

3.7 HAZARDS, HAZARDOUS MATERIALS, AND WILDFIRE

This section describes the existing conditions related to hazards, hazardous materials, and wildfire in the vicinity of the Project site and analyzes the potential for hazards, hazardous materials, and wildfire impacts to occur as a result of implementation of the Project. Hazards may include exposure to both natural and man-made hazards. These could include wildfire in the adjacent Irish Hills, hazards associated with aircraft operations at the nearby San Luis Obispo County Regional Airport (Airport), or exposure to hazardous materials.

Hazardous materials are defined as substances with physical and chemical properties of ignitability, corrosivity, reactivity, or toxicity, which may pose a threat to human health or the environment. The term “hazardous materials” is used in this section to generally describe chemical materials, such as petroleum products, solvents, pesticides, herbicides, paints, metals, asbestos, and other regulated chemical materials. Additionally, the term “release” as used in this section includes known historical spills, leaks, illegal dumping, or other methods of release of hazardous materials to soil, sediment, groundwater, or surface water. If a historical release exists, then there is a risk associated with planned development disturbing the release area. Potential future releases of hazardous materials that could occur from development under the Project also are included in the analysis.

3.7.1 Environmental Setting

3.7.1.1 Regional Setting

The Project site is located on unincorporated County land at the southwestern border of the City where urban development transitions to natural open space and agricultural areas. The nearest school to the Project site is Pacific Beach High School located approximately 0.25-mile northwest. The Airport is located approximately 1.8 miles east of the Project site.

3.7.1.2 Project Site

The Project site has historically been used for dairy cow, beef cattle, and horse grazing, and an existing quarry area in the site’s northwest corner is currently used as a construction materials storage yard and for grazing. The Project site is largely undeveloped. Historical aerials indicate that development has been limited to ranch buildings, including the farm house and agricultural accessory structures located in the northwestern portion of the Project site. In the Project vicinity, chromium mining operations briefly occurred over 50 years ago, as further described in Section 3.5, *Cultural Resources*; however, there is no

evidence of this historical operation occurring onsite or on any Department of Conservation mine maps within the Project site (California Department of Conservation 2016).

Structures onsite include the historic ranch buildings, a construction materials storage yard and red rock quarry in the northwestern portion of the site, and a stormwater detention basin located in the central portion of the site. The onsite construction materials storage yard may involve intermittent use or handling of hazardous materials associated with the use and storage of construction equipment and materials (i.e., fuels, lubricants, cleaning solutions). While grazing operations do not frequently involve the use of hazardous materials, historical use of the dairy barn, the creamery, the granary, and the horse barn may have included use of some commercial materials such as pesticides, herbicides, and cleaning liquids. Additionally, the existing stormwater detention basin has provided onsite water infiltration for runoff from the adjacent Irish Hills Plaza parking lots for at least ten years, with potential for accumulation of pollutants associated with vehicle liquids, such as motor oil, which have undergone biofiltration within the basin.

3.7.1.3 Wildfire Risk

Regional Wildfire Conditions and Hazards

In central California, the fire season usually extends from roughly May through October.¹ The duration of the fire season is influenced by a combination of climatic, vegetative, and physiographic conditions, including rainfall totals, distribution, and/or drought conditions that may affect the duration of this period. Structural losses or damage from wildfires often result from inappropriate



The Project site is within Moderate and Very High Wildland Fire Hazard Severity Zones (FHSZ) and contains open grasslands, tree canopy, and riparian vegetation that include biofuels for wildfires.

siting of structures within or adjacent to high fire hazard areas, use of inappropriate construction materials or flammable landscaping, and accessory structures. Fire hazard is the composition of fuels within an area that affect its potential for flammability and energy

¹ Recent events may indicate that wildfire behavior, frequency, and the duration of the fire season are changing in California; for example, the 250,000-acre 2017 Thomas Fire in neighboring Santa Barbara and Ventura counties was the largest wildfire in California history and it occurred in December. These issues are discussed more fully in Section 3.7.3.4, *Cumulative Impacts*.

release, whereas fire risk is the probability that a fire would ignite, spread, and potentially affect one or more resources valued by people (such as structures or life).

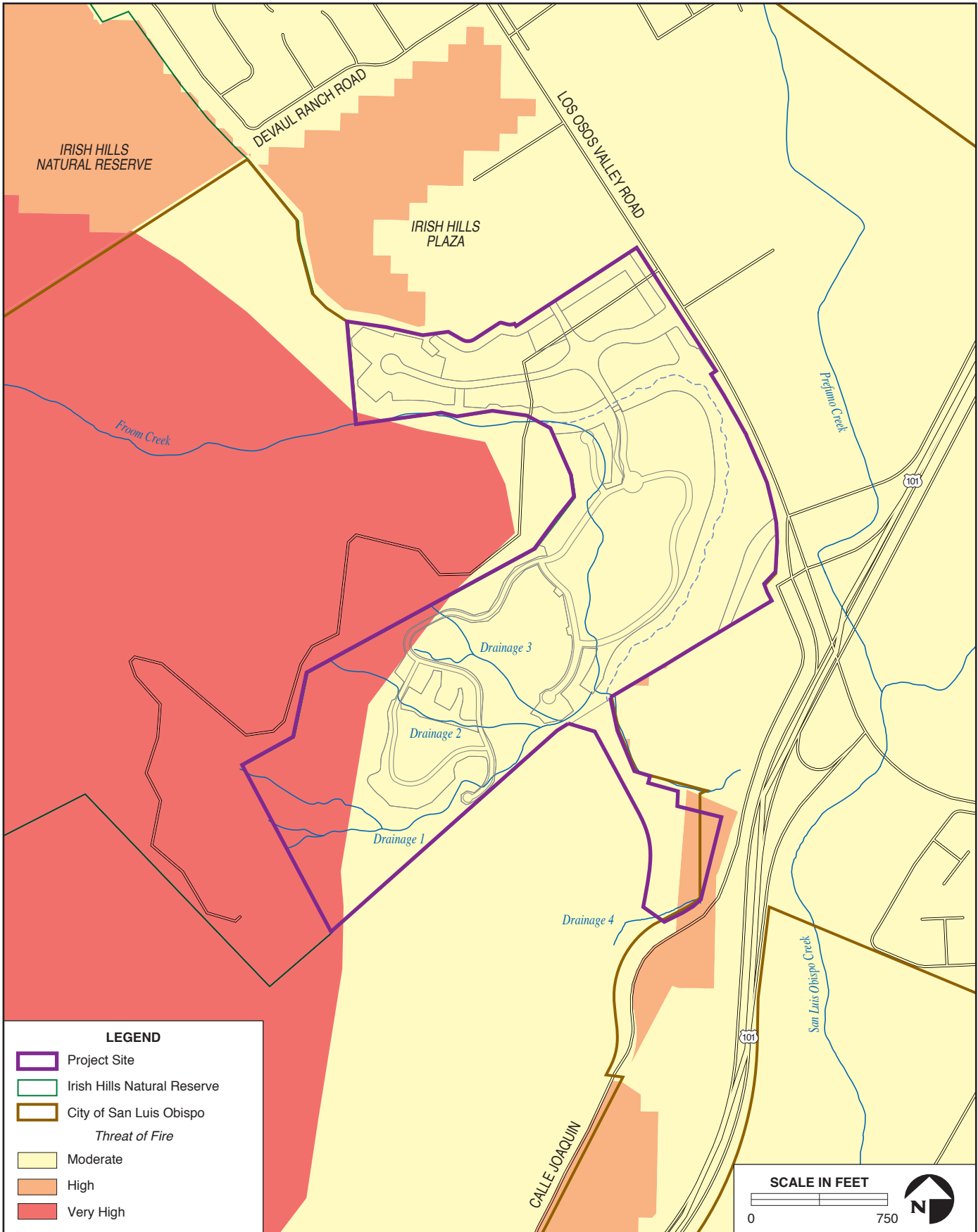
Climate change has the potential to affect fire frequencies, intensities, and total burn area. For instance, a warmer climate may result in increased fire frequency by facilitating the increased drying of fine surface fuels, allowing more potential ignitions to become actual ignitions that become wildfires. Fire intensity is more closely related to biomass management; however, large intense fires have nonetheless become more common in California throughout the past 20 years. Increased temperature and decreased precipitation influence the size of forest and woodlands, while arid forests and woodlands in the southwest primarily influence the size of a fire by the production of fuels in the year prior to fire and secondarily by drought in the year of fire. While the frequency, intensity, and burn area of a fire is subject to a variety of factors, it is accepted that the general increase in temperature is correlated to a higher risk of fire hazard (U.S. Forest Service 2012).

Fire Hazard Severity Zones

Fire Hazard Severity Zones (FHSZ) are defined by the California Department of Forestry and Fire Protection (CALFIRE) based on the presence of fire-prone vegetation, climate, topography, assets at risk (e.g., high population centers), and a fire protection agency's ability to provide service to the area. Approximately 102 acres of the site is designated as a Moderate FHSZ, and approximately 13 acres within the Upper Terrace are located within a Very High FHSZ (see Figure 3.7-1; CALFIRE 2007). Further, it should be noted that the site borders a Very High FHSZ within the Irish Hills Natural Reserve, with this border extending adjacent to and within the site's northern and western boundaries for approximately 0.75 mile. As the Project site is located both within Moderate to Very High FHSZ areas and at the edge of the wildland-urban interface, it has potential to be exposed to wildfire hazards.

The Project site is located within a CALFIRE State Responsibility Area (SRA); however, about one acre of the proposed stormwater detention basin area of the Project site falls within the Local Responsibility Area (LRA).²

² The SRA is the area where the State of California has the primary financial responsibility for the prevention and suppression of wildland fires. The LRA is an area where local agencies have primary financial responsibility for fire suppression.



Slope and Topography

Topography influences wildland fire to such an extent that slope conditions can often become a critical wildland fire factor. Conditions such as the length and steepness of slopes, direction of exposure, and/or overall ruggedness of terrain influence the potential intensity and behavior of wildland fires and/or the rates at which they may spread. Of these, the most important factor is the influence of slope steepness and prevailing wind direction on the speed at which a fire may spread (Barros et al. 2013). Nevertheless, flat terrain may still experience intense fire patterns. For example, the 2017 Santa Rosa Tubbs Fire traveled from flatlands over mountain ranges and back to flatlands, destroying over 5,600 structures in the process, many of them located within developed areas of Santa Rosa's downtown.

Lower-elevation portions of the Project site are generally flat (0-15 percent slopes). However, the Project site includes moderate to steep slopes (i.e., 15 to 75 percent) surrounding the site's Upper Terrace and western perimeters. Further, the Project site is bordered by upward sloping lands to the west into the Irish Hills Natural Reserve. Slope steepness and the ruggedness of terrain may affect both fire behavior and firefighting access (Table 3.7-1). As slope gradients increase, hand crews are less likely to establish fire-containment lines in areas of excessively steep slopes due to the lack of accessibility and safety concerns. The development of spot fires ahead of fire-lines and the hazards of rolling and blowing firebrands (i.e., ember showers) become progressively more serious as slope increases. The steep slopes with chaparral vegetation along the site's western perimeter presents severe wildland fire hazards. In addition, prevailing winds range from northwest to west-northwest, blowing inland from the Pacific Ocean up valleys such as the Los Osos Valley (Western Regional Climate Center 2018). Thus, prevailing winds, steep slopes, and the presence of dense old growth, highly flammable vegetation within portions of the Irish Hills Natural Reserve present a substantial wildland fire hazard along the site's 1-mile-long interface with these open lands.

Table 3.7-1. Potential for Firefighting Success and Tactics on Steep Slopes

Slope Class	Potential for Firefighting Success and Tactics
< 20%	Optimal chances for success of combating fires utilizing direct attack methods with all-wheel-drive fire trucks, bulldozers, hand crews, and aerial resources, including fixed-wing tankers.
21 – 40%	Moderate feasibility for controlling fires by direct attack with all-wheel-drive fire trucks, bulldozers, hand crews, and helicopters. Use of fixed-wing aerial tankers limited by ruggedness of terrain.
41 – 60%	Limited feasibility for controlling fires as slopes are typically beyond operating capability of all-wheel-drive fire trucks. Direct firefighting tactics are possible, but become increasingly difficult with increases in slope. Use of fixed-wing aerial tankers becomes highly restricted.
> 60%	Low feasibility for controlling fires. Slope gradients largely beyond operating capability of bulldozers. Attack methods become more indirect. Hand crews and helicopters become primary tools.

Source: County of Los Angeles 2011.

Vegetation and Fuel Biomass

Within the Project vicinity, open grasslands and coast live oak woodlands on and adjacent to the site, along with chaparral vegetation found in areas of the Irish Hills Natural Reserve, can quickly burn during the dry fire season, particularly under conditions of strong, dry winds such as the Santa Anas. The grassland and coastal scrub/chaparral plant communities that dominate the slopes of the Irish Hills have various chemical, physical, and physiological characteristics that contribute to the frequency and potential of local wildland fires. These vegetation communities have a propensity to burn on an intermittent basis, with grassland fires particularly susceptible to expand quickly. Consequently, recurrent fire has developed into an ecological factor necessary for the survival of some grassland, coastal scrub, and chaparral species. Some grassland and chaparral species require a “fire cue” such as intense heat, smoke, or charring of bark before seed germination can occur, and some have reproductive systems that allow for fast germination after fire. However, the grassland and chaparral ecosystems do not appear to require fire to remain healthy. According to recent studies, some California chaparral is extraordinarily resilient to very long periods without fire (Keeley and Borchert 2005) and generally continues to maintain productive growth throughout pre-fire conditions (Hubbard 1986; Larigauderie, Hubbard, and Stafford 1990). Unlike chaparral habitat, coastal sage scrub has less standing biomass and litter accumulation, and constituent shrub species are capable of continual reproduction by seed. In general, fire frequency tends to be highest within areas that are covered by coastal sage scrub communities, as they tend to accumulate more herbaceous plants annually than do areas containing woody chaparral shrubs.

Historic Wildland Fires and Return Interval

Past wildland fires in the County demonstrate that major wildland fires occur on average every 10 years within and north of the Santa Lucia Mountains; however, no major wildland fires have been recorded in recent history south of this mountain range and within the coastal portions of the County, nor have any been recorded within the vicinity of the Project site. The nearest historic wildfires in the area include the 1985 Las Pilitas Fire approximately 2.3 miles east, the 2005 Bishop A Fire approximately 3.3 miles north, and the 1984 Swift LE-7 Fire approximately 4.0 miles northwest (Fire Resource and Assessment Program 2017). The lack of recorded wildland fires within the immediate Project vicinity may indicate a high degree of fuel loading and increased risk of wildfire, particularly within the Irish Hills Natural Reserve (County of San Luis Obispo Fire Department 2018). Depending on weather conditions, plant types, and fire management policies, the Irish Hills and surrounding area have a very high risk of wildland fire and the majority of the area is identified as a Very High FHSZ by CALFIRE. Consequently, structures and residences located in this area are at risk from wildland fire.

Wildland Firefighting Strategies

Typical strategies for managing wildland fire hazards involve three parts, including ongoing fuel management activities, fuel reduction near structures, and suppression of active fires. Fuel management includes fire crews removing dried vegetation, creating fuel breaks where all vegetation is removed, and conducting prescribed burns. Fuel modification reduces the radiant and convective heat generated by wildfire and provides valuable defensible space for firefighters to take an effective stand against an approaching fire front and firebrands (i.e., ember showers). While these strategies may prove to be effective in preventing the spread of large fires and reducing risk to life and structures, they may also fragment and damage ecosystems and cause visual changes in the process (Los Angeles County Fire Department 2012).

When a wildfire occurs, an important factor for life, property, and the environment comes from passive protection measures, such as defensible space, fire-resistive landscaping, and fire-resistive construction. The sum effect of passive protection measures substantially increases the effectiveness of fire suppression activities. Inadequate or unreliable water supply, inadequate ingress and egress, inadequate structural safeguards, and inadequate vegetation management are the factors that lead to major structural-related fire losses in areas adjacent to wildlands (Cohen 1999). In addition, the inability of residents to shelter-

in-place in their homes can also create evacuation and fire department access problems in these areas (U.S. Forest Service 2000).

3.7.1.4 Hazardous Materials

Potential for Hazardous Materials on the Project Site

The Project site is largely undeveloped and has historically supported and continues to support grazing operations. There is no evidence of storage or use of hazardous materials associated with the grazing operations. Historical grazing and dairy operations may have resulted in limited amounts of pesticides and herbicides in low concentrations near the soil surface; however, these substances are not generally regulated as hazardous materials/site contamination and there is little risk associated with residual presence of pesticides in site soils. However, the northwestern portion of the site is developed with historic ranch buildings and a red rock quarry primarily used as a storage yard for construction materials and equipment/vehicles. Typical hazardous materials used, stored, or handled at the construction materials storage yard include fuels, fertilizers, and construction materials. Storage of these materials can pose potential hazards where leaks can contaminate air, water, and soil, or generate fire. There are no known contaminated sites recorded within the Project site, but use of portions of the site for construction storage may have resulted in soil contamination.

In addition to typical hazards and hazardous materials associated with storage of construction equipment and materials and grazing operations, radon is considered to have a moderate risk in some geologic formations and soils in the County. Radon is a naturally occurring gas produced by the breakdown of traces of uranium in certain soils and rocks and can pose a significant health problem. Within the region, only 3 of 173 tests for radon in homes contain over 4 picocuries per liter (pCi/L), ‘the highest’ rating, and radon is not considered to be a substantial local hazard (City of San Luis Obispo 2014). Further, the presence of a transformer on any of the adjacent Pacific Gas and Electric Company (PG&E) power poles that run along the northeastern property line could possibly contain polychlorinated biphenyls (PCBs). However, the possibility of a PG&E transformer to contain PCBs is very low, as PG&E discontinued use of PCBs in transformers in the 1980s (Grisanti & Associates 2011).

Inspection of the Project site indicates minimal presence of debris from the adjacent Irish Hills Plaza within onsite drainages and some non-hazardous solid waste from residual homeless campsites adjacent to Froom Creek.

Hazardous Materials Site Listings

There is no evidence of aboveground storage tanks (ASTs) or underground storage tanks (USTs) within the Project site. In addition to the lack of ASTs and USTs, the Project site is not currently or has not historically been associated with any bulk fuel storage or fixed dispensing equipment.

Records indicate that at least 10 inactive Leaking Underground Storage Tanks (LUSTs) sites are located within 0.5 mile of the Project site (Table 3.7-2; SWRCB 2018). There is one active SWRCB cleanup assessment site and one Department of Toxic Substances Control (DTSC) backlog cleanup assessment site that were identified approximately 0.2 mile southeast of the Project site across U.S. 101. These sites are undergoing assessments for potential contaminants of concern that affected soils, groundwater, and surface water.

Offsite cleanup sites located near the Project site or hydraulically up-gradient could be a concern if contaminants migrate to the Project site. Given the location of known sites with potential contamination and associated soil and groundwater affected and their distance from the Project site, there is a low potential for migration of contaminants to the Project site.

3.7.1.5 Airport Safety Hazards

San Luis Obispo County Regional Airport

The Airport provides commuter, charter, and private aviation service to the area. The primary hazard associated with land uses near the Airport is the risk of aircraft incidents on approach and takeoff. Aircraft flight operations are determined largely by the physical layout of the Airport and rules of the Federal Aviation Administration (FAA) (City of San Luis Obispo 2014). There are two runways at the Airport with parallel taxiways. Runway 11-29 is utilized for the majority of aircraft operations, with 97 percent of all aircraft operating at the Airport using this runway for departures and arrivals, as well as touch-and-go flights. Runway 7-25 is mostly used by small, light, general aviation aircrafts during crosswind conditions and is utilized for the remaining 3 percent of aircraft flights, only for general aviation propeller aircraft.³ The Project site is not located in the path of the

³ General aviation is all civil aviation operations other than scheduled air services and non-scheduled air transport operations for remuneration or hire.

Table 3.7-2. USTs and Cleanup Sites within a 0.5 mile-Radius of the Project Site

Hazardous Site Record	Location	Potential for Migration to the Project site
Laguna Lake Shell LUST Inactive Cleanup Site	Madonna Road and LOVR intersection, 0.5 mile north of Project site	Very Low – An inactive cleanup site associated with gasoline and other fuel oxygenate contaminants which was completed and closed in 2013.
Perry Ford, Lincoln LUST Inactive Cleanup Site	LOVR, 0.1 mile northeast of Project site	Very Low – An inactive cleanup site associated with waste, motor, hydraulic, and lubricating oil contaminants which was completed and closed in 2008.
Sunset Honda LUST Inactive Cleanup Site	LOVR, 0.1 mile northeast of Project site	Very Low – An inactive cleanup site associated with waste, motor, hydraulic, and lubricating oil contaminants which was completed and closed in 2000.
Kimball Motors LUST Inactive Cleanup Site	LOVR, 0.2 mile northeast of Project site	Very Low – An inactive cleanup site associated with benzene, gasoline, and tetrachloroethylene contaminants which was completed and closed in 2012.
Shell (former Texaco) LUST Inactive Cleanup Site	LOVR, 0.1 mile east of Project site	Very Low – An inactive cleanup site associated with gasoline and other fuel oxygenate contaminants which was completed and closed in 2009.
ARCO #6038 LUST Inactive Cleanup Site (A)	LOVR, 0.1 mile east of Project site	Very Low – An inactive cleanup site associated with diesel contaminants which was completed and closed in 1993.
ARCO #6038 LUST Inactive Cleanup Site (B)	LOVR, 0.1 mile east of Project site	Very Low – An inactive cleanup site associated with gasoline and other fuel oxygenate contaminants which was completed and closed in 2010.
Chevron USA LUST Inactive Cleanup Site	Calle Joaquin, 0.1 mile east of Project site	Very Low – An inactive cleanup site associated with gasoline contaminants which was completed and closed in 1996.
San Luis Obispo Tetrachloroethylene (PCE) Plume State Response Cleanup Site	LOVR, 0.2 mile east of Project site	Low – Active cleanup site since 2010. Groundwater was potentially impacted by PCE from the site’s previous dry-cleaning use. The extent of PCE contamination is unknown, and further investigative work is needed for locating PCE source areas; the extent of concern is limited to areas north of LOVR up to Marsh Street.

Table 3.7-2. USTs and Cleanup Sites within a 0.5 mile-Radius of the Project Site (Continued)

Hazardous Site Record	Location	Potential for Migration to the Project site
Conoco Phillips Site #5143 Cleanup Program Site	LOVR, 0.2 mile east of Project site	Low – Active cleanup site and initial assessment initiated in 2010. Soils were contaminated with crude oil, diesel and gasoline. Due to the separation by U.S. 101 and the potential for soil to migrate, potential for contaminate migration to the Project site is low.

Source: SWRCB 2018; DTSC 2018.

arrival/departure pattern for either runway and is not located within a Runway Protection Zone. A majority of the Project site is located within Aviation Safety Area S-2, while a small portion of the eastern area of the Project site is located with Aviation Safety Sub-Area S-1c (SLO County ALUC 2005).

Airport Safety Areas

The Project site is approximately 1.7 miles west of the Airport and falls within the jurisdiction of the Airport Land Use Plan (ALUP) adopted by the Airport Land Use Commission (ALUC) in 1973 and updated in 2005. The ALUP is currently in the process of being updated. The ALUC oversees development subject to the ALUP to ensure safety. Allowable types and intensity of development and potential airport safety hazards are identified within each Aviation Safety Area defined by the ALUP. Under the 2005 ALUP, a portion of the Project site overlaps Aviation Safety Sub-Areas S-1B and S-1C. However, more recent analysis of Airport hazards indicates the safety risks may differ from the 2005 ALUP. Using the criteria in Caltrans' California Airport Land Use Planning Handbook, the Project site falls outside of the Aviation Safety Areas (Johnson Aviation 2014). Further, the ALUC conceptually reviewed the Project on April 19, 2017. While the 2005 ALUP Safety Area maps are adopted by the ALUC, the City has consistently deferred to the San Luis Obispo Airport Land Use Compatibility Report prepared by Johnson Aviation in 2014 as the more accurate assessment of Airport hazards in the City. The report uses the Caltrans' California Airport Land Use Planning Handbook, which provides a more current and appropriate methodology for assessing aviation safety risks. The City has relied on the report during adoption hearings for recent planning and development projects, including the San Luis Ranch Specific Plan project and the Avila Ranch Specific Plan project.

Aviation Accidents at San Luis Obispo County Regional Airport

According to the California Airport Land Use Planning Handbook Accident Study, 68 percent of aviation accidents occur over or within an airport, and accident sites tend to occur fairly close to the extended runway centerline (Johnson Aviation 2014). There had been a total of 33 aviation accidents or incidents associated with the Airport, six of which resulted in fatalities, between 1984 and 2014. Of these, five incidents resulted in emergency landings within LUCE- defined Airport Overlay Zones (AOZs) between 1984 and 2014, none of which resulted in an on-ground fatality or occurred within or adjacent to the Project site (Table 3.7-3).

Table 3.7-3. Fatal Aircraft Accidents within the Vicinity of San Luis Obispo County Regional Airport

Flight Date	ALUP Safety Area
9/24/1990	S-2
8/7/1994	S-1B
1/16/2001	S-1C
8/1/2005	S-2
6/24/2013	S-1B

Source: Johnson Aviation 2014.

Note: Accident site placement for the ALUP Safety Areas were based on visual determination of Figure 4-3 from the Johnson Aviation Land Use Compatibility Report.

3.7.2 Regulatory Setting

Hazardous materials and hazards safety are governed by local jurisdictions, although federal and state laws which apply to local jurisdictions would also apply to future development under the Project. Regulations that are directly relevant to the Project are summarized below.

3.7.2.1 Federal

Federal Occupational Safety and Health Administration (OSHA) – Process Safety Management Standard (29 CFR 1910.119)

OSHA’s mission is to ensure the safety and health of American workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. OSHA standards are listed in 29 CFR 1910, including Process Safety and Management. This standard includes requirements for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals. Some of the requirements

of this standard include: all information pertaining to the hazardous chemicals shall be available to the employees; employees shall be given training on the operation of equipment with hazardous materials; and, the employer is required to perform a process hazard analysis.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

SLO County APCD is delegated authority by the U.S. Environmental Protection Agency (USEPA) to implement the Federal Asbestos NESHAP regulations specified in 40 CFR 61, Subpart M. There are specific requirements and procedures delineated in this regulation which pertain to certain demolition and renovation projects. All non-residential demolitions of any kind of structure or asbestos containing material disturbance are required to be approved in advance by SLO County APCD. Requirements for an owner/operator subject to this regulation include conducting a thorough inspection for the presence of asbestos by a Certified Asbestos Consultant (CAC) and written notification to SLO County APCD of the demolition or renovation at least 10 working days prior to the start of the job.

3.7.2.2 State

California Fire Code

The California Fire Code (CFC) lists specific requirements for emergency water supply, access roads and turnarounds, roofing, construction techniques, hazard abatement, and event inspection and safety. The CFC provides uniform fire prevention, hazardous material, and building construction regulations. To minimize risks to public health and the environment, a Fire Prevention Inspector is required to review a list of hazardous materials stored aboveground on a property to assess potential individual and/or cumulative impacts to the property and surrounding areas. The inspector would ensure that hazardous materials stored onsite comply with Chapter 6.95 of the California Health and Safety Code.

Public Resources Code (PRC) Section 4291 Mountainous, Forest-, Brush- and Grass-Covered Lands

(a) A person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material, shall at all times do all the following:

(1) Maintain defensible space of 100 feet from each side and from the front and rear of the structure, but not beyond the property line except as provided in paragraph (2). The amount of fuel modification necessary shall take into account the flammability of the structure as affected by building material, building standards, location, and type of vegetation. Fuels shall be maintained in a condition so that a wildfire burning under average weather conditions would be unlikely to ignite the structure. This paragraph does not apply to single specimens of trees or other vegetation that are well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to a structure or from a structure to other nearby vegetation. The intensity of fuels management may vary within the 100-foot perimeter of the structure, the most intense being within the first 30 feet around the structure. Consistent with fuels management objectives, steps should be taken to minimize erosion. For the purposes of this paragraph, “fuel” means any combustible material, including petroleum-based products and wildland fuels.

(2) A greater distance than that required under paragraph (1) may be required by state law, local ordinance, rule, or regulation. Clearance beyond the property line may only be required if the state law, local ordinance, rule, or regulation includes findings that the clearing is necessary to significantly reduce the risk of transmission of flame or heat sufficient to ignite the structure, and there is no other feasible mitigation measure possible to reduce the risk of ignition or spread of wildfire to the structure. Clearance on adjacent property shall only be conducted following written consent by the adjacent landowner.

Hazardous Materials Transportation

The transport of hazardous materials within the State of California is subject to federal, state, and local regulations. It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose unless the use of the highway is required to permit delivery or the loading of such materials (California Vehicle Code, Sections 31602(b) and 32104(a)). The California Highway Patrol (CHP) designates through routes to be used for the transport of hazardous materials. The transport of hazardous materials is restricted to such routes except in cases where travel from these routes is required to deliver or receive hazardous materials.

California Air Resources Board (CARB) Airborne Toxics Control Measure (ATCM for Construction, Grading, Quarrying, and Surface Mining Operations (Section 93105))

This CARB ATCM regulation applies to any area to be disturbed that is located in a geographic ultramafic rock unit, or to any area where NOA or serpentine would be disturbed. Projects that require grading within an area where an NOA may be present are required to demonstrate adequate dust control measures with the SLO County APCD. For example, for projects that require grading of 1 acre or more in serpentine, a geologic evaluation and Asbestos Dust Mitigation Plan must be submitted to the SLO County APCD.

The Project site lies within the NOA buffer area per the SLO County APCD's NOA map, and is therefore subject to CARB's ATCM for Construction, Grading, Quarrying, and Surface Mining Operations. CARB has identified asbestos as a TAC that if inhaled may result in the development of lung cancer or cause other health hazards. NOA can be found in serpentine rock and can be released into the air when it is broken or crushed. In the County, serpentine rock is located in many regions, including the Project site. Work in serpentine areas requires a SLO County APCD pre-approved dust control plan and may include asbestos air monitoring. Prior to any grading activities at a site within an area potentially containing NOA, the Applicant is required to comply with the applicable sections contained in the NOA ATCM, including the California Code of Regulations (CCR) Title 17, Section 93105. Refer also to Section 3.3, *Air Quality and Greenhouse Gas Emissions*.

Department of Toxic Substance Control (DTSC)

DTSC, a department of CalEPA, is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the federal Resource Conservation and Recovery Act (RCRA) and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

U.S. Code (USC) 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, Department of Health Services (DHS) lists of contaminated drinking water wells, sites listed by SWRCB as having UST leaks or

discharges of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

3.7.2.3 Local

City of San Luis Obispo General Plan

Safety Element (SE)

The City's General Plan guides the use and protection of various resources to meet community purposes. The General Plan SE focuses on achieving acceptable levels of risk through decisions on land use and the form of development, with consideration for the closely related factor of transportation. The General Plan SE includes policies that describe an approach to achieving the goals of the General Plan. In terms of hazards/hazardous materials, there are three policies included in the General Plan SE:

Policy 3.1 Wildland Fire Safety.

G. New subdivisions shall be prohibited in areas of "Very High" wildland fire hazard unless part of conservation or open space acquisition program. Development of existing parcels shall require a development plan to manage fuels, maintain a buffer zone, and provide adequate fire protection to the approval of the Chief Building Official. The development plan must be consistent with Policies required by the General Plan COSE.

H. The City of San Luis Obispo is considered a "Community at Risk" due to the threat of wildfire impacting the urban community. The City shall continue to enhance the fire safety and construction codes for new buildings in order to reduce the risk of urban fires that may result from wildfires. Citywide building code enhancements should include: Fire resistant exterior wall coverings; Sprinkler protection in attic areas; and Ember resistant vent systems for attics and under floor areas and other provisions identified in California Building Code (CBC) Chapter 7A.

Policy 5.2 Minimizing Hazardous Materials Exposure. People's exposure to hazardous substances should be minimized.

Policy 9.18 Safety of Structures and Facilities. Existing and new structures and facilities should reflect adopted safety standards. Within this policy, the City has developed a program, Program S 8.6.5 Required Inspections, whereby the City will conduct safety

inspections for hazardous materials in commercial, industrial, and multifamily residential buildings.

Land Use Element (LUE)

The General Plan LUE, the associated LUCE Update EIR, and technical studies such as the 2014 San Luis Obispo Airport Land Use Compatibility Report (Johnson Aviation) address the issues of airport hazards in detail. Based on this analysis, the LUE set forth both policies and programs to address Airport safety, which are summarized below and discussed in more detail in Section 3.9, *Land Use and Planning*.

Policy 7.4 Airport Safety Zones. Density and allowed uses within the Airport Safety Zones shall be consistent with the San Luis Obispo County Regional Airport ALUP unless the City overrides a determination of inconsistency in accordance with Section 21676 and 21676.5 et seq. of the Public Utilities Code. If the City overrides a determination, all land uses shall be consistent with the State Aeronautics Act and guidance provided in the California Airport Land Use Planning Handbook guidelines, City policies, and noise standards as substantiated by the San Luis Obispo County Regional Airport Master Plan activity forecasts as used for noise planning purposes.

City of San Luis Obispo Municipal Code – Demolition and Moving of Buildings Section 115 Public Safety Requirements

The City Municipal Code includes general requirements for building demolition activities, permitting for such activities, hauling operations, and routes for moving materials. In addition, there are subsections included for dust and debris, fire safety, and removal and disposal of demolition materials.

City of San Luis Obispo Municipal Code – Site Development Standards

23.05.080 - Fire Safety

Any proposed use that requires land use permit approval is subject to the provisions of Sections 23.05.082 and 23.05.086. The purpose of these standards is to provide for precautions to minimize hazards to life and property in the event of fire.

23.05.082 - Fire Safety Plan

The purpose of a fire safety plan is to enable a fire protection agency that has jurisdiction over a proposed site to evaluate the adequacy of proposed fire protection measures, and to keep itself informed of new developments to evaluate their effect upon the ability of the

agency to provide continuing service. The approval of a fire safety plan does not imply a commitment by any agency to an increased level of service.

This section details where fire safety plans are required, and the required content of the fire safety plan is described, including what is necessary for projects within urban and village areas and rural areas. Exceptions are provided to the content, such as in the case where the applicable fire protection agency determines that information provided with the project application and plans is sufficient to enable fire safety review without the need for a separate fire safety plan. Finally, fire safety plan review is required, and the timing and effect of review are detailed.

23.05.086 - Fire Safety Standards

In areas where fire protection is provided by the San Luis Obispo County Fire Department/California Department of Forestry and Fire Protection, new uses are required to comply with applicable provisions of the Uniform Fire Code, 1988 Edition, or such later edition as adopted by an ordinance of the County.

Airport Land Use Plan for the San Luis Obispo County Regional Airport

State law requires an independent, countywide ALUC to adopt an ALUP for each airport. This plan establishes zones based on flight patterns, with the aim of having future development be compatible with airport operations, considering safety and noise exposure. The ALUP contains several safety-related policies to address future development:

4.4.6 Safety Policies. Notwithstanding any other provision of this ALUP except for the specific provisions set forth in Section 6 (Specific Land Use Provisions for the Margarita Area), a proposed general plan, general plan amendment, specific plan, specific plan amendment, zoning ordinance, zoning ordinance amendment, building regulation modification, or individual development proposal will be determined to be inconsistent with the ALUP if the proposed project or local action:

- c. **Policy S-3.** Would permit or fail to adequately prohibit any future development project which specifies, entails, or would result in a greater building coverage than permitted by ALUP Table 7 (see Table 3.8-3 in Section 3.9, *Land Use and Planning*).

4.4.3.2 Aviation Safety Areas. Three fundamental areas are delineated with respect to aviation safety risks, of which Safety Area S-1 and S-2 overlay the Project site:

b. **Safety Area S-1** – The area within the vicinity of which aircraft operate frequently or in conditions of reduced visibility at altitudes equal to or less than 500 feet above ground level.

c. **Safety Area S-2** – The area, within the vicinity of which aircraft operate frequently or in conditions of reduced visibility at altitudes between 501 and 1000 feet above ground level. Aviation safety hazards to be considered in this area include mechanical failures, fuel exhaustion, loss of control during turns from downwind to base legs or from base to final legs of the traffic pattern, stall/spin incidents during engine-out maneuvers in twin engine aircraft, and midair collisions. Operational factors of concern include circle-to-land instrument approaches south of Runway 11-29, extensive “pattern work” by student pilots in fixed-wing aircraft (predominantly, but not exclusively to the south and west of the airport), and extensive practice flight by students in rotary-wing aircraft to the north of the airport. Nonetheless, because aircraft in Area S-2 are at greater altitude and are less densely concentrated than in other portions of the Airport Planning Area, the overall level of aviation safety risk is considered to be lower than that in Area S-1 or the Runway Protection Zones.

4.4.4.2 Aviation Safety Sub-Areas. In consideration of the above, the ALUC has established and adopted sub-areas within Aviation Safety Area S-1. The following description is for Aviation Safety Sub-Area S-1C, which applies to the Project site:

c. **Safety Area S-1C** – Those portions of Safety Area S-1 which are not included in Safety Areas S-1A or S-1B, but are adjacent to (within 0.5 nautical miles) frequent or low-visibility aircraft operations at less than 500 feet above ground level. Aviation safety hazards to be considered in this area include mechanical failures, deviation from localizer or VHF omnidirectional range during Instrument Flight Rules operations (due to pilot error or equipment malfunction), stall/spin incidents during engine-out maneuvers in multi-engine aircraft, loss of control during “go around” or missed approach procedures, and loss of visual references by aircraft performing circle-to-land procedures.

4.5.3 Airspace Protection Policies. Notwithstanding any other provision of this ALUP, any proposed general plan, general plan amendment, specific plan, specific plan amendment, zoning ordinance, zoning ordinance amendment, building regulation modification, or individual development proposal will be determined to be inconsistent with the ALUP if the proposed local action:

- a. **Policy A-1** – Lacks sufficient provisions to ensure that no structure, landscaping, apparatus, or other feature, whether temporary or permanent in nature shall constitute an obstruction to air navigation or a hazard to air navigation, as defined above.

These policies are linked to designated Airport runway safety zones which encompass the Project site and are discussed more fully in Section 3.9, *Land Use and Planning*.

CALFIRE and San Luis Obispo County Fire Department Strategic Fire Plan 2017

The Strategic Fire Plan collaboratively addresses fire protection planning efforts within the County and provides a planning level framework for hazardous fuel assessment and strategies to reduce the potential for wildfire ignition. The goals of the plan include coordination between multiple jurisdictions within the County and improvement of fire suppression capabilities.

City of San Luis Obispo Emergency Operations Plan 2011

The City Emergency Operations Plan (EOP) addresses the planned response to emergencies in, or affecting the City. The EOP identifies the emergency management organization to coordinate response to emergencies or disasters, describes procedures, and establishes framework for preparedness and response actions.

3.7.3 Environmental Impact Analysis

3.7.3.1 Thresholds of Significance

The Project would have a significant impact if it would create a public health hazard or cause harm to the environment. The significance criteria for this hazards, hazardous materials, and wildfire analysis are based on Appendix G of the State CEQA Guidelines. A potential impact related to hazards, hazardous materials, or wildfire is considered significant if the Project would:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;
- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area;
- f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Additionally, since the Project site is located in or near state responsibility areas or lands classified as very high fire hazard severity zones, wildfire impact is considered significant if the Project would:

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan;
- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or
- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Non-Applicable Thresholds

- Threshold (c) (*Hazardous Materials Emission Near Schools*): There is one school located approximately 0.25 mile from the Project site, separated by existing urban development that includes commercial businesses and residential uses. The Project proposes residential and commercial uses that would not generate hazardous materials. Typical materials (e.g., cleaning soaps, solvents and pesticides) used in the residential and commercial development would be similar in nature to those used at the school. Accordingly, there would be no potentially significant adverse impact to schools with implementation of the Project and this issue will not be analyzed further in this EIR.

3.7.3.2 Impact Assessment Methodology

This assessment includes review of existing adopted plans, public databases, recent studies and EIRs, to assess the potential presence of hazards and hazardous materials sites within the Project site and vicinity. The Project site was evaluated for the presence of hazardous materials based on a review the LUCE Update EIR, and integrated current information for contaminated sites from U.S. EPA's EnviroFacts, DTSC's EnviroStor, and SWRCB's GeoTracker databases. Additionally, information for this section was gathered from information provided by the General Plan SE, ALUP, historical reports, the DTSC data management system, and Project site information on file with the City.

Risk associated with wildfire is assessed based on numerous items, including the CALFIRE FHSZ determination, an assessment of the fuel biomass that is within and adjacent to the Project site, historic wildland fires in the vicinity, slope, winds, vegetation age and composition, and changes that may result after implementation of the Project.

Analysis of potential airport-related hazards included review of the State Aeronautics Act, the FAA regulations, and guidance provided in Caltrans' California Airport Land Use Planning Handbook. In addition, policy consistency with the ALUP Safety Areas is provided in Section 3.9, *Land Use and Planning*. For the purposes of this section, the California Airport Land Use Planning Handbook is used for hazards impacts, consistent with City guidance and the LUCE Update EIR methodology.

To evaluate potential for post-fire impacts, such as debris flows, flooding, or slope instability, this section incorporates an assessment of impacts of the Project associated with downstream flooding as a result of runoff, post-fire slope instability, or drainage changes as presented in Section 3.8, *Hydrology and Water Quality*. Regarding impacts associated

with increased potential for landslide under these same conditions, please refer to Section 3.6, *Geology and Soils*.

3.7.3.3 Project Impacts and Mitigation Measures

The Project would place residential and commercial development in a location that is vulnerable to wildfires. The Project would also have a limited potential for release of hazardous materials during construction and operation. Potential impacts related to hazardous materials, airport operations, and wildfire are discussed further below and summarized in Table 3.7-4.

Table 3.7-4. Summary of Project Impacts

Hazards and Hazardous Materials Impacts	Mitigation Measures	Residual Significance
HAZ-1. The Project would exacerbate wildfire risks, thereby exposing occupants to wildfire hazards, and impair emergency response, and would require wildfire fuel management in the Irish Hills Natural Reserve.	MM HAZ-1 MM HAZ-2 MM HAZ-3 MM HAZ-4 MM HAZ-5	Significant and Unavoidable
HAZ-2. The Project would potentially expose persons to toxic, hazardous, or otherwise harmful chemicals through accidental conditions involving the release of hazardous materials into the environment.	None required	Less than Significant
HAZ-3. The Project site is located within the ALUP Safety Areas and would potentially result in an airport-related safety hazard for people residing or working in the Project site.	None required	Less than Significant

Impact HAZ-1 The Project would exacerbate wildfire risks, exposing occupants to wildfire hazards and impairing emergency response, and would require wildfire fuel management in the Irish Hills Natural Reserve (Significant and Unavoidable).

As described in Section 3.7.1.3, *Wildfire Risk*, the Project site is located in a region with very high to moderate fire hazard potential, including the western 1-mile-long perimeter of the site that borders and includes very high fire hazard areas. Adjacent grassland, coastal sage scrub, oak woodland and chaparral vegetation within the Irish Hills Natural Reserve provides substantial flammable natural fuels for future potential wildfires. The Project site also lies at the base of the From Creek watershed with steep slopes in the Irish Hills Natural Reserve creating wind channels; prevailing winds generally blow northwest up the slopes but periodically reverse and blow southeast downslope toward the Project site (Western Regional Climate Center 2018). In addition, grasslands and vegetation along

slopes and within drainage channels within the Project site serve as fuels that contribute to potential fire hazards for future development. As part of the Project, 39.1 acres of residential uses, 3.1 acres of commercial uses, and 2.9 acres of public facilities are proposed within the CALFIRE-designated Moderate FHSZ. While approximately 13 acres of the Very High FHSZ exist within the Project site, no development is proposed within this zone; proposed development within the Upper Terrace of Villaggio are approximately 200 feet from the Very High FHSZ. Further, along approximately 1,000 feet of the Project site's western perimeter, residential land uses within Madonna Froom Ranch are proposed directly adjacent to Very High FHSZ within the Irish Hills Natural Reserve, though these residential uses would be buffered by the existing Froom Creek alignment.

Project Construction

The Project would allow for construction activities to occur on approximately 58 acres of the site over multiple years. Project site construction activities would occur on and adjacent to grasslands in a Moderate FHSZ and immediately adjacent to a Very High FHSZ where the risk of fire ignition is heightened, especially during critical fire weather conditions with warm temperatures, low humidity, and strong winds. Operation of construction equipment, such as saws, welders, generators, and heavy machinery, would temporarily introduce new ignition sources into the area. Flammable solids involved in construction include plastic and fiberglass components, and the accumulation of material from work equipment. Flammable liquids include gasoline or diesel fuel, hydraulic oil, engine oil, and engine coolant.

While the chance of accidental ignition by such heavy equipment may seem improbable, several wildland fires in Southern California have been ignited by such equipment.⁴ For example, the nearly 85,000-acre Las Pilitas Fire in 1985 was ignited by equipment use and burned wildland areas to the east of the City (County of San Luis Obispo Fire Department 2018). As construction would occur over a period of several years, the risk of fire ignition from construction activities immediately adjacent to the Very High FHSZ constitutes a potentially significant adverse impact, especially during periods of high fire risk. While adherence to the City's Municipal Code Sections 23.05.080, 23.05.082, and 23.05.086 and associated compliance with CFC and CBC construction requirements would minimize the

⁴ The 2014 Rancho Bernardo suburb fire in San Diego that burned 1,500 acres was caused by construction equipment, and the 2009 Jesusita Fire in Santa Barbara, which burned almost 9,000 acres and destroyed 80 homes, was ignited by landscape equipment during a trail maintenance operation.

risk from accidental construction-related wildfires, the risk would not be eliminated given the setting of the Project site. Associated impacts would be *potentially significant*.

Project Operation

There is the potential for a fire ignition within the Irish Hills or elsewhere within a Very High FHSZ, which would potentially affect the Project site and surrounding development, infrastructure, and natural resource areas. Project operation could also increase the potential to ignite wildfires. Activities such as barbeques, smoking, vehicle maintenance, and landscaping activities, etc., could introduce new ignition sources into the area, including within the Project site and within the Irish Hills Natural Reserve, considering potential increased activities from Project residents. Fueled by prevailing northwest winds, fire ignition from the Project site may spread rapidly up the Irish Hills.

When southeast winds prevail, wildfire may burn downslope onto the Project site. The rugged, sloped terrain of the Irish Hills make firefighting challenging and the Project would eliminate the existing buffer between the Irish Hills and urban development in the southern portion of the City and block direct access to the Irish Hills in this area.

The Project would exacerbate wildfire risks by developing residential uses in a high fire hazard area, thereby placing structures and people in a high risk place and contributing to wildfire hazards that would affect existing people and property, including pollutant concentrations from a wildfire, uncontrolled spread of wildfire, and post-fire flooding, debris flows, and drainage changes. The Project would substantially increase the total number of people and structures within an area designated Moderate FHSZ and adjacent to a High FHSZ. During periods of maximum occupancy, 1,231 persons could be onsite within the residential and commercial areas (i.e., employees and residents). Further, although no development is proposed in the Very High FHSZ, the risk of wildfire remains high due to Project location at the wildland-urban interface at the base of steep slopes and ravines in the Irish Hills.

The fact that the Project site itself lies in the Moderate FHSZ does not eliminate the wildfire risk associated with the Project given its setting in the Irish Hills. For example, the 2017 Thomas Fire in Ventura resulted in the loss of nearly 1,000 homes, including many that were not within a designated High FHSZ but topographically located in wildfire-susceptible areas. Additionally, based on the conceptual site plan (see Figure 2-5), approximately 16 structures within Madonna Froom Ranch and approximately 14 structures within Villaggio would be immediately adjacent to vegetation of Moderate and

Very High FHSZ areas. Accounting for those structures within the Project site that are adjacent to open space areas (that do not necessarily face the Irish Hills), the total number of structures located within the Moderate FHSZ and thereby subject to wildfire risk would be approximately 62 structures. These structures would be at risk of fires igniting in the Irish Hills or elsewhere and burning through Very High FHSZ downslope onto the Project site, especially considering slopes, prevailing winds and biofuels that have not recently burned.

Following a wildfire in the Irish Hills, there would be a potential for people and structures to be exposed to significant risks associated with potential flooding, sedimentation, and debris flow. Following the 2017 Thomas Fire in Montecito, debris flows flooded creeks, reshaped watersheds, and resulted in substantial loss of life and property. The Project site is located at the base of the Froom Creek watershed and the Irish Hills. Denuded hillsides adjacent to the site in the Irish Hills Natural Reserve and in the headwaters of the Froom Creek watershed may become unstable in post-fire conditions, when rainfall could mobilize debris to cause landslides, mudflows, and flooding onsite and in the vicinity. In addition to the direct impact to structures and people, this impact could manifest as changes to site hydrology, as further analyzed in Section 3.8, *Hydrology & Water Quality*.

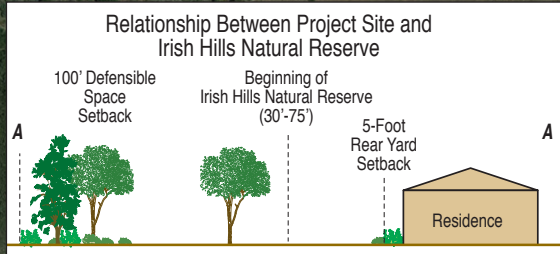
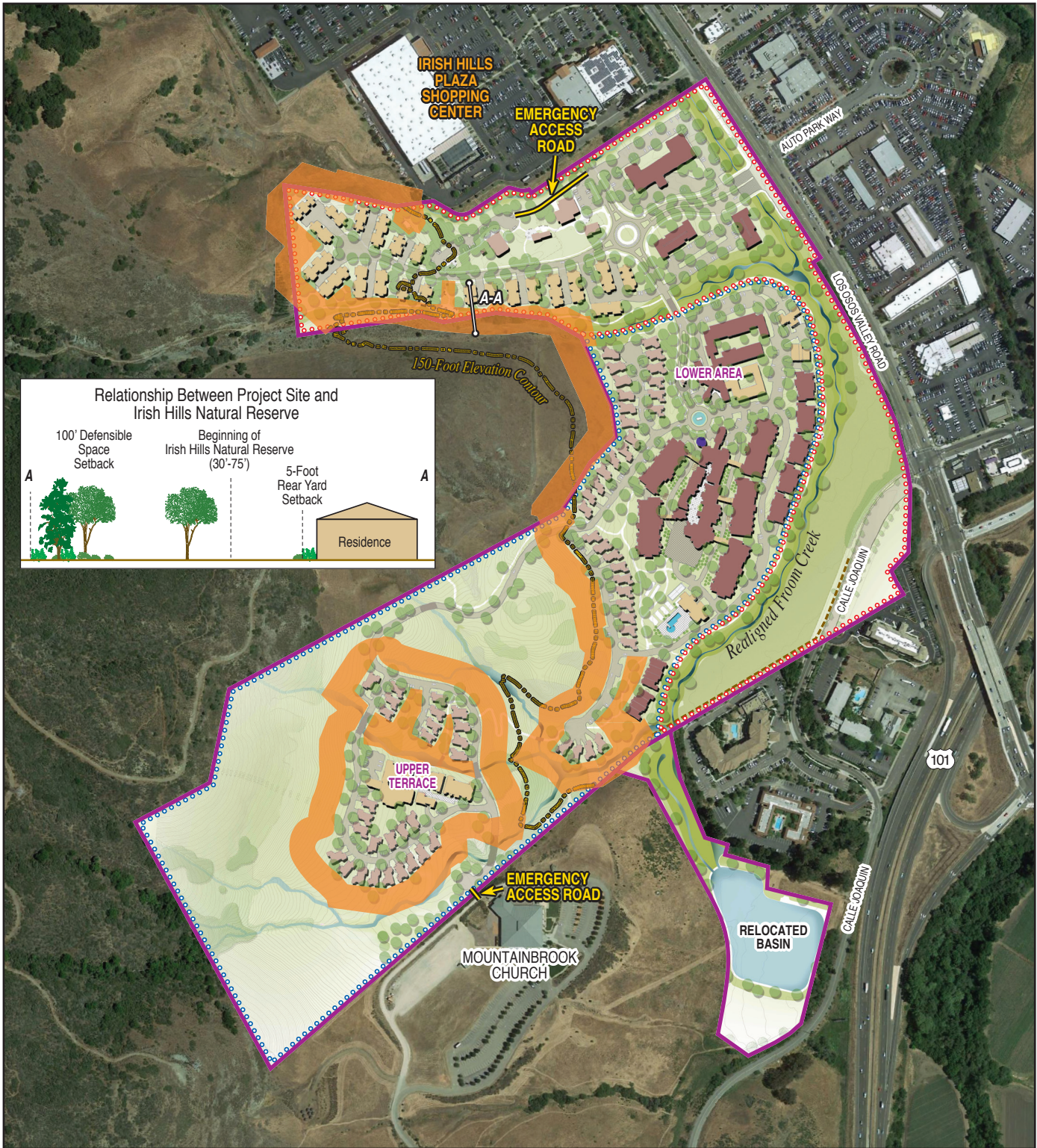
Compliance with Policies 3.1 and 9.18 within the General Plan SE, development standards with the CFC, and the City Municipal Code would reduce the risk of damage or injury by ensuring the Project would minimize the potential for ignition and increase structural resistance to fire. Further, compliance with PRC Section 4291 would require the Project to establish a 100-foot clearance between structures and highly flammable vegetation to create a defensible space. This defensible space typically involves fuel modification within a buffer zone where combustible native or ornamental vegetation is modified or replaced with drought-tolerant, low-fuel-volume plants. Under the currently proposed Project land use plan (refer to Figure 2-4 and Figure 2-5), approximately 1,000 feet of medium-high density residential (R-3-SP) immediately borders the Irish Hills Natural Reserve within Villaggio. Additionally, there is approximately 1,651 feet of R-3-SP within 100 feet of the Project boundary, which averages approximately 75 feet from the boundary edge (especially along the Madonna Froom Ranch edge). Considering the minimum 5-foot backyard setback and the 100-foot defensible space required of PRC 4291, defensible space would potentially extend up to 95 feet into the adjacent Irish Hills Natural Reserve along portions that border the Reserve, and average approximately 20 feet into the Reserve along the portion that averages the R-3-SP land use approximately 75 feet from the boundary edge. Compliance with these measures, particularly implementation of defensible space

buffers, would ensure impacts associated with the proposed development's wildfire risk would be substantially reduced to a *less than significant* level.

While defensible space requirements would decrease risks associated with wildfire, there may be secondary impacts to biological resources, potentially impacting several acres of Irish Hills Natural Reserve habitats. The potential vegetation clearance up to 95 feet outside the Project site would potentially occur along a 1,000-foot segment of R-3-SP that borders the Irish Hills Natural Reserve, which would potentially modify approximately 2.18 acres of existing vegetation (Figures 3.7-2 and 3.7-3). Vegetation clearance up to 75 feet outside the Project site, along a 1,651-foot segment of R-3-SP that borders the Reserve, would potentially modify approximately 0.76 acres of existing vegetation. Additionally, within Villaggio, fire buffer clearance within existing grasslands and riparian habitats in the Upper Terrace to the southwest and along the western boundary of the Lower Terrace would likely also require additional vegetation clearance. Therefore, fire buffer clearance requirements would result in potential secondary impacts to biological resources both on and off the Project site, including potentially rare and sensitive habitats, such as serpentine native bunch grasslands and areas supporting rare plant species. See Section 3.4, *Biological Resources* for a more complete discussion of such impacts.

Emergency Evacuation

The Project would substantially increase the total number of people that may be subject to evacuation during a wildfire. The Project's proposed intersection at LOVR is the primary access and egress route to the site for private vehicles and evacuation. During wildfire, residents, employees, hotel guests, and potentially visitors may all need to evacuate the site. Vehicles would contribute to congestion on evacuation routes along LOVR and U.S. 101, contributing to probable evacuation-related congestion, potential road closures, and exposure of evacuees to traffic-related hazards during evacuation. In extreme events, evacuees could also be exposed to smoke, flames, ash and embers, and/or downed power lines and trees. During emergency conditions when a threat such as a wildland fire is imminent, it may be difficult for the healthcare center to guide panicked individuals to fire meeting points and shelter-in-place locations as detailed within the Draft FRSP Program 7.4.1a, especially if site conditions quickly change. Further, residents of Villaggio would constitute a special needs population under the City's EOP and would require special care services and resources. Therefore, the Project could impair the implementation of an existing EOP, a *potentially significant* impact. See also Impact Section 3.13, *Transportation and Traffic* regarding emergency evacuation.



LEGEND

Project Site	100-Foot Buffer	1 Story – 18'-20' High
1- to 2-Foot Berm	Cross Section Location (refer to Figure 3.7-3)	2 Story – 24'-30' High
Madonna Froom Ranch		3 Story – 36'-45' High
Villaggio		Tower – 45'-55' High

Proposed Building Heights

1 Story – 18'-20' High

2 Story – 24'-30' High

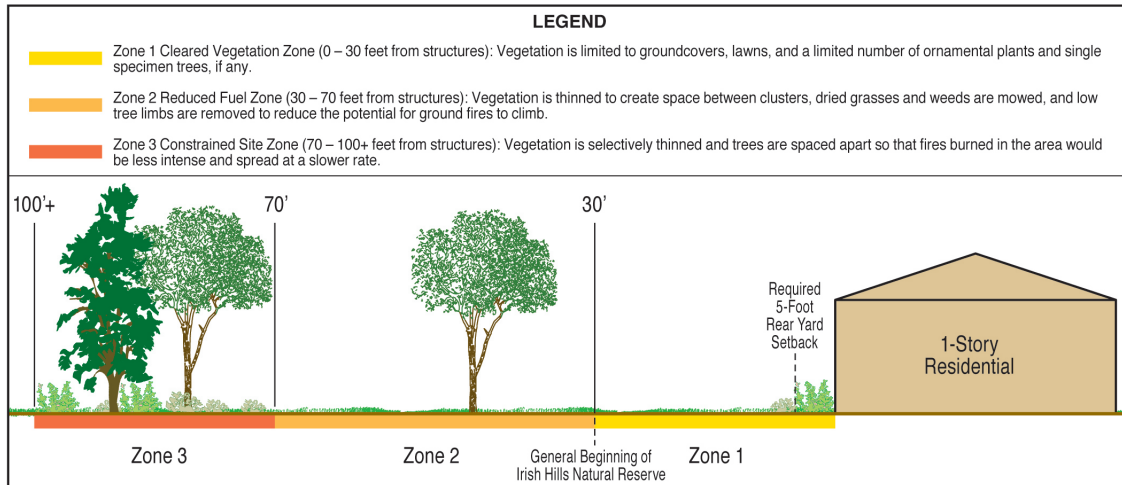
3 Story – 36'-45' High

Tower – 45'-55' High

SCALE IN FEET

0 550

Aerial Source: Google 2018.



wood.

Illustrative Defensible Space Setback Cross Section

FIGURE 3.7-3

Emergency Response

The Project would eliminate the existing buffer between the Irish Hills and urban development in the southern portion of the City and block direct access to the Irish Hills in this area, forcing responders to navigate through Madonna Froom Ranch or the Upper Terrace. To respond to a wildfire, emergency vehicle access to the adjacent slopes of the Irish Hills Natural Reserve under the Project would be limited and would restrict the ability of firefighters to protect structures within the direct line of fire from damage. As detailed above, approximately 30 residential units within Villaggio and R-3 units within Madonna Froom Ranch are proposed adjacent to the Project site boundary with the Irish Hills Natural Reserve. These units would be especially vulnerable to any wildfire originating from the hillside. Proposed security fencing and retaining walls along the western edge of the Project site would potentially limit access for firefighters to attack fires within the Irish Hills Natural Reserve, which would leave the Project site vulnerable, a *potentially significant* impact.

In accordance with the City’s Municipal Code, the City of San Luis Obispo Fire Department (SLOFD) is required to review the Project for compliance with SLOFD requirements for emergency access. Based on communication with Fire Chief Garret Olson on June 27, 2018, SLOFD would require fire access routes in two locations from the Project site to the Irish Hills Natural Reserve on at least 12-foot wide paths, one extending from Villaggio, and one from Madonna Froom Ranch. See also, Section 3.13, *Transportation and Traffic* regarding emergency access.

Taken together, the Project would result in substantial adverse impacts associated with the exacerbation of wildfire hazards, considering the surrounding terrain, prevailing winds, presence of biofuels, and known high fire risk areas. The Project would also impair emergency evacuation and response. As a result, the Project would result in an increased risk that people would be exposed to pollutant concentrations from a wildfire, uncontrolled spread of a wildfire, or post-fire hazards resulting in potential for structural damage, injuries, or loss of life due to wildfires. Therefore, *potentially significant* impacts would occur.

Mitigation Measures

MM HAZ-1 The Applicant shall prepare and submit a Construction Impact Management Plan to the City of San Luis Obispo Fire Department (SLOFD) prior to the issuance of grading permits. The Plan shall list measures taken during construction to reduce the potential for brush or grass fires from use of heavy equipment, welding, vehicles with catalytic converters, and other potential activities. The Plan shall include SLOFD recommended measures including, but not limited to the following:

- *All equipment with the potential to work off-road shall be equipped with appropriate mufflers and have extinguishers mounted on each vehicle;*
- *In coordination with SLOFD, personnel shall be briefed on the dangers of wildfire and be able to respond accordingly should the need arise;*
- *Onsite supervisor(s) shall have a cell phone or other means of initiating a 911 response time in a timely manner in the event of a medical emergency and/or fire;*
- *All dead and decadent vegetation immediately surrounding the development area shall be removed to a minimum perimeter of 30 feet;*
- *Smoking shall only occur in a designated area;*
- *A water tender will be available on each construction site during the entire phase of construction; and*
- *A water tender operator shall be available onsite during all construction and remain onsite a minimum of 30 minutes after all construction has finished for the day.*

Plan Requirements and Timing. The Applicant shall prepare a Construction Impact Management Plan in coordination with SLOFD, the San Luis Obispo County Fire Department, and the City, and submit the Plan to the SLOFD for approval prior to the issuance of grading permits. Provisions for fire protection shall be restated on all grading and building plans. Fire protection measures shall be implemented throughout construction and draw upon the CALFIRE and San Luis Obispo County Fire Department Strategic Fire Plan. The name and telephone number of an onsite supervisor shall be provided to SLOFD prior to commencement of construction or grading activities.

Monitoring. The SLOFD shall review the Construction Impact Management Plan and provide recommended measures as necessary. The City permit processing planner shall ensure measures are integrated into the final grading and building plans prior to permit approval. City monitoring staff shall spot check for compliance during construction for each phase of development.

MM HAZ-2 In accordance with PRC Section 4291, the Applicant shall hire a City-qualified team that consists of appropriate specialists (i.e., fire management professionals, biologists) to prepare a Community Fire Protection Plan to design the creation and maintenance of required fire buffers and fuel management zones around developable areas and detail methods for achieving fire safety around new buildings while preserving the integrity and function of affected native plant communities to the maximum extent feasible, and that ensures that consistent fire fuel management practices are applied throughout the City. The Plan shall incorporate management strategies in coordination with adjacent property owners, including Mountainbrook Church and the Irish Hills Natural Reserve. The Plan shall outline the removal and control of invasive, non-native vegetation, and conservation of sensitive habitats and rare species, while developing fire fuel management practices that will discourage or prevent non-native grasses and other non-native invasive species from dominating surrounding areas. Landscaping shall be maintained by the Applicant and periodically inspected by the SLOFD during fire inspections in each of the fuel management zones to avoid the buildup of deadwood and leaf litter, which, if left to accumulate, would reduce the mitigating effect of the Plan.

Specifically, the Plan shall include, but not be limited to, the following elements:

- *Vegetation coverage and type;*
- *Setbacks between structures, sensitive wildlife species, and access routes;*
- *Development plan landscaping and planting standards within the setback areas;*
- *Native trees and shrubs, such as coast live oak, coastal scrub, and grassland shall be thinned and limbed up but left in place;*
- *All allowable weed abatement techniques, qualifications, and requirements for weed abatement contractors, as well as measures and techniques that ensure the required fuel management and vegetation clearance, shall be designed and implemented to provide adequate structure protection and avoid degradation of sensitive biological habitat; and*
- *Invasive species shall be removed and controlled.*

Plan Requirements and Timing. Prior to approval of the final development plan, the Community Fire Protection Plan shall be prepared and submitted to the City Natural Resources Manager and SLOFD for review and approval, with coordination from the San Luis Obispo County Fire Department. The Plan shall be implemented consistent with the approved maintenance schedule.

Monitoring. The City-qualified biologist shall submit a monitoring report to the City Natural Resources Manager and SLOFD at the end of the first year following Project occupancy documenting the fuel management activities that took place. Conformance with the Community Fire Protection Plan shall be demonstrated through the submittal of annual photo documentation by the Applicant or site visits as necessary at the discretion of the Compliance monitoring staff.

MM HAZ-3 The Froom Ranch Specific Plan (FRSP) shall designate smoking areas, located away from onsite fire hazards areas and within acceptable locations

consistent with Chapter 8.16, Smoking Prohibition and Secondhand Smoke Control, of the City Municipal Code. Otherwise, smoking shall be prohibited onsite. The Applicant shall amend the FRSP to include policies to requiring the allowed use of fire resistant landscaping and hardscaping in areas to reduce mulch/gorilla hair, which is the receptive embers, if determined appropriate by SLOFD.

Plan Requirements and Timing. Prior to adoption of the Final FRSP, the Applicant shall amend the Final FRSP to include these policies. The Applicant shall coordinate with SLOFD to identify appropriate locations for designated smoking areas and appropriate fire resistant landscaping and hardscaping features within the Project site.

Monitoring. The Final FRSP shall be reviewed by the SLOFD and City for inclusion of the above measure.

MM HAZ-4 The Applicant shall prepare and implement an Evacuation Plan, which shall address both Villaggio and Madonna Froom Ranch areas. The Evacuation Plan shall be subject to review by the City and SLOFD, and shall include, but not be limited to:

- Accommodation for assisted living and special care individuals;*
- Shelter-in-place accommodations;*
- Specified quantity and capacity of vehicles required to accommodate residents and employees of Villaggio, and maintenance of those vehicles;*
- Signage that clearly indicates evacuation routes and meeting areas;*
- Specified egress points for transportation vehicles;*
- A relocation plan from the Project site to a secondary facility, with associated transportation;*
- Contingency plans for changes to the construction schedule or phasing plan that would affect the primary evacuation plan and routes;*
- Periodic updates that would consider potential redevelopment activities or other roadway alterations; and*

- *Regular practice drills (e.g., one per year) for implementation of the Evacuation Plan.*

Plan Requirements and Timing. The above Evacuation Plan shall be prepared in coordination with the SLOFD and the San Luis Obispo County Fire Department and submitted for approval to the City and SLOFD prior to adoption of the Final VTTM. The Applicant shall resubmit the Plan to the City and SLOFD prior to the construction of each phase of development. Prior to occupancy of the first residential unit, the Applicant shall implement measures within the Evacuation Plan.

Monitoring. The City and SLOFD shall review the Evacuation Plan and ensure all recommendations are incorporated. The City Fire Marshall shall inspect the Project site for compliance prior to the occupancy of the first residential unit for each phase.

MM HAZ-5 The Froom Ranch Specific Plan (FRSP) shall designate fire access routes in at least two locations from the Project site to the Irish Hills Natural Reserve on at least 12-foot wide paths, one extending from Villaggio and one from Madonna Froom Ranch. Fire access routes shall be designed to allow emergency response to wildland area in the Irish Hills to support direct access for firefighting personnel and equipment.

Plan Requirements and Timing. Prior to adoption of the Final FRSP, the Applicant shall amend the Final FRSP to include the required accessway, in coordination with SLOFD to identify appropriate locations within the Project site.

Monitoring. The Final FRSP shall be reviewed by the SLOFD and City for inclusion of the above measure.

Residual Impacts

Exacerbated fire hazards that could occur during construction and operation of the Project would require implementation of MM HAZ-1 through MM HAZ-5 to reduce potentially significant impacts. MM HAZ-1 would be required to reduce impacts from the risk of fire ignition from construction activities, limiting the potential for fires ignited by construction activities to the furthest extent feasible. Implementation of mitigating fire protection measures during construction phases would reduce the risk of fire caused by construction

activities through personnel briefings and provision of fire safety equipment such as extinguishers, designated smoking areas, and access to water tenders during construction. MM HAZ-2 would reduce the potential impacts of Project introduction to an area with biofuels that may cause a wildfire incident, reducing fire hazards associated with vegetation and biofuel mass. This would require defensible space around the Project's habitable structures, which has the potential to affect the adjacent Irish Hills Natural Reserve if the defensible space is not confined to the Project site. Implementation of MM HAZ-3 would be required to reduce the risk of wildfire from smoking by residents of the Project. This mitigation would maintain consistency with the City-wide smoking policies, ensuring that smoking within privately and publicly maintained spaces does not occur adjacent to areas with high fire hazards (City Municipal Code Section 8.16).

To ensure that the Project would not substantially impair an emergency operation or evacuation plan, MM HAZ-4 would require the development and implementation of a Project-specific Evacuation Plan, ensuring resources are available to safely evacuate persons within the Project site, with consideration for changes to the anticipated construction schedule or potential development activities. Finally, MM HAZ-5 would ensure emergency responders can directly access the Irish Hills through the Project site in the event of wildfire, including personnel and equipment. However, compared to existing conditions in which firefighters are currently able to stage at the Project site and are allowed full, unhindered access to the Irish Hills, the Project with incorporation of this measure would continue to impair access for fire fighting personnel.

These measures would reduce the range of wildfire risks associated with the Project. However, given the location of the site at the base of the Irish Hills with slopes, vegetation, and winds that put the Project site and surrounding areas at risk for wildfire impacts, the mitigation measures would not reduce the potentially impact to a level of insignificance. Occupants would still be exposed to wildfire hazards and secondary impacts to the Irish Hills would continue to occur from offsite fuel management (refer to Section 3.4, *Biological Resources*), and emergency response to wildfire in the Irish Hills would continue to be impaired by the Project as currently designed. Therefore, with implementation of the above mitigation, impacts related to wildland fires with associated threat of damage to structures and loss of life, would be *significant and unavoidable*.

Impact HAZ-2 The Project would potentially expose persons to toxic, hazardous, or otherwise harmful chemicals through accidental release of hazardous materials into the environment (Less than Significant).

Large quantities of hazardous materials would not be introduced to the area as a result of potential land use changes anticipated to occur under the Project. As detailed below, the Project would not create new significant hazardous conditions or exacerbate existing hazardous conditions.

Transport of Hazardous Materials

The transport of potentially hazardous materials would continue to occur on arterial roads in the area, such as U.S. 101 or LOVR. The transport of large quantities of hazardous materials is subject to applicable federal, state, and local regulations to reduce the risk of accidental spills, leaks, fire, or other hazardous conditions. Future land uses under the Project are not anticipated to involve the transport of unusually high volumes of hazardous materials. Further, documentation for all hazardous materials that are transported for individual Project site activities would be provided as required for compliance with existing federal and state hazardous materials regulations. The U.S. Department of Transportation Office of Hazardous Materials Safety prescribes strict regulations for the safe transportation of hazardous materials. Compliance with applicable regulations, as well as oversight by the appropriate federal, state, and local agencies tasked with hazardous materials management, would minimize the risk of hazardous materials exposure during transport.

Use and Storage of Hazardous Materials

New residential and commercial uses in the Project site would involve the routine use and storage of common types of hazardous materials for cleaning and maintenance operations, such as paints, fuels, solvents, and cleaning products, as well as limited medical supplies and waste. Potentially hazardous materials that would be used and stored within the Project site would be typical of those found in urban areas (e.g., paints, fuels/lubricants, cleaning solvents, adhesives, sealers, and pesticides/herbicides); however, these hazardous materials would not pose a significant risk to the public or the environment and would be used in limited quantities associated with residential and general commercial land uses.

Further, any business that handles or uses hazardous materials above regulatory levels would be required to comply with federal, state, and local regulations and standards established by the U.S. EPA, CalEPA, the County, and the City to protect the public health and safety. Businesses are required to comply with health and safety and environmental protection laws and regulations, including the City's Municipal Code.

Disposal of Hazardous Materials

Because no ASTs or USTs are known to exist within the Project site, there is low potential for the release of hazardous materials from these sources during Project grading and excavation activities. However, as described above, the Project site may have residual hazardous materials from previous land uses, such as fuels, oils, fertilizers, decomposing construction materials, and limited amounts of pesticides and herbicides. Grading activities may release these hazardous materials. However, given that the site is largely undeveloped and was historically used for grazing and dairy operations, the risk of contamination is extremely low. Further, federal, state, and local regulations govern the disposal of hazardous wastes. Additionally, asbestos-containing material (ACM), lead-based paint (LBP), or other hazardous materials encountered during demolition or construction activities would be disposed of in compliance with all pertinent regulations for the handling of such waste, including SLO County APCD NESHAP requirements and CCR Title 8, Industrial Relations.

Operation of the Project would involve the use of potentially hazardous materials, including vehicle fuels, oils, and transmission fluids. In addition, operation of residential and commercial uses within the Project site would entail routine cleaning and maintenance activities using common hazardous materials, such as cleaning fluids, detergents, solvents, adhesives, sealers, paints, fuels/lubricants and pesticides/herbicides, etc. However, applications of such materials would be in limited (i.e., not commercially reportable) quantities and would be handled in compliance with federal, state, and local regulations pertaining to their transport, use, or disposal.

Ultimately, the existing Project site conditions do not indicate that substantial safety risks from hazardous materials are present that may be exacerbated. Additionally, implementation of the Project would not substantially increase the risk from hazardous materials to the public within the Project site or within the surrounding area. Therefore, compliance with standards and regulations would ensure that the risk of hazardous materials impacts would be *less than significant*.

Impact HAZ-3 The Project site is located within Airport Land Use Plan (ALUP) Safety Areas and would potentially result in an airport-related safety hazard for people residing or working in the Project site (Less than Significant).

Airport safety is primarily related to the potential for accidents related to aircraft operations such as emergency landings or in rare cases crashes, excessive noise levels caused by frequent aircraft flyover, and ensuring that land use development is carried out in a manner that minimizes risks associated with aircraft hazards. Minimizing or avoiding risks to residential and commercial land uses involves designating areas around the ends of runways that must be free of objects or sensitive land uses, limiting the height of new structures in the surrounding airspace, and understanding historical accident patterns. The Project site's proximity to the Airport would present a potential airport-related safety issue for future development, if development intensities exceed the standards established by the ALUC and the California Airport Land Use Planning Handbook. The risk of an aircraft accident increases with proximity to the runway and its approach path.

The Project site is located approximately 1.7 miles away from Runway 7-25, which supports only 3 percent of Airport aircraft operations. The majority of the Project site is outside of the general approach areas of Runway 7-25. Although a small portion of residential and commercial uses in the northeastern corner of the site are within Aviation Safety Sub-Areas S-1B and S-1C of the existing ALUP, developable land uses proposed under the Project are largely located within Aviation Safety Area S-2, which generally indicates areas of overhead aircraft turning movements. The maps prepared as part of the Johnson Aviation Report depicting Airport hazards based on the Caltrans Handbook Safety Compatibility Zones depict the Project site as being located entirely outside of the airport safety compatibility zones and susceptible to airport hazards. The ALUP is currently in the process of being updated, including the Safety Areas. Further, the ALUC conceptually reviewed the Project on April 19, 2017 and advised that the Project should comply with Aviation Safety Area S-2 restrictions at a minimum. Given the ALUC's preliminary determination of the Project and the pending ALUP update, the Project is analyzed for airport safety against the Caltrans Handbook Safety Compatibility Zones identified in the Johnson Aviation Report.

While small portions of the Project site lie within Safety Sub-Areas S-1B and S-1C of the 2005 ALUP, more recent analysis of Airport hazards indicates the safety risks may differ from the 2005 ALUP. Using the criteria in the California Airport Land Use Planning Handbook, the Project site falls outside of the Aviation Safety Areas (Johnson Aviation 2014). While the 2005 ALUP Safety Area maps are adopted by the ALUC, the actual Airport risks are very low onsite according to the more recent San Luis Obispo Airport Land Use Compatibility Report prepared by Johnson Aviation in 2014 based on the California Airport Land Use Planning Handbook. Accordingly, no substantial physical

airport-related safety hazard is expected to occur as result of Project implementation. Further, the Project would be subject to review by the ALUC for consistency with the ALUP and Airport Safety Areas.

With regard to excessive airport noise, noise from aircraft overflights do not generate excessive noise levels under current and projected airport operations and would not substantially affect the health or safety of future Project residents. Therefore, aviation-related safety impacts to residents and commercial employees or patrons within the Project site would be *less than significant*.

3.7.3.4 Cumulative Impacts

Cumulative hazards from wildfire would be exacerbated by additional construction and operation of urban uses within the City and region along the wildland-urban interface. Projects within this area would introduce additional fire hazard-related risks that would place additional people and structures at risk of damage. Further, the heightened potential for future fire hazards from the influence of climate change and warmer conditions, as discussed in Section 3.7.1.3, *Wildfire Risk*, would contribute to the potential for a higher frequency, intensity, and size of fires that may occur within the Project site vicinity and overall region. Adherence to the CFC, City Municipal code, policies within the General Plan SE, and review of discretionary projects by the SLOFD would reduce potential wildfire hazards, but given the high potential for wildfire near the City, the potential for cumulative development to exacerbate wildfire hazards is *significant and unavoidable*.

Cumulative projects within the City and the Project vicinity would have the potential to expose future area residents, employees, and visitors to chemical hazards through development of sites and structures that may be contaminated from either historic or ongoing uses. The severity of potential hazards for individual projects would depend upon the location, type, and size of development and the specific hazards associated with individual sites. Discretionary projects proposed in the City would be required to undergo individual environmental review, including review of potential impacts related to hazards and hazardous materials that are applicable to that particular development site and proposed use. Additionally, projects would also be subject to the local, state, and federal standards which require the safe removal of potentially hazardous building materials and the cleanup of contaminated properties, thus reducing the level of risk on a particular site. Because development standards or remediation requirements would be applied if hazards or hazardous materials posed a risk to safety, the Project's cumulative impacts associated

with exposure to hazards or hazardous materials would not be cumulatively considerable. Therefore, the Project's contribution to cumulative impacts are *less than significant*.

In addition, several cumulative projects listed within Table 3.0-1 are also within the ALUP Safety Areas, thereby potentially exposing persons to risk of airport safety hazards. These primarily include residential units and commercial developments near the Airport, such as the San Luis Ranch Specific Plan and Avila Ranch Development Plan projects. However, these projects are subject to review of airport-related hazards during the environmental review process and by the ALUC, which would ensure that development does not impose an aviation-related hazard on structures or people. In addition, the incremental increase in airport safety hazards at the Project site would be negligible and would not be cumulatively considerable. Therefore, cumulative impacts from airport hazards would be *less than significant*.