and service systems has been identified as analyzed below, the mitigation measures identified in the Final Mitigated Negative Declaration no longer apply to this Project, and have not been incorporated as required measures in this EIR.

Project Impacts

Impact UT-1: ***Additional Demand for GWD Water Supplies. The Project would result in a net increase in water demand by approximately 1.17 acre-feet per year (AFY), which could be accommodated by existing and projected available Goleta Water District (GWD) water supplies. No infrastructure improvements would be required, and impacts to water supplies and infrastructure would not be significantly adverse.***

The Project site is currently undeveloped with no associated water demand. Implementation of the Project and construction of the site for a new fire station would result in additional demand for water supplies and services provided by the GWD. Table 4.10-15 provides a summary of water demands for the Project based on City water demand factors and average water demands associated with other Santa Barbara County Fire District (SBCFD) fire station facilities and activities. As summarized therein, the Project would result in a net increase in demand for an estimated 1.17 AFY of water (City of Goleta 2002; MFPD 2016). However, this estimate does not include consideration of those water conservation strategies described in Section 2.0, *Project Description.* The water demand estimated in Table 4.10-15 therefore provides a conservative estimate of Project water demands.

Table 4.10-15. Proposed Project Water Demand

	Demand Source	Demand Factor	Multiplier	Potable Water Demand (AFY)
Project Use	Structures – Firefighters[1]	0.0737 AFY/ person	3	0.22
	Structures – Admin.[2]	0.15 AFY/ 1,000 square feet (sf)	1,297 sf	0.19
	Landscaping[3]	1 AFY/ acre	0.21	0.21
	Topping off of Trucks[4]	150 gallons/ fill	52 fills per year	0.024
	Hose Training[5]	8,000 gallons/ year	N/A	0.025
	Miscellaneous[6]	N/A	N/A	0.50
Total Project Use				**1.17**

[1] Uses residential factors from Table 7 of City of Goleta Environmental Thresholds and Guidelines Manual, Chapter 11 Groundwater Thresholds Manual, assumes 3 rotating on duty firefighters living at the fire station for 24-hour shifts.
[2] Uses factors for "Office" from Table 7 of City of Goleta Environmental Thresholds and Guidelines Manual, Chapter 11 Groundwater Thresholds Manual.
[3] Assumes landscaping would be entirely composed of drought-tolerant plants and trees.
[4] Assumes trucks would be partially filled on site only once per week, at other times would be filled from hydrants off-site. This is consistent with activities at the other County of Santa Barbara Fire Department stations.
[5] Assumes hose training between January and June each year, consistent with training at other County of Santa Barbara Fire Department stations. Annual water usage for hose training estimated for the Montecito Fire Protection District (MFPD) Station 3 Project (MFPD 2016).
[6] Estimate; includes washing of equipment and other incidental use.

As discussed above and summarized in Table 4.10-15, the GWD currently has a surplus of 150 AFY of water supplies available during normal years. The Project's estimated water demand would represent only 0.8 percent of GWD's projected surplus water supply. Therefore, the GWD would have adequate supply available to serve the Project and would not be required to construct additional infrastructure to meet the demands of the Project and GWD's existing water service commitments. Under multiple dry year (drought) conditions, the GWD anticipates a 657 AFY deficit in water supply, of which Project water demand would represent a highly negligible 0.1 percent. Implementation of Project water conservation design features, as described in Section 2.0, *Project Description,* compliance with the GWD's Water Conservation Plan would further reduce Project water demands from those estimated in Table 4.10-14, resulting in further negligible increases in demand.

The GWD has provided a Preliminary Water Service Determination for the Proposed project (John McInnes GWD, 2017) and has determined that water service may be installed for the Proposed Project subject to the requirements of the SAFE Water Supplies Ordinance, District Code, and water availability. While

the Project would represent a de minimis increase in water demand, until an Intent to Serve letter is issued by the GWD, provision of an adequate water supply for a new fire station is not guaranteed. However, Intent to Serve letters are not usually issued until a development proposed has been approved and the developer has applied for and paid tap fees. The GWD would complete their Project review before issuance of their Can and Will Serve letter. This standard review would ensure that adequate water is available to service the Project.

Given the GWD has supplies and infrastructure available to accommodate anticipated Project water demands, along with requirement for compliance with GWD standard procedures for determination of adequate water supplies and issuance of Final Can and Will Serve letters, impacts to water services and infrastructure would be *adverse, but less than significant* (Class III).

Mitigation Measures and Residual Impact

As impacts would be less than significant, no mitigation measures are required. The residual impact on utilities and service systems would be *adverse, but less than significant* (Class III)

Impact UT-2: ***Generation of Wastewater. The Project would result in the generation of an estimated 391 gallons per day (gpd) of wastewater which would be collected and conveyed through Goleta West Sanitary District (GWSD) sewer infrastructure to the Goleta Sanitary District (GSD) wastewater treatment plant. Adequate capacity is available to serve the Project's anticipated wastewater demands without the need for additional new conveyance or treatment infrastructure.***

Although neither the GWSD or the City have an adopted wastewater generation factor specific to institutional uses such as a fire station. Potential staffing levels at the proposed fire station is presently anticipated to be three firefighters on duty at all times for 24-hour shifts, which would be comparable to average household size within the City (2.72 persons per household; City of Goleta 2014). Based on sewage generation flow rates from the GSD's *Standard Specifications for Design & Construction of Sanitary Sewers* (2008), the average sewer generation flow rate for a single-family residence is 0.0005 cubic feet per second (cfs)/acre, which for the 1.21-acre Project site would equate to 391 gpd.[4] Compared to the GWSD's remaining unused treatment capacity of 1.41 MGD, the Project would comprise a negligible 0.003 percent increase in demand for wastewater treatment. The GSD treatment plant could readily accommodate such increases in flows without exceeding existing treatment capacities or wastewater treatment requirements. All storm water would be managed on-site and would not require construction of new storm drain infrastructure. Development review and Project approval processes by the City, GWSD, and GSD would ensure development of the Project and

[4] 1 cfs = 646,190 gpd

associated wastewater and storm drainage infrastructure would occur in compliance with existing regulations and general procedures.

Given the GWSD has infrastructure and unused treatment capacity available to accommodate anticipated Project wastewater demands, impacts to wastewater services, storm drainage facilities, and associated infrastructure would be *adverse, but less than significant* (Class III).

Mitigation Measures and Residual Impact

As impacts would be less than significant, no mitigation measures are required. The residual impact on utilities and service systems would be *adverse, but less than significant* (Class III).

Impact UT-3: ***Generation of Solid Waste. The Project would result in the generation of an estimated 2.85 tons of waste per year which would be collected and disposed of at the Tajiguas Landfill. The facility has capacity available to serve the Project's solid waste demands without resulting in failure to comply with existing regulations or requiring construction of new facilities.***

The City does not have adopted solid waste generation factors for institutional uses such as a fire station. However, solid waste generated by the fire station, which would consist of three firefighters on duty at all times for 24-hour shifts, would be comparable to that expected for a single family household within the City (2.72 persons per household; City of Goleta 2014). Based on the City's *Environmental Thresholds and Guidelines Manual* (2002), residential per capita solid waste generation is estimated at 0.95 tons per year. Assuming three on duty firefighters at all times, solid waste generation for the fire station is estimated at 2.85 tons per year. When compared to the existing processing and disposal capacity of the SCRTS and Tajiguas Landfill, Project solid waste generation would equate to only 0.5 percent and 0.2 percent, respectively.

According to the City's *Environmental Thresholds and Guidelines Manual*, any project that generates 196 tons per year or more of solid waste, after receiving a 50 percent source reduction and recycling credit, is considered to pose a significant impact on the landfill's capacity and ability of the County to handle its long-term solid waste stream. Due to the fact that the estimated solid waste generation for the proposed Project is less than three (3) tons per year, project specific impacts from new solid waste generation are considered *adverse, but less than significant* (Class III).

Mitigation Measures and Residual Impact

As impacts would be less than significant, no mitigation measures are required. The residual impact on utilities and service systems would be *adverse, but less than significant* (Class III).

Cumulative Impacts

Region of Influence

The Region of Influence for evaluating cumulative impacts on utilities and service systems include the service areas of water, wastewater, and solid waste service provides with past, present, and reasonably probable projects which would have the potential to contribute towards the demand for water supplies, wastewater treatment, and solid waste disposal, or result in alterations to existing collection, conveyance, or treatment infrastructure. Therefore, all related projects that would generate new demand for water supplies, increases in wastewater flows, or increases in solid waste streams within the City and utility service areas would be within the Region of Influence.

Impact Assessment

Water Supply. Cumulative development in and around the City would add 826 residential units and more than 245,000 square feet of new commercial and industrial space (see Table 3-1 in Section 3.0, *Related Projects*). Table 4.10-16 provides a summary of basic net new water demands from cumulatively considered development based on average water demand rates for residential and non-residential development from the City's *Environmental Thresholds and Guidelines Manual.* As shown, total cumulative water demand within the City are estimated at 540.3 AFY.

Table 4.10-16. Estimated Cumulative Water Demand

Land Use	Size	Demand Rate	Potable Water Demand (AFY)
Residential	826 units	0.6 AFY/unit[1]	495.6
Commercial/Industrial	245,000 sf	0.3 AFY/1,000 sf[2]	73.5
Proposed Project	Refer to Table 4.10-12		1.17
Cumulative Total			**540.3**

[1] An average of single-family residential and multi-family residential water demand rate is applied to all residential projects.
[2] The general commercial water demand rate is conservatively applied to all non-residential development.

The total estimated cumulative water demand within the City and GWD's service area would be approximately 39.1 percent of the current water demands and would exceed GWD's available water surplus and further contribute towards projected 2035 deficits in supply. Given that total cumulative water demand is estimated to exceed existing and projected supplies, pending development within the City would have a cumulatively significant effect on water supply. However, given the Project comprises only 0.2 percent of the estimated cumulative demand and includes a number of water conservation design strategies that would exceed existing water conservation requirements, the Project is not considered to have a considerable contribution towards this cumulatively significant impact.

Wastewater. As discussed above, cumulative development in and around the City would add 826 residential units across a total of 70.02 acres and more than 245,000 square feet of new commercial and industrial space (see Table 3-1 in Section 3.0, *Related Projects*). Table 4.10-17 provides a summary of basic net new wastewater flows from cumulatively considered development based on average wastewater generation rates for residential and non-residential development from the GSD's *Standard Specifications for Design & Construction of Sanitary Sewers.* As shown, the Project, along with other pending development within the City would result in an estimated cumulative net increase of 284,953 gpd of wastewater flows, which could be accommodated by existing unused GWSD and GSD wastewater treatment capacity without the need for construction of new infrastructure or exceedance of permitted wastewater treatment and discharge requirements. Therefore, the Project, along with other pending development would not result in a cumulatively significant impact to wastewater services or infrastructure.

Table 4.10-17. Estimated Cumulative Wastewater Generation

Land Use	Size	Demand Rate	Wastewater Generation (gpd)
Residential	826 units/70.02 acres	0.0043 cfs/acre[1]	194,597
Commercial/Industrial	245,000 sf/60.52 acres	0.0023 cfs/acre[2]	89,965
Proposed Project	11,600 sf/1.21 acres	0.0005 cfs/acre	391
Cumulative Total			**284,953**

[1] Wastewater generation rates for residential use chosen based on closest average wastewater generation flow rate for 826 units constructed on a net total of 70.02 acres of land (closest density is 12.3 units/acre).
[2] Wastewater generation rates for non-residential development based on average wastewater generation flow rates for "General Commercial" uses.

Solid Waste. As discussed under Impact UT-2 above, the proposed Project's estimated solid waste generation is 2.85 tons per year. Based on the City's threshold for cumulative impacts to solid waste front the *Environmental Thresholds and Guidelines Manual,* a project is not considered to contribute towards a cumulatively significant solid waste impact if its increase in solid waste would equate to less than 40 tons per year. Therefore, the proposed Project is not considered to result in or contribute to a cumulatively significant impact to solid waste.

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