

5.3 HAZARDS AND FIRE SAFETY

This section addresses potential hazards and hazardous materials from historic uses on and near the Project site (including Valley Fever) and wildfire hazards. The impacts of the proposed development on the Project site are analyzed at a project-level of detail; direct and indirect impacts are addressed for each threshold criterion for both the on-site and off-site Project features. Growth-inducing impacts and cumulative impacts are described in Sections 6.0 and 7.0, respectively.

5.3.1 INTRODUCTION

Purpose

Appendix G of the California Environmental Quality Act (CEQA) Guidelines requires that both hazards and hazardous materials and fire safety issues be evaluated as part of the environmental documentation process. Analyses of geotechnical hazards and provision of fire protection services are discussed in Sections 5.1 (Geotechnical) and 5.16 (Fire and Law Enforcement Services), respectively.

Summary

Hazards and Hazardous Materials

There would be less than significant impacts related to Valley Fever with implementation of mitigation measure (MM) 3-1 related to dust control during construction; MM 3-2 related to aiding the prevention of Valley Fever among construction workers; with project design feature (PDF) 3-1 related to resident notice of temporary Valley Fever risk during construction and other earth-moving activities; and implementation of Rule 403 dust control measures, as described further in Section 5.11, Air Resources.

There would be less than significant impacts related to environmental hazards, including hazardous materials from current or historic land uses with implementation of MM 3-4 related to historic dry well re-abandonment and MM 3-5 related to permanent closure of the abandoned mine/tunnel.

Operations at the Quail Lake Skypark Airport would not have a significant impact for any portion of the Project site. The Project would result in less than significant impacts related to impairment or interference with an emergency response or evacuation plan with implementation of MM 3-7, requiring preparation of an emergency response plan for the Project.

Fire Safety

With adherence to requirements for fuel modification zone management (MM 3-9) and emergency access (MM 3-7), the Project's potential impact related to wildfires would be less than significant. MM 3-9 requires property owner notification of their responsibilities for maintaining the fuel modification zone(s) on their property. The Project would not result in significant impacts related to proximity of a land use representing a potential fire hazard.

Section Format

As described in Section 5.0, Environmental Setting, Impacts, and Mitigation, and in accordance with State CEQA Guidelines Article 9 (Contents of Environmental Impact Reports), each topical environmental analysis includes a description of the existing setting; identification of thresholds of significance; analysis of potential Project effects and identification of significant impacts; identification of mitigation measures, if required, to reduce significant impacts; and level of significance after mitigation, if any. This information is presented in the following format (please refer to Section 2.0, Introduction, and Section 5.0 for descriptions of each of these topics):

- Introduction
 - Purpose
 - Summary
 - Section Format
 - References
- Hazards and Hazardous Materials
 - Relevant Plans, Policies, and Regulations
 - Environmental Setting
 - Project Design Features
 - Threshold Criteria
 - Environmental Impacts—A separate analysis is provided for each of the following categories of potential impacts:
 - On-Site Impacts
 - Off-Site Impacts
 - Mitigation Measures
 - Level of Significance After Mitigation
- Fire Safety
 - Relevant Plans, Policies, and Regulations
 - Environmental Setting
 - Project Design Features
 - Threshold Criteria
 - Environmental Impacts—A separate analysis is provided for each of the following categories of potential impacts:
 - On-Site Impacts
 - Off-Site Impacts
 - Mitigation Measures
 - Level of Significance After Mitigation
- References

References

Although all references cited for preparation of this analysis are listed in Section 5.3.4, the primary technical references for this section are listed below.

1. Converse Consultants. 2015a (August 31). *Phase I Environmental Site Assessment Report: Assessor's Parcel Numbers 3275-007-014, 3275-006-006 and 3275-008-001, Los Angeles County, California*. Costa Mesa, CA: Converse Consultants (Appendix 5.3-A).
2. Converse Consultants. 2015b (August 31). *Memorandum of Clarification, Centennial Project Area, Los Angeles County, California*. Costa Mesa, CA: Converse Consultants (Appendix 5.3-B).
3. Converse Consultants. 2015c (August 31). *Mitigation Measures, Centennial Project Area, Los Angeles County, California*. Costa Mesa, CA: Converse Consultants (Appendix 5.3-C).
4. Converse Consultants. 2008 (November). *Limited Phase II Environmental Site Assessment – Drum Sampling: Centennial Park Site, Lot 1760, VTTM 60023, State Highway 138 and Quail Lake, Los Angeles County, California*. Costa Mesa, CA: Converse Consultants (Appendix 5.3-D).

Reference 1 encompasses the portion of the site located east of 300th Street West. Between 1999 and 2007, four previous Phase I Environmental Site Assessments (ESAs) and an updated hazardous material database search were performed for the Project site areas located west of the 300th Street West. References 2 and 3 above compile and update, where applicable, the findings of these reports. The previously completed environmental site assessment studies prepared for the Project site and referenced in the 2015 Converse Consultants Phase I ESA Report, are listed in the Report's List of References Appendix (see Appendix 5.3-A).

Exhibit 5.3-1, Locations of Phase I Findings, shows the four different areas surveyed as part of preparation of References 1 through 4 listed above. These reports can be found in Appendices 5.3-A through 5.3-D.

In addition to the environmental safety and man-made hazards evaluated in References 1 through 3, this section also discusses potential hazards that could result from aircraft operations in the immediate vicinity; pesticide use during historical and current agricultural activities in the area; exposure to San Joaquin Valley Fever; and the potential for wildfires.

5.3.2 HAZARDS AND HAZARDOUS MATERIALS

Relevant Plans, Policies, and Regulations

Since hazards and hazardous materials covers many diverse topics, for ease of readability this section is organized by topic rather than by jurisdiction.

General Plans

Los Angeles County General Plan and Antelope Valley Area Plan

The *Los Angeles County General Plan* and the *Antelope Valley Area Plan* (AVAP), part of the County General Plan, includes goals and policies that address hazards issues, limited to emergency response, in the unincorporated County. The AVAP goal and policies applicable to the analysis of hazards with Project implementation are listed below. Section 5.8, Land Use, Entitlements, and Planning, presents a more in-depth analysis of the Project's consistency with relevant plans, policies and regulations.

Goal PS 6: Government officials work with community members to promote community safety.

Policy PS 6.1: Ensure safety information is available at local public areas.

Policy PS 6.2: Encourage residents and business owners to create an evacuation plan and maintain emergency supplies.

Policy PS 6.3: Promote the formation and coordination of Certified Emergency Response Teams.

Policy PS 6.4: Provide assistance to local communities that wish to create a local emergency evacuation plan.

Policy PS 6.5: Strengthen coordination and collaboration between citizens, public agencies, and non-profit groups to plan for disaster response.

Policy PS 6.6: Develop an inclusive master emergency plan that designates evacuation routes, emergency relief centers, emergency animal keeping shelters, and information centers in every Antelope Valley community.

Asbestos Regulations

The United States Environmental Protection Agency (USEPA) has identified asbestos as a hazardous air pollutant pursuant to Section 112 of the Federal Clean Air Act. Further, the California Air Resources Board (CARB) has identified asbestos as a Toxic Air Contaminant (TAC) pursuant to the *California Health and Safety Code* (Sections 39650 et seq.). Asbestos is also regulated as a potential worker safety hazard under the authority of the Occupational Safety and Health Administration (OSHA). These federal and State regulations prohibit emissions from asbestos-related demolition or construction activities; require medical examinations and monitoring of employees engaged in activities that could disturb asbestos; specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos fibers; and require notice to federal and local government agencies prior to beginning renovation or demolition that could disturb asbestos.

In California, asbestos abatement must be performed and monitored by contractors with appropriate certifications from the California Department of Industrial Relations, Division of Occupational Safety and Health (CalOSHA). In addition, CalOSHA has regulations concerning the use and management of hazardous materials and enforces the hazard communication program regulations. All demolition that could result in the release of asbestos must be

conducted according to CalOSHA standards. These standards have been developed to protect construction workers and the general population from hazards associated with exposure to these materials. Young children, the elderly, and people in poor health may be more susceptible to adverse health effects from exposure to asbestos released into the environment.

Pesticide and Chemical Regulations

Pesticides are regulated by the Federal Government under the 1947 Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). FIFRA establishes registration and labeling requirements for pesticides, herbicides, and other economic poisons. Registration requires documentation stating that the pesticide will not damage human health or the environment if used as intended. FIFRA prohibits the sale of any economic poison that has not been registered by the USEPA. The California Department of Food and Agriculture (CDFA) is the principal agency responsible for regulating pesticide sales and pesticide use in the state. Specifically, it registers and classifies pesticides; licenses professional agricultural pest-control operations and advisors; monitors pesticide residues in food samples; and promulgates pesticide use and worker safety regulations. Section 11501 of the *California Food and Agriculture Code* requires pesticide applications to be confined to their target in order to avoid contamination of non-target properties; violations can result in either civil penalties or a revocation of a pesticide-use permit.

The California Department of Health Services (DHS) has an advisory role with respect to pesticide use and exposure. It conducts studies and investigates cases of pesticide exposure; conducts toxicological evaluations and risk assessments; and provides educational programs for physicians on diagnosing and treating pesticide poisonings. On a local level, if the USEPA determines that a pesticide has the potential to cause human injury or environmental damage, its use is restricted and a permit from the local Agricultural Commissioner is required for its purchase and use. Furthermore, restricted pesticides are only available for sale and for use by Certified Applicators or persons under their direct supervision for those uses covered by the Certified Applicator's certification.

Pesticides may be applied either by broadcast spraying (spraying a fine mist over the target, usually from an aircraft or a land vehicle) or by topical application (placing the pesticide directly on or in the vicinity of the target). Broadcast spraying can result in the dispersion of pesticides into adjacent non-target areas (especially during windy conditions); therefore, some pesticides that are applied in this manner are strictly regulated.

The Proposition 65 initiative (approved by California voters in 1986) addresses exposure to toxic chemicals, including but not limited to pesticides. Also known as the Safe Drinking Water and Toxic Enforcement Act of 1986, Proposition 65 requires the State to publish a list of chemicals known to cause cancer, birth defects, or other reproductive harm. This list, which must be updated at least once a year, has grown to include approximately 750 chemicals since it was first published in 1987. According to Proposition 65, businesses must provide a "clear and reasonable" warning before knowingly and intentionally exposing anyone to a listed chemical (OEHHA 1986).

Environmental Setting

Phase I Environmental Site Assessment Results

To determine the presence of and potential for hazardous materials and/or waste contamination on the Project site from existing and historic on- and off-site uses and/or from recognized environmental conditions (RECs), Phase I ESAs have been prepared, and updated where applicable, to collectively encompass the entire Project site. The work performed for the Phase I ESAs was completed in conformance with the scope and limitations of the American Society of Testing and Materials (ASTM) Practice E 1527-13 and consisted of interviews with the property owners' representatives; site and vicinity reconnaissance; reviews of regulatory agency records, descriptions of the physical setting, and historical documentation; and interviews with public agency personnel. A complete listing of databases reviewed as part of the Phase I ESAs is provided in Appendices 5.3-A and 5.3-B of this EIR. On-site and surrounding land uses relevant to the site assessment are described below and are illustrated on Exhibit 5.3-1.

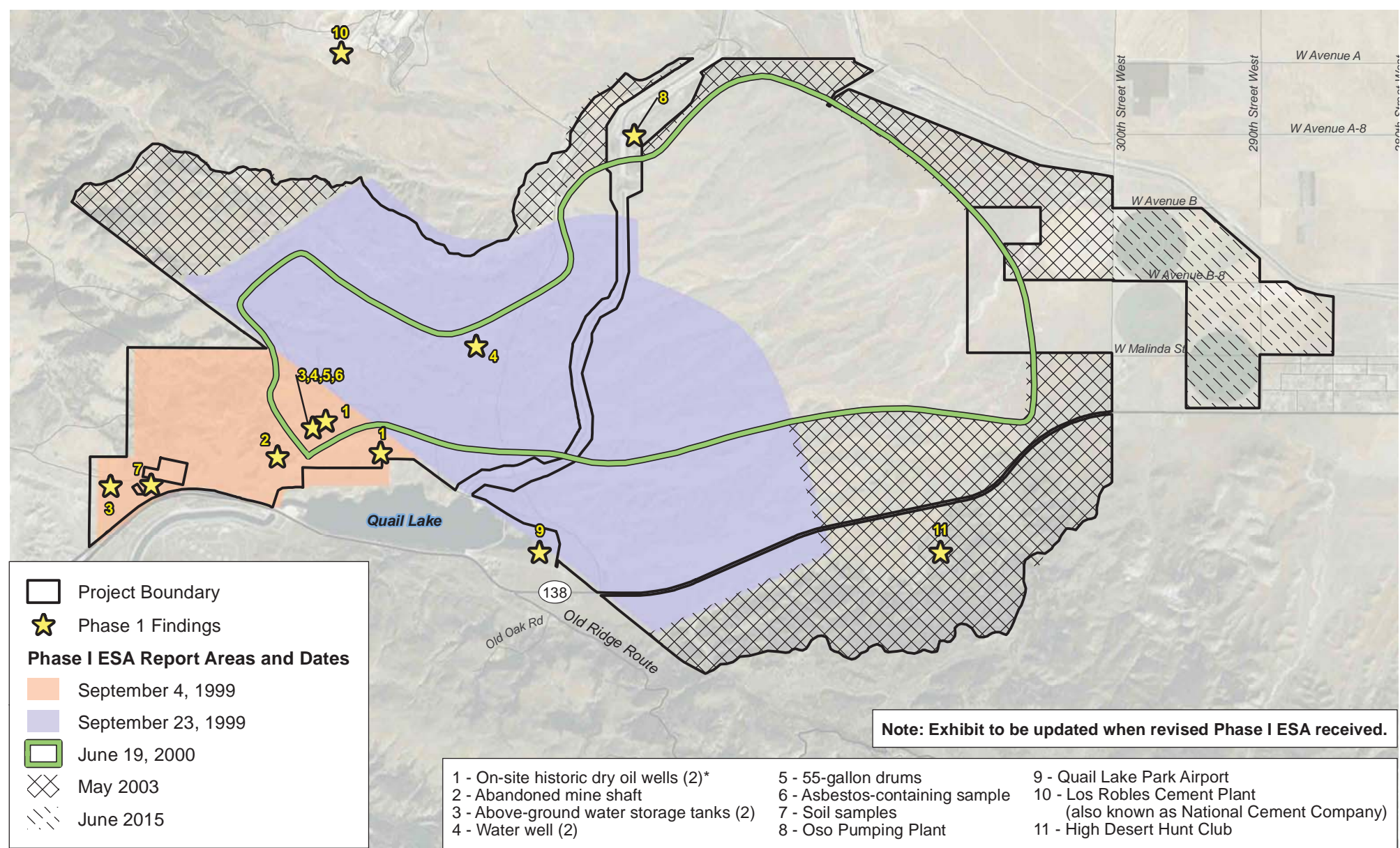
On-Site Uses

During the site reconnaissance, California Registered Environmental Assessors (REA) assessed current site utilization and examined the Project site for evidence of release(s) of hazardous materials and petroleum products; they also identified RECs present on the site, which are identified on Exhibit 5.3-1. Currently, the Project site is primarily open space and rangeland. The 12,323 acres of land that comprise the Project site have primarily been used for open cattle grazing over the last 150 years. In addition to cattle grazing, the Tejon Ranch Company owns and cultivates approximately 1,000 acres in the eastern portion of the Project site as pivot fields.¹ These 1,000 acres include 5 separate pivot fields that correlate with the approximately 652 acres of Prime Farmland on the site that are currently under cultivation for the production of alfalfa and three-way forage mix (e.g., barley, oats, sudan grass). The Phase I ESAs also documented the following physical features or uses on the Project site at the time each Phase I ESA was completed:

- Dry creeks were noted throughout the property, which sometimes contained debris including barbed wire, wood, and metal.
- Residential dwellings are located near the center of the northern property line (currently one residence is present and is occupied).
- Concrete-lined metal pipes and telephone poles were observed near the northern portion of the site. Also near the northern portion of the site, a pile of asphalt and metal pipes, which appeared to be irrigation pipes, was observed. Stained soil was observed in the area of the asphalt, which Tejon Ranch Company reports is planned to be removed in the future.
- An inactive portion of a hunter's camp is located in the western portion of the Project site. At the time of the survey, the camp consisted of six trailers, a shooting range, and

¹ A "pivot field" is a circular agricultural field with a centralized "pivot" irrigation system.

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Locations of Phase 1 Findings

Exhibit 5.3-1

Centennial Project



two outhouses. Associated with the camp was a generator and two gasoline cans. No leaks, stains, or odors were observed or detected.

- An apparent mine shaft, whose entrance was covered in soil, was observed near the southern access point to the Project site. The non-producing, abandoned mine shaft is now a small drift tunnel (approximately four feet high by five feet wide at the entrance) that extends approximately eight feet into the side of a hill near Quail Lake (Metzger 2007; Grant 2008a).
- An aboveground water storage tank, which has a capacity of 2,000 gallons, was observed in the southwestern portion of the Project site. This tank was rusted, but no odors, stains, or leaks were detected or observed.
- In an area in the southwestern portion of the Project site, discolored soil, gravel, and cleared vegetation were observed, and soil samples were collected. The results of the soil sampling, performed as part of the Phase I ESA, are discussed further below.
- In an area in the central portion of the Project site formerly used as a homestead, a water well and three 55-gallon metal drums were observed. One of the drums had a black tar-like substance leaking from it, and the ground surface beneath the drum was stained. No leaks, stains, or odors were noted for the other two drums. In November 2008, a Phase II ESA, a second level of investigation performed after a Phase I ESA, involving laboratory testing of shallow soil samples taken from the area of the 55-gallon drums, was performed (Converse Consultants 2008). The results of the Phase II ESA are discussed further below.
- A trough-like structure constructed out of cinder blocks and surrounded by chain-link fence was observed in the approximate center of the Project site. Plywood, a five-gallon bucket, and siding were present in the structure. The use of the structure was unknown during reconnaissance but may have been used for storage of hazardous materials. The Phase I ESA does not report evidence of a release, such as stained soil, leaks, or odors.
- An equipment yard was located at the northwest corner of the Project site to the east of 300th Street West. Diesel fuel aboveground storage tanks (ASTs), drums, and other containers of hazardous materials (e.g., pesticides, oil), tires, and heavy equipment were observed in the equipment yard. During initial reconnaissance, surface staining was observed in the bermed, concrete-floored (i.e., not ground surface) diesel fuel storage area. During subsequent reconnaissance as part of the Phase I ESA (August 2015), the bermed area was cleaned and no staining was observed.

Surrounding Uses

The Project site is generally surrounded by undeveloped or agricultural land, with scattered single-family residences located near the southeast portion of the site. In addition, the following physical structures are located adjacent to or within the immediate vicinity of the Project site:

- The West Branch (Quail Lake Canal) of the State Water Project's California Aqueduct generally bisects the Project site in a north-south direction; it empties into Quail Lake,

which is 1 of the State Water Project's (SWP's) 29 storage facilities. The East Branch of the California Aqueduct is located immediately north of the Project site's northern boundary. These features are maintained and operated by the California Department of Water Resources (DWR).

- The Quail Lake Reservoir, an unlined water storage facility, is located immediately to the south along the southwestern border of the Project site.
- The Oso Pumping Plant, part of the SWP's aqueduct system, is located proximate to the West Branch of the Aqueduct near the north-central portion of the Project site.
- The Quail Lake Skypark Airport, a single strip, private airstrip is located east of Quail Lake and south of the Project site. This airport is discussed in detail later in this section under "Aircraft Operations".
- The National Cement Plant (Cement Plant), a limestone mining operation, is located in Kern County adjacent to the Kern/Los Angeles County boundary; it is located approximately 1 mile north of the Project site on a leased area of approximately 2,500 acres, of which approximately 300 to 400 acres are actively utilized for Cement Plant operations. The location is shown on Exhibit 5.3-1.
- A north-south access road to the National Cement Plant bisects the Project site west of the California Aqueduct.
- State Route (SR) 138 bisects the southern portion of the Project site.

Sites Included on Agency Lists

A search of federal, State, local, tribal, and other databases was performed by Converse Consultants to identify sites with known or potential environmental issues related to hazardous materials or wastes within a one-mile radius of the Project site. An updated database search for a five-mile radius from the approximate center of the Project site was conducted in 2015. The complete list of databases searched and identified sites can be found in Appendix 5.3-B of this EIR. Listed sites include both permitted facilities whose operations use, produce, or transport hazardous materials and the locations of reported releases and/or cleanup operations (remediation). A single site can be listed in multiple databases. In particular, CEQA requires the Lead Agency to consult the lists compiled by the State of California, pursuant to Section 65962.5 of the *California Government Code*; this is also known as the "Cortese List" (*California Public Resources Code* [PRC], Section 21092.6). The Cortese List is one of the databases included in the database search.

The Project site itself was not identified on any hazardous materials database, including the Cortese List. Off-site locations of potential concern were reviewed, which were determined to include underground storage tank (UST) sites, hazardous waste generators, air emission sites, and case closed (i.e., remediation completed) sites; there is one spill/leak site—the National Cement Company. UST sites, hazardous waste generators, and air emission sites are listed to track permitted facilities, and the case closed listing is, as the name suggests, no longer an active cleanup location. Therefore, these types of listings do not represent an environmental hazard to the Project site. The remediation activities at the National Cement Plant are discussed below.

The National Cement Plant—also known as the Los Robles Cement Plant—is located in Kern County approximately one mile north of the Project site; its location is shown on Exhibit 5.3-1. Raw materials quarried at the site are the primary ingredients in Type II Portland Cement. During the 1990s, several locations were discovered where on-site cement manufacturing operations and waste handling practices had, over the years, impacted the quality of soil and groundwater on the Cement Plant site. The waste discharge sources of the Cement Plant site include solid waste disposal to on-site landfills located to the east of the plant structures; liquid waste storage in a belowground waste oil tank located at the southeastern portion of the plant; chemical storage at a drum storage area in the plant's maintenance area at the southeastern portion of the plant; diesel fuel transfer in an underground pipeline in the plant operating area; and cement kiln dust disposal in large piles located to the west of the plant structures. These source areas are commonly referred to as “the Industrial Landfill Area”, “the Maintenance Shop Area” (combines the Waste Oil Tank Area and the Drum Storage Area), “the Diesel Pipeline Area”, and “the Cement Kiln Dust Piles”, respectively. The Cement Plant is not a State or federal Superfund site.

Each source area has undergone specific site-characterization processes to identify the nature and extent of the unauthorized releases. In each source area, the known cause of the unauthorized release has been removed, as required by the regulatory agency with oversight authority. However, in some source areas, approved levels of contaminants remain in the soil. In addition, groundwater quality beneath all source areas was impacted to varying degrees. As a result, the California Regional Water Quality Control Board, Lahontan Region (Lahontan RWQCB) has issued waste discharge requirements (WDRs) and/or cleanup and abatement orders (CAOs) for each of these source areas that required installation of groundwater treatment systems; that prescribe groundwater monitoring in order to ascertain the rate at which pollutant levels are declining; and that allow for corrective action (where necessary) based on the monitoring results to clean up contaminated groundwater.

The groundwater contamination from the Maintenance Shop Area had migrated at shallow depths off the Cement Plant site and under parts of Tejon Ranch adjacent to the southeastern corner of the Cement Plant site. To address groundwater contamination under Cleanup and Abatement Orders 6-90-59A3 and 6-94-90A3, a long-term groundwater pump and treatment system went into operation in July 2003. Quarterly Groundwater Monitoring Reports are prepared for the Lahontan RWQCB (copies of which are available with the County of Los Angeles Department of Regional Planning) to demonstrate containment of the plume and to track the success level in remediating the contaminants of concern (primarily halogenated volatile organic compounds [HVOCs]). Groundwater that is treated to potable water standards is now intermittently discharged into the incised channel in approximately the same area where the groundwater previously discharged naturally. Since the implementation of this groundwater treatment system, HVOCs have not been detected in the surface waters of the incised channel. It is noted that, prior to implementation of the treatment system, the HVOCs were detected at low concentrations and for a short distance before they volatilized. Therefore, this source area poses no threat to the Project site because the limits of surface and groundwater contamination are distant from the Project site and its water supply sources.

The groundwater contamination from the Industrial Landfill Area, Diesel Pipeline Area, and Cement Kiln Dust Piles is contained in perched groundwater lying entirely within the Cement Plant site and is at a considerable distance from the Project site (approximately one mile). There is no connection between the affected groundwater and the groundwater sources available to the Project site.

The Lahontan RWQCB is also the lead oversight agency for ongoing and future environmental activities at the Cement Plant to monitor groundwater quality and required remediation activities. The Lahontan RWQCB works closely with the responsible parties (with the former and current owners of the Cement Plant that have active responsibilities, and the property owner who has backup liability) to ensure that all environmental concerns are adequately identified and addressed in a timely manner. The CAOs charge the responsible parties with long-term remediation and containment actions to clean up and abate the effects of unauthorized waste discharges. The WDRs establish the discharge limitations for the constituents of concern (COC) and outline the monitoring and reporting requirements.

In addition to the source areas discussed above, the Cement Plant site includes a former hazardous waste resource (energy) recovery facility that is located to the west of the plant structures; it was previously operated by Systech Environmental Corporation. The State of California Department of Toxic Substances Control (DTSC) is the lead regulatory agency, and DTSC issued a “closure certification” letter on March 29, 2007, for the Systech site (DTSC 2007). This certification indicates that DTSC considers the site fully remediated and the facility formally closed.

Additional information regarding the National Cement Plant is provided in Section 5.4, Water Quality; Section 5.11, Air Resources; and Section 5.18, Water Resources, respectively, of this EIR.

Historic Non-Producing Oil Wells (Dry Holes)

There are two historic, plugged and abandoned dry holes (non-producing wells), identified as Tejon Ranch Oil Company Well #1 and Kinsey #1, on the Project site. These are located in Section 14, Township 8N, Range 18W according to the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), and are shown on Exhibit 5.3-1, Locations of Phase I Findings. Based on testing and review of records, these oil wells were abandoned in accordance with applicable regulations. However, according to the DOGGR, the wells would need to be re-abandoned prior to grading in accordance with current DOGGR guidelines. In accordance with Section 3208 of the *California Public Resources Code*,

A well is properly abandoned when it has been shown, to the satisfaction of the supervisor, that all proper steps have been taken to isolate all oil-bearing or gas-bearing strata encountered in the well, and to protect underground or surface water suitable for irrigation or farm or domestic purposes from the infiltration or addition of any detrimental substance and to prevent subsequent damage to life, health, property, and other resources.

Asbestos-Containing Samples

Asbestos, a naturally occurring fibrous material, was used for years in many building materials for its fire-proofing and insulating properties. Any activity that involves cutting, grinding, or drilling during demolition could release friable (easily crumbled) asbestos fibers unless proper precautions are taken. Inhalation of airborne fibers is the primary mode of asbestos entry into the body, making friable materials the greatest potential health risk. During site reconnaissance conducted in 1999 by Converse Consultants for a previous Phase I ESA, materials potentially containing asbestos were observed on site. Four samples were taken to be analyzed for asbestos content from location number "6" shown on Exhibit 5.3-1. One sample was found on wood siding located in a small debris pile in an area that was formerly used as a homestead; the sample appeared to be cloth. The remaining samples were from a water trough and appeared to be tar or mastic. The cloth sample contained 70 to 80 percent asbestos. The other samples did not contain asbestos.

Soil Sampling

As noted above, during site reconnaissance in 1999, Converse Consultants observed discolored soil, gravel, and cleared vegetation in an area in the southwestern portion of the Project site, from an unknown origin, and performed limited Phase II testing. Four surface soil samples were collected from the immediate area and are noted as location number "7" on Exhibit 5.3-1. Three of the samples were analyzed using the following USEPA test methods:

- USEPA method 8015M for Total Petroleum Hydrocarbons (TPH) as gasoline.
- USEPA method 8015M for TPH as diesel and heavy oil range organics.
- USEPA method 8260 for Volatile Organic Compounds (VOCs).
- Title 22 Metals.

The background soil sample was not analyzed. No contaminants were detected above the method detection limits for TPH as gasoline, TPH as diesel/heavy oil range organics, or VOCs. Various metals were detected in the soil (e.g., arsenic, barium, lead); however, the concentrations were ten times below the Soluble Threshold Limit Concentrations and the Total Threshold Limit Concentrations, and were therefore determined to not represent a hazard.

As noted above, a former homestead area was observed near the central portion of the Project site and was noted that one of the drums appeared to have leaked a black, tar-like substance, though no odor (such as from petroleum hydrocarbons) emanated from the substance. Therefore, in November 2008, a Phase II ESA was performed in the area near the 55-gallon drums. For the Phase II ESA performed in the drum area, a total of four soil samples were collected at two depths: six inches and two feet below ground surface (bgs), from each of two soil boring locations (D1 and D2) in close proximity to the drums. The two samples collected at a depth of six inches bgs were analyzed for total petroleum hydrocarbons, carbon

chain (TPH-cc), and Title 22 metals;² the two samples collected at two feet bgs were analyzed for VOCs. In addition, all soil samples collected were field-screened for VOCs using a photoionization detector (PID).³ All PID readings were 0.0 parts per million (ppm). All soil samples collected as part of the Phase II ESA in the drum area were laboratory tested using the appropriate USEPA Method for the constituents being analyzed.

TPH-cc and VOCs were not detected in either soil sample submitted for these constituents. A total of eight metals were detected in one or both samples tested for Title 22 metals. Of these, arsenic was the only metal detected above its respective USEPA Region IX Screening Level (i.e., 0.39 milligram per kilogram [mg/kg] for arsenic) or the California Environmental Protection Agency's (CalEPA's) California Human Health Screening Levels (CHHSLs)(0.07 mg/kg for arsenic) for residential property. Specifically, the average arsenic concentration for the two samples collected for Title 22 metals analysis was 3.08 mg/kg (D1=3.75 mg/kg; D2=2.40 mg/kg). However, the USEPA and CalEPA screening levels and the average arsenic concentration measured in the drum area are below both the average background concentration of arsenic naturally occurring in California soil (3.5 mg/kg) and the DTSC's established arsenic cleanup level of 12 mg/kg for proposed school sites. Therefore, the Phase II ESA concludes that the arsenic levels detected in the soil around the drums are natural in origin, rather than anthropogenic (man-made), and do not represent an environmental concern (Converse Consultants 2008).

Pesticide Use

As detailed in Section 5.5, Land Resources, areas in the northeastern corner of the Project site and surrounding off-site areas have been and are currently used for agricultural purposes. During farming activities, pesticides are commonly used for pest control. A pesticide is any substance used to kill crop pests (such as insects, rodents, weeds, and fungi). Pesticides are inherently toxic and, when used improperly, can have adverse effects on human health and the environment. Pesticides exert adverse effects on living organisms, including non-target organisms such as non-pest plants and animals in or near a treated area. The four variables that determine the degree to which a non-target organism is affected include the chemical and physical properties of pesticides; their mode of application; their route of entry into the non-target organism; and their rate of absorption into the blood stream. The list of pesticides used on the site can be found in Table 5.3-1, Pesticides Used on the Centennial Project site.

The chemical and physical properties of a pesticide determine the potential toxic effects it can have on humans. The USEPA examines the toxicity, intended use, and environmental impact of every pesticide as part of the pesticide registration process. A pesticide listed for general use is considered to present little or no danger to either the applicator or the environment if it is used as directed. Based on the Proposition 65 Chemical List effective June 1, 2007, and as noted in Table 5.3-1, none of the pesticides known to be used on the Project site are regulated by Proposition 65, which regulates toxic chemical exposure for chemicals known to cause cancer, birth defects, or other reproductive harm. Therefore, all of

² Refers to the 16 metals listed in Title 22 of the *California Code of Regulations* ("Title 22 metals").

³ A photoionization detector is a portable vapor and gas detector that detects a variety of organic compounds.

these pesticides are listed for general use. Please refer to Section 5.4, Water Quality, for more information on pesticide use as it relates to water quality.

**TABLE 5.3-1
PESTICIDES USED ON THE CENTENNIAL PROJECT SITE^a**

| Insecticides ^b | Herbicides ^c |
|---|-------------------------|
| Malathion 8 Aquamul | Hasten |
| Lock-On | Raptor |
| | Buctril 4EC |
| ^a None of the pesticides listed in this table are regulated by Proposition 65 (OEHHA 2015). ^b Atkinson 2005. ^c Tejon Ranch Company 2008. | |

Quail Lake Skypark Airport

The Quail Lake Skypark Airport, a single-strip, private airport, is located east of Quail Lake and south of the Project site. The airport is 1 of 68 Special-Use Airports in California (Caltrans Aeronautics 2017), which is defined by the *California Code of Regulations* (CCR, specifically Title 21, Part 3527[w]) as “an airport not open to the general public, access to which is controlled by the owner in support of commercial activities, public service operations and/or personal use”. A total of six aircraft are based out of the Quail Lake Skypark Airport, including five single-engine aircraft and one multi-engine aircraft (GCR and FAA 2015). The Skypark facilities are limited to a single 40-foot-wide airstrip totaling 3,100 feet in length (GCR and FAA 2015). The total number of flights out of the Quail Lake Skypark Airport is not known; however, given the private airport status and a limited number of locally based craft, the total number of flights is expected to be minimal.

Valley Fever

Valley Fever is the common name (formally known as *Coccidioidomycosis*) for a fungal disease caused by inhalation of *Coccidioides immitis* spores that are carried in dust; it is found in parts of the southwestern United States, Mexico, and South America (LADPH 2017). In California, the highest incidence of Valley Fever occurs in the San Joaquin (Central) Valley, with over 75 percent of reported cases (CDPH 2016a). Valley Fever tends to occur in areas with dry dirt and desert-like weather conditions that can allow the fungus to grow. The fungus is found throughout Los Angeles County, with the highest rates in the San Fernando Valley and Antelope Valley (LADPH 2017).

The fungus can become airborne when soil that contains *C. immitis* spores is disturbed, either by natural or anthropogenic (man-made) means, including wind, farming, and construction. Valley Fever is diagnosed by a blood test, a chest x-ray, and other tests, and it can be treated with anti-fungal medications. Approximately 60 percent of people exposed to Valley Fever spores develop no symptoms. If symptoms develop, those individuals generally develop a mild respiratory illness with flu-like symptoms that can last a month or more. Rarely, individuals develop a severe illness such as pneumonia, meningitis, or dissemination when the fungus spreads to other parts of the body. At highest risk for exposure to Valley Fever

are farmers, construction workers, military personnel, archaeologists, and others who are likely to engage in activities that actively disturb soils in areas where Valley Fever may be present. Persons at the highest risk of developing severe Valley Fever include the very young (under 5 years old); older adults (over 60 years old); immunocompromised individuals and those with diabetes; pregnant women; and certain ethnic groups, including African-Americans, Latinos, and Filipinos (LADPH 2016; CDPH 2016b).

Between 2011 and 2015, the annual incidence of Valley Fever in Los Angeles County has ranged from 3.2 (2011) to 5.5 (2015) cases per 100,000 persons, or 316 cases and 557 cases, respectively. During this period, the Statewide incidence of Valley Fever varied from 5.9 (2014) to 13.9 (2011) cases per 100,000 persons, with the highest rate of cases reported in Kern County (CDPH 2016b). In California, the annual number of Valley Fever cases has been on the rise since 2000. It is believed that contributing factors may include changes in climate and rainfall patterns; construction activities that disturb soil; an increase in susceptible persons moving to endemic areas; and heightened awareness and diagnoses (Sondermeyer et. al. 2013). The Los Angeles County Department of Public Health (DPH) divides the County into Service Planning Areas (SPA) for the purposes of tracking and reporting trends of many diseases in Los Angeles County. The Antelope Valley is included within SPA1, which reported the highest incidence rate of reported cases of Valley Fever in Los Angeles County in 2014, at 26.2 cases per 100,000 people. The Centennial Project site is within the farthest western portion of SPA 1, and is adjacent to SPA 2 (San Fernando Valley), which had a lower incidence rate of 5.7 cases per 100,000 people (LADPH 2016).

Project Design Features

PDF 3-1 Prior to sale, lease, or rental of any residential structure or portion thereof on the Centennial Project site, the Project Applicant/Developer shall provide to each prospective purchaser or tenant a notice and statement of acknowledgment that shall be executed (i.e., read and signed) by the prospective purchaser, lessee, or tenant that the property within Centennial may present a temporary risk of exposure to Valley Fever spores during construction or other earth-moving activities. The form shall include strategies to reduce potential exposure to Valley Fever spores. The form and method of distribution of said notice and statement of acknowledgment shall be as approved by the County.

Threshold Criteria

The following significance threshold criteria are derived from the County of Los Angeles Environmental Checklist. The Project would result in a significant impact if it would:

Threshold 3-1 Create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials.

Threshold 3-2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment.

- Threshold 3-3** Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of sensitive land uses.
- Threshold 3-4** 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 it create a significant hazard to the public or the environment.
- Threshold 3-5** Result in a safety hazard for people residing or working in the project area for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport.
- Threshold 3-6** Result in a safety hazard for people residing or working in the project area for a project within the vicinity of a private airstrip.
- Threshold 3-7** Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Environmental Impacts

- Threshold 3-1** **Would the project create a significant hazard to the public or the environment through the routine transport, storage, production use, or disposal of hazardous materials?**
- Threshold 3-2** **Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment?**
- Threshold 3-3** **Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of sensitive land uses?**

On-Site Impacts

The following analysis addresses the potential for hazardous materials handling, pesticides, and Valley Fever to affect construction and/or operation of the Project. Section 5.11, Air Resources, includes the analysis of toxic air contaminant emissions from proposed stationary sources on the Project site.

Hazardous Materials Handling

Construction of the Project would involve the limited transport, storage, use, and/or disposal of common construction-related hazardous materials, including oil and grease, solvents, diesel fuel, and other chemicals in vehicles, trucks, and heavy equipment. These materials could be released into the environment in small amounts in the event of an accident. Construction of the Project would not require the use of acutely hazardous materials or substances. To prevent environmental hazards, the handling of hazardous materials used in construction equipment would have to be conducted in accordance with existing regulations.

These regulations include the transport of hazardous materials; on-site storage and use of hazardous materials; and procedures to implement in the event of a spill.

Implementation of the Project would result in the on-site handling of hazardous materials that are common in urban environments. This includes the development of residential land uses, at varying densities, along with commercial/retail, business park, education, utility, and institutional/civic land uses. The Business Park land use designation may include a hospital or other medical-related facilities and light industrial facilities; the Utility, Business Park (conditional), and Institutional/Civic (conditional) land use designations would have the option to construct a Materials Recycling Facility (MRF). These types of facilities are, again, typical of urban development and a myriad of specialized regulations are applicable to medical and industrial land uses, as appropriate. The proposed Business Park land use areas are situated entirely along the south side of SR-138, and the proposed public facilities land use areas where the MRF could be located are situated along the northeast boundary. These are “edge” areas of the Project site, rather than being intermixed with residential and other land uses. The materials that would be expected to be used on the Project site include commercial cleansers, solvents, and other janitorial or industrial-use materials; paints; landscape maintenance materials; pressurized gases; chlorine for pools; petroleum products at gas stations; and others. The handling, storage, and usage of these materials would be subject to applicable local, State, and/or federal regulations. While many such common materials are technically labeled “hazardous”, the presence of such materials is common in a mixed-use urban environment, and their use on the Project site would not pose an unusual or uncommon threat to the health or safety of the future population of the Project site. In addition, any hazardous materials used during construction would also be transported, used, stored, and disposed of according to any applicable local, State, and/or federal regulations.

Pesticides

Pesticides (insecticides, herbicides, and fungicides) are used for current agricultural operations on the Project site and in the pivot fields located east of 300th Street West. As indicated previously in Table 5.3-1, Pesticides Used on the Centennial Project Site, no pesticides are currently used that are subject to Proposition 65 restrictions. It is anticipated that use of pesticides would continue as long as these areas remain under agricultural use. It is also expected that these pesticides would continue to be applied according to federal, State, and local requirements and manufacturer recommendations, such as concentration and method of application. Agricultural production will continue in the eastern portion of the Project site while early phases of Project construction and occupation of the developed land uses occur incrementally over time. As such, the Project will introduce new land uses and residents onto the Project site while current pesticide use continues.

Federal, State, and local requirements and manufacturer recommendations are specific to each pesticide and are intended to ensure that acute overexposure or chronic exposure to these materials by either the farmers or adjacent resident populations does not occur. Therefore, there would be less than significant impacts during construction and operation of the Project.

Regarding future on-site pesticide use, such materials would be used in the maintenance of public and private landscaped areas on the Project site. Please refer to Section 5.4, Water

Quality, for a discussion of pesticide use as it relates to water quality as a result of Project operation. The small volume of on-site pesticide use for landscaped areas would also be applied in accordance with federal, State, and local requirements as well as manufacturer recommendations. Therefore, it is anticipated that future residents of the Project would not be exposed to types or concentrations of pesticides or frequency of application that would result in adverse health effects. Therefore, impacts would be less than significant.

Valley Fever

As discussed above, Valley Fever spores have the potential to be found in soils of the Antelope Valley. The site is currently a large expanse of undeveloped land, which experiences periodic high winds and supports widespread grazing and some agricultural activity. These conditions would result in (1) disturbance of existing soils on the site; (2) dust formation associated with this disturbance; and (3) a resultant risk of Valley Fever for residents in the Project area. However, grading required for site development would have a more intensive surface disturbance and, as such, would increase the risk of Valley Fever exposure if spores are present on the Project site and become airborne in fugitive dust.

The control of fugitive dust is the key to preventing exposure to Valley Fever spores during ground-disturbing construction activities. Even if Valley Fever spores are present on site and are disturbed during grading, if they do not become airborne they do not have the potential to be inhaled and result in illness. Section 5.11, Air Resources, describes fugitive dust control measures that would be required and implemented on the Project pursuant to the Antelope Valley Air Quality Management District's (AVAQMD's) Rule 403, Fugitive Dust, and South Coast Air Quality Management District's (SCAQMD's) Rule 403, Fugitive Dust. Both these rules require that dust be controlled so as not to be visible beyond the property line and are monitored and enforced by the AVAQMD and SCAQMD, depending on the location of construction activities (CARB 1976). AVAQMD Rule 403 and SCAQMD Rule 403 control measures include watering exposed surfaces and haul roads three times daily; replacing ground cover in disturbed areas quickly; covering stock piles with tarps; and limiting speeds on unpaved roads to 15 miles per hour. The rules include comprehensive sets of best available control measures that reduce fugitive dust generation and are required for all projects within the AVAQMD's and SCAQMD's jurisdictions. The Rule 403 measures would minimize the potential for exposure and inhalation of Valley Fever spores to the maximum extent feasible.

SCAQMD Rule 403 also requires that each large project identify a Dust-Control Supervisor that is employed by or contracted with the Property Owner/Developer and is on the site or within 30 minutes of the site during working hours; has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements; and has both completed the SCAQMD Fugitive Dust Control Class and been issued a valid Certificate of Completion for the class. Mitigation measure (MM) 3-1 ensures that the requirement for a trained Dust-Control Supervisor is implemented during all phases of Project construction.

The Project's construction workers would be at the highest risk for Valley Fever exposure, and there would be an increased risk to the existing population in the immediate Project area. However, because of the large size of the Project site, the potential generation of dust

from grading and construction would primarily be localized within the site and would not affect neighboring populations due to distance. This is because fugitive dust must be entrained in wind and, just like sediment in water, particles in the wind drop out during transport. Therefore, due to the great distance between the majority of on-site grading areas and the existing residences in the area, any fugitive dust generated after implementation of dust-control measures (MM 3-1) would settle out of the wind transporting the dust before they could reach off-site areas. Rule 403 requirements stipulate that dust be controlled so as not to be visible beyond the property line. Therefore, the majority of dust generated during grading would remain on the Project site itself and, as mentioned above, would be most likely to affect construction workers. To help prevent construction workers from contracting Valley Fever on the Project site, MM 3-2 describes measures such as requiring that respirators or masks be worn; and completing other means of reducing the spread and/or inhalation of Valley Fever spores, if present.

While construction workers would be at highest risk, on-site populations would also be at risk for exposure during interim phases of development, depending on the proximity to on-site construction activities. As described in PDF 3-1 and ensured by MM 3-3, all residents would be provided with a notice disclosing this potential risk and describing strategies to avoid potential exposure to Valley Fever spores during construction or other earth-moving activities prior to sale, lease, or rental of any property.

Therefore, with implementation of PDF 3-1 and MMs 3-1 through MM 3-3, the potential for exposure to Valley Fever spores from construction of the Project would be less than significant.

At the completion of construction activities, risks of exposure to Valley Fever would be reduced for those living on the Project site and adjacent to the Project site due to the replacement of undeveloped land with urban development, irrigated landscaping, and paved areas, that would have reduced risks of fugitive dust generation and the associated risk of Valley Fever. Valley Fever spores have a reduced chance of becoming airborne in areas that are irrigated, vegetated with groundcover, covered with hardscapes or pavement, or urbanized with relatively little undisturbed soil (KCPHSD 2015). Therefore, once the Project is completed and the landscaping is established, residents and visitors on the Project site would not have an increased risk of exposure to Valley Fever when compared to the existing conditions. This would be no different than any other development in the Los Angeles County region adjacent to undeveloped land, and there would be a less than significant impact.

Off-Site Impacts

Proposed off-site features, including intersections with SR-138, utility connections, water wells, and California Aqueduct crossings, would not involve habitable structures, recreational areas, or other land uses that would introduce a new population into an area that could potentially be exposed to environmental hazards, such as hazardous materials, pesticides and Valley Fever. Grading and other construction activities would disturb soils that could result in exposure to Valley Fever, as discussed above for on-site Project development. As such, implementation of off-site Project features would be subject the same requirements (i.e., MM 3-1 and MM 3-2) as on-site development. With implementation of these measures, there would be less than significant impacts.

Impact Summary: There would be less than significant impacts related to environmental hazards including hazardous materials handling, pesticides, and Valley Fever with implementation of PDF 3-1 and MMs 3-1 through 3-3.

In accordance PDF 3-1 and ensured by MM 3-3, all residents would be provided with a notice disclosing this potential risk and describing strategies to avoid potential exposure to Valley Fever spores during construction or other earth-moving activities prior to sale, lease, or rental of any property. With implementation of AVAQMD Rule 403 and SCAQMD Rule 403 fugitive dust control measures and additional measures to minimize Valley Fever exposure during construction (MM 3-1 and MM 3-2), the risk of exposure by construction workers and nearby residents during construction would be reduced to levels less than significant.

Threshold 3-4 **Would the project 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 it create a significant hazard to the public or the environment?**

On-Site Impacts

As discussed previously, Phase I ESAs have been prepared, and updated where applicable, to collectively encompass the entire Project site. Phase I ESAs include a database review of properties having potential environmental concerns in the vicinity of the Project site (i.e., “listed sites”); review of records, aerial photographs, and other documentation that illustrate the history of site use; and site reconnaissance. The Phase I ESAs determine that listed sites and/or current or historic land uses in the Project vicinity would be unlikely to adversely affect site development and the future population on the site. Specific on- and off-site land uses discussed in the Phase I ESAs are described below.

Historic Dry Wells

Two historic dry (non-producing) oil wells are present on the Project site generally north of Quail Lake (Exhibit 5.3-1). Based on testing and review of records from the DOGGR, the oil well and drill sites were abandoned with appropriate notice provided to DOGGR and no seepage or hazardous conditions are present. However, the DOGGR regulates development over abandoned oil wells. As part of the Project, the wells would need to be re-abandoned according to current DOGGR guidelines as required by MM 3-4. There would be less than significant impacts related to the presence of re-abandoned historic dry wells with implementation of mitigation.

Abandoned Mine Shaft

A small (approximately four-foot-high) tunnel was dug in the side of a hill as an attempted gold mine located near the southern access point to the Project site (Exhibit 5.3-1). However, available information indicates that no gold or other mineral resources were discovered and the mine shaft was abandoned (Converse Consultants 2015b). Therefore, the mine does not represent a potential health hazard related to contaminated runoff or other environmentally

adverse conditions that can result from mining operations. However, the mine may be attractive to children and other new residents, and the current stability of the small tunnel is unknown. To eliminate potential risks from the abandoned mine shaft and to prevent any future accessibility into the tunnel, prior to approval of construction permits the tunnel shall be permanently closed in accordance with applicable regulations, as directed by the California Department of Conservation Office of Mine Reclamation, as described in MM 3-5. There would be less than significant impacts with implementation of MM 3-5.

Homestead Area

As part of the Project, the drums and the limited areas of identified asbestos and/or other debris in the area of the former homestead site would be removed in accordance with all applicable regulatory standards, which are determined based on the quantity, type, and media (i.e., soil, groundwater) of the identified contamination as encountered at the time of site development. If hazardous materials are encountered in the homestead area or anywhere else on the Project site, activities in the immediate area shall be halted until consultation with the appropriate agencies (e.g., DTSC, State Water Resources Control Board, Los Angeles County Fire Department [LACFD]) is performed and the method of removal is determined (MM 3-6).

In addition, the former water well would be backfilled and compacted during grading operations in accordance with California Department of Water Resources Water Wells Standards regulations, including Chapter II (Standards), Part III (Destruction of Wells), Section 23 (Requirements for Destroying Wells), which prescribe the appropriate steps for destroying inactive water wells, including, but not limited to, preliminary work, filling and sealing conditions, placement of fill or sealing materials, the requirements for sealing and fill materials, additional requirements for wells in urban areas, and temporary cover requirements. Remediation and/or removal of identified hazardous materials and contaminated soils would be completed in compliance with applicable governmental regulations and agency requirements during Project construction. Therefore, there would be no impacts to proposed future land uses on the Project site because the limited and common type of contaminated materials that would likely be encountered on the site would be fully resolved during site development activities and prior to occupancy of future land uses. There would be a less than significant impact.

National Cement Plant

As discussed in detail previously, the National Cement Plant is located in Kern County approximately one mile north of the Project site (Exhibit 5.3-1), and groundwater contamination had resulted from historic activities of this facility. Accordingly, there has been agency oversight by DTSC and the Lahanton RWQCB (lead oversight agency) related to continuing remediation efforts. As described fully above in the Environmental Setting section, the contaminant source areas pose no threat to the Project site and its water supply sources due to distance; lack of connectivity between the shallow groundwater impacted by historic releases and Tejon Ranch water supplies; and the results of ongoing groundwater remediation. Finally, as part of the Water Quality Technical Report prepared for the Project, the National Cement Plant was reported to have been in compliance with regulatory permitting and related requirements (Geosyntec 2016). Further, in March 2007, the DTSC

issued a closure letter for the Systech site, which indicated to the Tejon Ranch Company that the Systech site had been fully remediated (DTSC 2007). Therefore, this land use would result in no impacts to the Project site.

The Cement Plant is also engaged in an alternative-fuel source project (the National Cement Plant Tire-Derived Fuel project). Air emissions from operations at the National Cement Plant are discussed in Section 5.11, Air Resources.

In addition to considering Cement Plant operations on the National Cement Plant property site, the vehicular access from SR-138 to the Cement Plant is germane to the Project. The southern half of the existing National Cement Plant Road within the Project site would be realigned to the west of its current location. As in the existing condition, the realigned roadway would be a private-use facility with clearly marked signs prohibiting public access and would not be part of the Project's proposed circulation system. The Project would incorporate the current bridge crossing over the West Branch of the Aqueduct (currently used for cement trucks) as one of the primary connectors between the east and west sides of the Project site. Therefore, potential direct conflicts with existing traffic on the National Cement Plant Road and future vehicular and other traffic (pedestrian, bicyclists) introduced by the Project would be eliminated because the two streams of traffic would be fully separated.

The National Cement Plant Road, as a dedicated drive for the National Cement Plant facility only, would carry less traffic than the Project roadways. Additionally, the operations of the National Cement Plant do not involve the transport of materials classified as hazardous under State and federal regulations (Grant 2008b). Materials routinely transported to and from the National Cement Plant facility are comprised of inert, non-hazardous materials such as quarried limestone and cement. Finally, urban land uses have been developed in proximity to heavily traveled roadways that carry much higher volumes of traffic than would be expected on the National Cement Plant Road. Therefore, for the reasons described above, proposed land uses in varying proximity to the National Cement Plant Road would not be adversely affected by continuing operations on this roadway.

In summary, there is no evidence that either historic or regular operations at the National Cement Plant or on the realigned National Cement Plant Road have or would adversely impact the Project.

Off-Site Impacts

Off-site Project features (intersections with SR-138, utility connections, water wells, and California Aqueduct crossings) are not, by themselves, population-generating uses and also would not create hazards or use hazardous materials. Only potable and recycled water would cross the Aqueduct at one or more of the three crossings. Wastewater would be collected and treated in two treatment plants; there would be one treatment plant located on each side of the Aqueduct, and wastewater would therefore not cross the Aqueduct. Also, as part of the 2015 Phase I ESA, Converse conducted site reconnaissance of the off-site Project features. The water bank area is a parcel of land measuring approximately 2,640 feet by 2,640 feet (0.5 mile by 0.5 mile). Various dirt/concrete/asphalt berms are located within the boundaries of the water bank, and no surface staining was observed. Converse drove along

the roads that form the Property boundaries: SR-138, 300th Street West, and 290th Street West. These roads were all asphalt paved and were generally in good condition; easements along the highways/roads were unpaved. During the second reconnaissance conducted for the Phase I ESA, Converse re-inspected the general areas along the California Aqueduct located on Tejon Ranch property through the chain-link fencing that surrounds the structure. No environmental concerns were observed during the reconnaissance of off-site Project features. Therefore, these features would not result in impacts related to a new population's proximity to listed properties and/or historic and current land uses of concern.

As discussed in Section 4.0, Project Description, the California Department of Transportation (Caltrans) is preparing environmental clearance documents in support of improvements to the SR-138 in the Project area that including the area proximate to the Project site shown as "study area" on Exhibit 4-9, Centennial Project – Caltrans Study Area. This documentation would include a Caltrans-compliant Phase I ESA and soil testing, as performed for all Caltrans projects. As such, it is assumed the environmental clearance document prepared under Caltrans' direction will identify, assess, and, if needed, remediate any contaminants found in the Caltrans right-of-way, which includes the off-site portions of the five intersections with SR-138.

Impact Summary: The Phase I and Phase II ESAs conducted for the Project conclude that Project implementation would not result in significant impacts related to exposure to hazardous materials from historic and current land uses through compliance with requirements for handling hazardous materials, implementation of MM 3-6 related to encountering unanticipated hazardous materials during construction; MM 3-4 related to documentation of re-abandonment of the historic oil wells on site; and MM 3-5 related to mine closure.

Threshold 3-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Threshold 3-6 For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

On-Site Impacts

As described above, the Quail Lake Skypark Airport, located east of Quail Lake and south of the Project site, is a small, single-strip, general aviation (i.e., non-jet) private airport. As Quail Lake Skypark has one runway and no Federal Aviation Administration (FAA) control tower, no operational data is recorded. However, because the Quail Lake Skypark is privately owned and only has six locally based aircraft, the number and frequency of flights is expected to be minimal. Any additional flights or activity at the airport would be subject to the approval of the airport owner because the facility is not available to the general public.

Caltrans Division of Aeronautics reports the facility operates under a Special-Use Airport Permit that was issued in November 2002. Airports that are permitted as "Special-Use" are

not open to the general public and access to the airport is at the discretion of the owner. While the permit does not specify a maximum number of daily flights, the Skypark is permitted to operate during daylight hours only (Miles 2016).

Also, the permit requires application for an Amended/Corrected Airport Permit prior to making physical or operational changes at the airport. Caltrans' Aviation Safety Officer for Los Angeles and Riverside Counties was consulted regarding the potential for expansion of activities at the Quail Lake Skypark; based on permit conditions and limited airport infrastructure, it was concluded to be "very unlikely that there would be any significant increase in flight activity in the future" (Miles 2016). Therefore, implementation of the Project would not increase or otherwise affect air traffic at Quail Lake Skypark such that a hazard would result. As discussed in Section 4.0, Project Description, the California Department of Transportation (Caltrans) is preparing environmental clearance documents in support of improvements to the SR-138 in the Project area. The Quail Lake Skypark would be permanently closed in the event the SR-138 improvements are implemented by Caltrans. As such, the potential for exposure of persons to hazards associated with aircraft operations at Quail Lake Skypark Airport would be less than significant.

Off-Site Impacts

Proposed off-site Project features (intersections with SR-138, utility connections, water wells, and California Aqueduct crossings) are not, by themselves, population-generating uses. Therefore, these features would not result in impacts related to exposure of a new population to hazards from aircraft operations.

Impact Summary: The potential for exposure of persons to hazards associated with aircraft operations at Quail Lake Skypark Airport would be less than significant.

Threshold 3-7 **Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

On-Site Impacts

Section 5.10, Traffic, Access and Circulation, includes an analysis of whether traffic generated by the Project and the proposed circulation plan would result in inadequate emergency access for emergency vehicles as well as residents and employees in the area. The traffic analysis determined that the Project would have adequate intersection levels of service (LOS) for all points of access into the Project site and for the internal circulation system.

Additionally, the Project includes locations for up to four new fire stations and a new Sheriff's substation; these amenities would contribute to improved emergency and evacuation response in northern Los Angeles County. Please refer to Section 5.16, Fire and Law Enforcement Services, for a complete discussion of these proposed facilities. In 2012, the *Los Angeles County Operational Area Emergency Response Plan* (OAERP) was adopted by the County Board of Supervisors. The objective of the OAERP is to integrate County resources to be an efficient organization capable of responding to emergencies using the National Incident Management System (NIMS), the California Standardized Emergency Management

System (SEMS), mutual aid, and other appropriate response procedures. The OAERP is an extension of the State of California Emergency Plan (LACOEM 2012).

To ensure that future Centennial residents would be informed regarding evacuation routes and other aspects of an emergency response specific to the Project site, the Project Applicant has had an Emergency Response Plan prepared for the Project, which will be updated with each new tract map in accordance with MM 3-7 and be reviewed and approved by the County of Los Angeles Department of Regional Planning, who would facilitate review by the LACFD and the County of Los Angeles Sheriff's Department. This review would ensure that the Project's Emergency Response Plan does not conflict with or otherwise impair the OAERP, and provides a comprehensive emergency response planning effort. The Emergency Response Plan would be distributed to each property tenant or purchaser in accordance with MM 3-7. Therefore, Project development would not impair implementation of or physically interfere with emergency response or evacuation activities of the LACFD, the County of Los Angeles Sheriff's Department, or any other agency mobilized during an emergency response. There would be a less than significant impact after mitigation.

The Project roadways would be built to County of Los Angeles standards and would be designed to ensure that proper access for emergency ingress and egress would be accomplished for evacuation as well as for emergency vehicle access. The Project includes an extensive backbone vehicular circulation system and would provide four points of access to the site via SR-138 (excluding the re-aligned National Cement Plant Road). The proposed bridge over the West Branch of the Aqueduct would be constructed from reinforced concrete or steel girders with concrete or asphalt road decks and would be constructed in compliance with all applicable seismic and engineering codes and standards. In the unlikely event (either man-made or natural) of the failure of one or both bridges over the California Aqueduct, there would be opportunities for emergency ingress and egress to and from both sides of the Project site (i.e., east and west of the Aqueduct) via the Project's extensive roadway system and via the re-aligned National Cement Plant Road (refer to Exhibit 4-8, Centennial Project – Circulation Plan). Consequently, ingress and egress would be maintained throughout the Project site via multiple access points with many possible routes of travel in the event of an emergency. No significant access-related impacts associated with emergency ingress and egress would be expected to occur as a result of the Project.

As discussed above under Relevant Plans, Policies, and Regulations, the AVAP goal and policies related to hazards are limited to emergency response. The Project would be consistent with those policies that are under the purview of individual, private projects and consistent with the intent of those policies under the purview of the County. As discussed, Project implementation would involve continued preparation of an Emergency Response Plan, which would be distributed to each property tenant or purchaser (Policies PS 6.1 through PS 6.4). The Emergency Response Plan, which would be updated as each new tract map is prepared, would be reviewed by the County Department of Regional Planning, the LACFD, and the County Sheriff's Department. As discussed further in Section 4.0, Project Description, a temporary, storefront, Sheriff's station would be developed and fully operational prior to approval of the first certificate of occupancy and would be closed subsequent to development of the permanent on-site Sheriff's station. Similarly, the Project includes conceptual site locations for up to four new fire stations; one fire station is proposed

in Village 1 and would be operational no later than the time the 1,000th dwelling unit is built (MM 16-3). The LACFCD would approve the final fire station site locations, and the Project Applicant/Developer would construct and equip the fire stations. These facilities would provide emergency response and evacuation services to the residents, employees, and visitors on the site (Policy PS 6.5). The Emergency Response Plan also supports the County's intent to development a master emergency plan that encompasses every Antelope Valley community (Policy PS 6.6).

Therefore, with the implementation of MM 3-7, the Project would not impair implementation of or physically interfere with emergency response or evacuation activities of the LACFD, the County of Los Angeles Sheriff's Department, or any other agency mobilized during an emergency response.

Off-Site Impacts

The off-site Project features (intersections with SR-138, utility connections, water wells, and California Aqueduct crossings) would not adversely affect traffic circulation or otherwise affect emergency response or evacuation. The proposed backbone circulation system, including connections with SR-138, would be constructed prior to occupancy of developed land uses. The five SR-138 intersections would include acceleration/deceleration lanes to ensure safe and efficient ingress and egress from the site on the highway, including during emergencies. During construction of the SR-138 intersections in the public right-of-way, the Project Applicant/Developer would be required to prepare and implement a Traffic Control Plan in compliance with California MUTCD standards, which would be ensured with implementation of MM 3-8. After mitigation, there would be a less than significant impact.

Impact Summary: The anticipated traffic generation was determined not to adversely affect emergency access or evacuation routes. Also, the Project includes conceptual locations for up to four new fire stations that will improve emergency and evacuation response for the Project site and for northern Los Angeles County. Further, the Project Applicant/Developer would continually update the Emergency Response Plan prepared for the Project in accordance with MM 3-7. During construction in the Caltrans right-of-way for new Project intersections, the Project Applicant/Developer would be required to prepare a California MUTCD-compliant Traffic Control Plan for County and Caltrans approval, and ensured with implementation of MM 3-8, reducing the potential for impacts to emergency access and circulation during activities in the roadway. Therefore, after mitigation, the Project would result in less than significant impacts related to impairment or interference with the emergency response or evacuation activities of the LACFD, the County of Los Angeles Sheriff's Department, or any other agency mobilized during an emergency response.

Mitigation Measures

MM 3-1 The Project Applicant/Developer shall employ a Dust-Control Supervisor who will be on the site within 30 minutes of the start of work taking place each morning; will have the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Antelope Valley Air Quality Management District (AVAQMD) Rule 403 and South Coast Air Quality Management District (SCAQMD) Rule 403 requirements; and will have completed the SCAQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class. Contact information for the Project's Dust Control Supervisor shall be posted on-site to ensure that the public has a means of providing complaints regarding fugitive dust. The Dust Control Supervisor shall be responsible for tracking complaints, conducting corrective action, as necessary, and for maintaining an up-to-date log of complaints and responses for periodic County review.

MM 3-2 To aid in the prevention of Valley Fever among construction crews on the Project site, the following measures shall be implemented by the Construction Contractor during all construction activities:

- Hire crews from Los Angeles and/or Kern County populations, or other areas where Valley Fever is endemic, where possible, since it is more likely that they have been previously exposed to the fungus and are therefore immune.
- Prior to Project construction initiation, and for any personnel additions after initial Project construction initiation, the following California Department of Public Health (CDPH) materials on Valley Fever (or the most updated materials applicable to Los Angeles County) shall be distributed to worksite supervisors:
 - CDPH pamphlet entitled "Preventing Work-Related Coccidioidomycosis (Valley Fever)" available at: <http://www.cdph.ca.gov/programs/hesis/Documents/CocciFact.pdf>. (CDPH 2013a)
- Prior to Project construction initiation, and for any personnel additions after initial Project construction initiation, the following CDPH materials on Valley Fever (or the most updated materials applicable to Los Angeles County) shall be distributed to construction workers:
 - CDPH pamphlet entitled "Valley Fever Fact Sheet" available at: <http://www.cdph.ca.gov/HealthInfo/discond/Documents/VFGeneral.pdf>. (CDPH 2013b)
 - CDPH pamphlet entitled "Hoja de datos de la Fiebre del Valle (Valley Fever Fact Sheet in Spanish)" available at:

<http://www.cdph.ca.gov/HealthInfo/discond/Documents/HojaDeDatosDeLaFiebreDelValle.pdf> (CDPH 2013c).

- CDPH pamphlet entitled “Fact Sheet Valley Fever (Valley Fever Fact Sheet in Tagalog),” available at: <http://www.cdph.ca.gov/HealthInfo/discond/Documents/TagalogGeneralValleyFeverFactSheet.pdf> (CDPH 2013d).
- Require crews to use masks or respirators that are adequate to restrict inhalation of particulates during Project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health regulations.
- During rough grading and construction, the access way into the Project site from adjoining paved roadways shall be paved or treated with environmentally safe dust-control agents.

MM 3-3 The Project Applicant/Developer shall provide to each prospective property purchaser or tenant a notice and statement of acknowledgment that shall be executed (i.e., read and signed) by the prospective purchaser, lessee, or tenant that the property within Centennial may present a risk of exposure to Valley Fever spores during construction or other earth-moving activities. The form shall include strategies to reduce potential exposure to Valley Fever spores. The form and method of distribution of said notice and statement of acknowledgment shall be as approved by the County.

MM 3-4 The Project Applicant/Developer shall coordinate with the California Department of Conservation, Division of Oil, Gas and Geological Resources (DOGGR) to facilitate re-abandonment of the two on-site historic dry oil wells in accordance with current DOGGR specifications. The Project Applicant/Developer shall present documentation that it has complied with the DOGGR requirements for re-abandonment of the two on-site wells.

MM 3-5 The Project Applicant/Developer shall provide documentation to the County that the abandoned mine shaft is permanently closed in accordance with applicable regulations, as directed by the California Department of Conservation Office of Mine Reclamation, to prevent future access and potential ground instability issues.

MM 3-6 If unanticipated hazardous materials or waste is encountered during construction, all work in the immediate vicinity of the suspect hazardous material shall be halted and the applicable oversight agency(ies) shall be notified. The applicable agency(ies) are determined based on the type and extent of the material encountered, and may include the California Department of Toxic Substances Control (DTSC), the State Water Quality Control Board, and/or local agencies, such as the County of Los Angeles Fire Department. The Project Applicant/Developer shall coordinate with appropriate agency(ies) on the appropriate means to address the suspect hazardous material/waste. All environmental investigation and/or

remediation shall be conducted under a Workplan approved by the primary oversight agency(ies) and construction in the affected area shall not proceed until clearance has been issued by the applicable agency(ies).

MM 3-7 The Project Applicant/Developer shall prepare an Emergency Response Plan for the Project, which shall be updated as needed for each Tentative Map, and shall be submitted to the County for review and approval. The Project Applicant/Developer shall be responsible for distributing the current Emergency Response Plan to each purchaser or tenant of each property within Centennial, and shall distribute the Plan to all landowners through the Transportation Management Agency (TMA).

MM 3-8 The Project Applicant/Developer shall prepare a Traffic Control Plan in accordance with the California Manual on Uniform Traffic Control Devices (MUTCD). The Traffic Control Plan shall be reviewed and approved by the California Department of Transportation (Caltrans), and all construction activities in the public right-of-way shall comply with the approved Traffic Control Plan to the satisfaction of Caltrans. Documentation of Caltrans approval shall be provided to the County for any Tentative Map involving construction within State Route 138 right-of-way.

Level of Significance after Mitigation

Impacts related to hazards and hazardous materials would be less than significant with implementation of the MM 3-1 through MM 3-8 described above.

5.3.3 FIRE SAFETY

This section analyzes wildland fire hazards that could occur in the vicinity of the Project site. Analysis of fire protection service can be found in Section 5.16 (Fire and Law Enforcement Services). The impacts of the proposed development on the Project site are analyzed at a project-level of detail; direct and indirect impacts are addressed for each threshold criterion for both the on-site and off-site Project features. Growth-inducing impacts and cumulative impacts are described in Sections 6.0 and 7.0, respectively.

Relevant Plans, Policies, and Regulations

Federal

No federal plans or policies have been identified that relate to fire safety.

State

California Fire Plan

In a collaborative effort between the State Board of Forestry and the California Department of Forestry and Fire Protection (CAL FIRE), the *2010 Strategic Fire Plan for California* (Fire Plan), last revised in April 2016, was prepared to address the protection of lives and property from California wildfires while recognizing that wildfires are a natural phenomenon and can

have beneficial effects, particularly on ecosystem health. The Fire Plan is a comprehensive update to the *California Fire Plan* prepared in 1996, the first such collaborative statewide wildfire planning document. The overarching vision of the Fire Plan is to have “A natural environmental that is more resilient and man-made assets which are more resistant to the occurrence and effects of wildland fire through local, state, federal and private partnerships” (CAL FIRE 2016). This vision is supported by seven goals and related objectives, and the application of adaptive management as a fundamental strategy of Fire Plan implementation. The purpose of applying adaptive management is to allow for changing conditions, and to better meet environmental, social and economic goals; increase scientific knowledge regarding wildfires; and foster understanding among stakeholders over time. The following are the Fire Plan’s seven goals to support the vision of “A natural environmental that is more resilient and man-made assets which [sic] are more resistant to the occurrence and effects of wildland fire through local, state, federal and private partnerships” (CAL FIRE 2016). The Fire Plan states that each sequential goal is meant to build upon the accomplishment of the previous goal.

1. Identify and evaluate wildland fire hazards and recognize life, property and natural resources assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the sharing of all analyses and data collection across all ownerships for consistency in type and kind.
2. Articulate and promote the concept of land use planning as it relates to fire risk and individual landowner objectives and responsibilities.
3. Support and participate in the collaborative development and implementation of wildland fire protection plans and other local, County, and regional plans that address fire protection and landowner objectives.
4. Increase awareness, knowledge and actions implemented by individuals and communities to reduce human loss and property damage from wildland fires, such as defensible space and other fuel reduction activities, fire prevention, and fire safe building standards.
5. Develop a method to integrate fire and fuels management practices with landowner priorities and multiple jurisdictional efforts within local, State, and federal responsibility areas.
6. Determine the level of fire suppression resources necessary to protect the values and assets and risk identified during planning processes.
7. Address post-fire responsibilities for natural resource recovery, including watershed protection, reforestation and ecosystem restoration (CAL FIRE 2016).

California Building Code

Chapter 7A, “Materials and Construction Methods for Exterior Wildfire Exposure”, of the 2016 California Building Code (CBC), adopted and amended in Title 26 “Building Code” of the Los Angeles County Code, applies to new and existing buildings located in any Fire Hazard Severity Zone or Wildland-Urban Interface (WUI) Fire Area designated by the LACSD.

These codes establish minimum standards for materials, systems, and/or assemblies that can provide a reasonable level of exterior wildfire exposure protection for buildings through construction with ignition-resistant materials and design to resist the intrusion of flame or burning embers projected by a vegetation fire (i.e., wildfire exposure).

County

Los Angeles County General Plan and Antelope Valley Area Plan

The *Los Angeles County General Plan* and the *Antelope Valley Area Plan* (AVAP), part of the County General Plan, includes goals and policies that address wildfire issues in the unincorporated County. The AVAP goal and policies applicable to the analysis of fire safety with Project implementation are listed below. Section 5.8, Land Use, Entitlements, and Planning, presents a more in-depth analysis of the Project's consistency with relevant plans, policies, and regulations.

Goal PS 1: Protection of the public through fire hazard planning and mitigation.

Policy PS 1.1: Limit the amount of potential master-planned development in Very High Fire Hazard Severity Zones through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.

Policy PS 1.2: Require that all new developments provide sufficient access for emergency vehicles and sufficient evacuation routes for residents and animals.

Policy PS 1.3: Promote fire prevention measures, such as brush clearance and the creation of defensible space, to reduce fire protection costs.

Policy PS 1.4: Provide strict enforcement of the Fire Code and all Fire Department policies and regulations.

Los Angeles County Fire Department

The Los Angeles County Fire Department (LACFD) provides fire services to the Project area. The Regional Fire Prevention Unit Section II serves the areas of Los Angeles County designated as a Fire Hazard Severity Zone in a State Responsibility Area, including the Antelope Valley area. This office inspects and approves all single-family dwelling units located in wildland areas. Because the Project site is located in the area designated as a Fire Hazard Severity Zone, the area is considered to have a high fire potential.

Fuel Modification Planning

The Fire Hazard Severity Zones in State Responsibility Areas are defined in Appendix M of the County of Los Angeles Code's Title 32 (Fire Code). Title 32 is intended to provide minimum standards to safeguard the public's safety and welfare, and Section 4908.1 describes requirements for fuel modification plans in Fire Hazard Severity Zones. The section states the following:

A fuel modification plan shall be submitted and have preliminary approval prior to any subdivision of land and have final approval prior to the approval

of a permit for any permanent tent, yurt, trailer, or other structure used for habitation, to the approval of a permit for any structure that changes occupancy classification from a non R to R type occupancy, and new construction, remodeling, modification, or reconstruction of: (1) any enclosed structure over 120 square feet; (2) any structure enclosed on three sides or more and greater than or equal to 200 square feet; and (3) any structure greater than or equal to 400 square feet, where such remodeling, modification, or reconstruction increases the square footage of the existing structure or footprint by 50 percent or more within any 12-month period, and where the tent, yurt, trailer, structure, or subdivision is located within areas designated as a Fire Hazard Severity Zone within the State Responsibility Areas or Very High Hazard Severity Zone within the Local Responsibility areas, applicable Hazard Zone maps, and Appendix M of this code at the time of application. Every fuel modification plan shall be reviewed by the forestry division of the fire department for defensible space, reasonable fire safety, and compliance with Sections 325.2.1, 325.2.2, 325.10, and 503.2.1 of this code, the Fire Department's Fuel Modification Guidelines, and California Code of Regulations Title 14, Division 1.5, Chapter 7, subchapter 2. After such final plan has been approved by the forestry division of the fire department, a signed and notarized copy of the provided Covenant and Agreement and or previously reviewed and approved association CC&R's [Covenants, Conditions, and Restrictions] that include the necessary fuel modification information shall be recorded at the registrar-recorder/County clerk's office and a copy given to the Fuel Modification Unit prior to site inspection and release. The fuel modification inspection ensures compliance with applicable requirements of this code, the Building Code, Section 701A.5 (Vegetation management compliance), and the Residential Code, Section R327.1.5 (Vegetation management compliance). An on-site inspection must be conducted by the forestry division of the fire department and a final release issued by the forestry division prior to a certificate of occupancy being granted by the building code official.

The County Fire Department's Forestry Division (Forestry Division) provides several fire prevention services, including vegetation management services and fuel modification planning. The purpose of fuel modification is to provide defensible space between structures and wildlands. The Fuel Modification Plan Guidelines, last revised in 2011, were created by the Forestry Division to help the public understand the process of fuel modification plan review and approval as well as set forth landscape design criteria for applicable properties located in Fire Hazard Severity Zones (LACFD 2015).

A fuel modification plan consists of three sequential zones where combustible native or ornamental vegetation has been modified and/or partially or totally replaced with drought-tolerant, low-fuel-volume plant species. Fuel modification zones are designed to protect homes from wildfire by limiting and reducing the amount of fuel available for a wildfire. The reduction in available fuel affects the flame lengths and amount of heat produced by the fire and eliminates landscape areas where embers can ignite vegetation. Each zone should be designed so that the amount of fuel is reduced and the moisture in the plants is increased the

closer to a structure. The details of fuel modification plans vary in complexity and reflect the fire history; the amount and type of vegetation; the arrangement of the fuels; the topography; the local weather patterns; and the construction, design, and placement of structures (LACFD 2015). The following is a generalized fuel modification plan and associated zones (LACFD 2011):

Zone A is a minimum 20-foot setback zone from the edge of any structures; it is adjacent to structures and should offer protection from intense flames through either properly maintained, irrigated plants with high moisture content, or through walkways, gravel, stone, paved surfaces, or water features to create breaks in the fire's path.

Zone B is the irrigation zone/transition zone that extends from the edge of Zone A up to 100 feet from structures; a large percentage of existing vegetation may be removed and replaced with irrigated, fire- and drought-resistant plants. It may have detached structures and may contain some native vegetation if spaced according to the planting guidelines that create a transition to the native brush and thinning zone (Zone C).

Zone C is the native brush thinning zone and, if applicable, extends from the edge of Zone B up to 200 feet from structures. Vegetation will consist mainly of native plants with appropriate thinning and spacing; adequately spaced ornamental shrubs and trees are allowed (if approved by LACFD) but generally not recommended due to water conservation goals. The objective of this zone is to slow the rate of fire spread, reduce flame lengths, and minimize the intensity of the fires prior to reaching irrigated zones (i.e., Zones A and B) or the structure.

Planting proposed as part of a project along any public or private roadway that may be used for emergency access will also be reviewed to ensure compliance with applicable fire code requirements and safety as part of the Fuel Modification Plan review. Fuel modification distances are site specific, designed for severe fire weather scenarios, and are not intended to be a blanket requirement for all sites. The Zone A and Zone B irrigated zones encompass the minimum 30 to 50 feet of required removal of all highly flammable brush required by the Fire Code. Zone C will typically coincide with the requirement to thin from 30 to 200 feet from any structure. Also, a wide variety of conditions may result in the required fuel modification not being fully achieved within the property boundaries. Property owners are not required to extend their fuel modification on to adjacent property (i.e., off-site). However, they are encouraged to collaborate with adjacent private landowners and public agencies/landowners to find ways to extend fuel modification or brush clearance activities in ways that benefit everyone in the community. Where the desired zones are not capable of being implemented, alternatives to the typical requirements may be substituted. The installation of a wall made of cinderblock or other fire retardant material may be required as part of the Fuel Modification Plan (LACFD 2011).

Development Standards

The County of Los Angeles' standards related to development in areas designated as Fire Hazard Severity Zones in a State Responsibility Area and that would be applied to the Project are specified in the Chapter 7A. "Materials and Construction Methods for Exterior Wildfire Exposure" of the Building Code (Title 26) and in the Fire Code (Title 32); these standards include, but are not limited to the following:

- All roof coverings shall be of fire retardant Class A materials. Wood-shingle and wood-shake roofs are prohibited in Very High Fire Hazard Severity Zones (VHFHSZs) regardless of classification (Section 704A.1.2).
- Where the roof profile allows a space between the roof covering and roof decking, the spaces shall be constructed to prevent the intrusion of flames and embers; shall be firestopped with approved materials; or shall have one layer of No. 72 American Society of Testing and Materials (ASTM) cap sheet installed over the combustible decking (Section 704A.1.2).
- Ventilation openings shall be constructed on the underside of eaves and cornices. The Building Official may accept or approve special eave and cornice vents that resist the intrusion of flame and burning embers (Section 706A.3 et. seq.).
- Exterior windows, window walls, glazed doors, and glazed openings in exterior doors shall be multi-pane glazing units with a minimum of one tempered pane, or glass block units, or have a fire-resistance rating of not less than 20 minutes, when tested according to ASTM E 2010, or they shall conform to the performance requirements of the Office of the State Fire Marshall (SFM) 12-7A-2 (Section 704A.3.2.2).
- Spark arresters constructed with heavy wire mesh or other noncombustible material with openings not to exceed ½ inch shall be provided in chimneys of any fireplace, barbecue, incinerator, or any heating appliance in which solid or liquid fuel is used (Section 326.12.2).
- Clearance of brush and vegetative growth shall be maintained (Section 325.2).

Environmental Setting

The Project site is generally surrounded by undeveloped or agricultural land, with scattered single-family residences located near the southeast portion of the site. CAL FIRE and the LACFD designate lands within Los Angeles County that are determined to be highly vulnerable to wildfire as being “Fire Hazard Severity Zones” (Los Angeles County Code, Title 32). This designation replaces the previous County wildfire risk rating (i.e., Fire Zones 1 through 4) (Lopez 2006). Adoption of and revisions to Fire Hazard Severity Zone designations are made by the Los Angeles County Board of Supervisors. The Fire Hazard Severity Zone designation is based on evaluation of numerous interrelated criteria including fuels, topography, dwelling density, weather, infrastructure, building materials, brush clearance, and fire history. The County Fire Chief periodically reviews Fire Hazard Severity Zone areas and makes recommendations to the Board of Supervisors to revise the limits of these areas based on changes in any of the evaluation criteria.

Portions of the Project site are designated as a VHFHSZ and portions are designated as a HFHSV (LACDRP 2015). CAL FIRE classifies a zone as having a moderate, high, or very high fire hazard based on a combination of how a fire will behave and the probability of flames and embers threatening buildings. Project site characteristics that contribute to these designations include (a) access, (b) lack of existing adequate fire flows, (c) topography, and (d) vegetative cover. Typically during the spring months, vegetation begins to lose its moisture content. By the fall, when Santa Ana wind conditions begin occurring, wildland fire

conditions become extremely high. CAL FIRE, which also incorporates City and County records, recorded a total of 31 wildfires over 100 acres in size within approximately 5 miles of the Project site from 1964 through 2015. Of these, four fires occurred within Project site boundaries: the Liebre fire, which burned approximately 48,565 acres in 1968 (approximately 0.2 acre on site); Cement Fire No. 1 and Cement Fire No. 2, which burned a combined total of approximately 747 acres in 1994 (approximately 601 acres on site); the Pine fire, which burned approximately 16,272 acres in 2004 (approximately 65 acres on site); and the Hwy 138 and 300 West fire, which burned approximately 193 acres in 2006 (approximately 135 acres on site) (CAL FIRE 2016b). The effect of climate change on wildland fires has been addressed in Section 5.21, Climate Change.

When chaparral and coastal sage growth is young, it is more succulent and has few dead or dying branches and provides less horizontal fuel continuity; as a result, it has higher than average fuel moisture content and is usually more fire retardant. As these plant species reach 20 or more years of maturity, the dead-to-live fuel ratio increases, which creates more available fuel to sustain fires that have very high intensities and energy releases. Generally, fire-prevention tactics for urban development in wildland fire hazard areas focus on (1) restricting the types of building materials used; (2) appropriate building design; and (3) incorporating setbacks, including fuel-modification zones. All developments within a VHFHSZ and HFHSV are required to meet the building construction requirements specified in the County Code for these areas, as discussed above. Refer to Section 5.16, Fire and Law Enforcement Services, for a discussion of fire-protection service levels for the Project site.

Project Design Features

No project design features are identified for Fire Safety.

Threshold Criteria

The following significance threshold criteria are derived from the County of Los Angeles Environmental Checklist. The Project would result in a significant impact if it would:

- Threshold 3-8** Expose people or structures to a significant risk of loss, injury, or death involving fires, because the project is located:
- i. within a Very High Fire Hazard Severity Zone (Fire Zone 4).
 - ii. within a high fire hazard area with inadequate access.
 - iii. within an area with inadequate water and pressure to meet fire flow standards.
 - iv. within proximity to land uses that have the potential for dangerous fire hazard.
- Threshold 3-9** Constitute a potentially dangerous fire hazard.

Environmental Impacts

Threshold 3-8 **Would the project expose people or structures to a significant risk of loss, injury, or death involving fires, because the project is located:**

- i. **within a Very High Fire Hazard Severity Zone (Fire Zone 4)?**
- ii. **within a high fire hazard area with inadequate access?**
- iii. **within an area with inadequate water and pressure to meet fire flow standards?**
- iv. **within proximity to land uses that have the potential for dangerous fire hazard?**

Threshold 3-9 **Does the proposed use constitute a potentially dangerous fire hazard?**

On-Site Impacts

The Project would introduce urban development in an undeveloped area subject to wildfire hazards. The Project area is within a VHFHSZ and an HFHSV, which are subject to high fire hazards due to the presence of high brush, woodlands, and steep slopes.

Fire Hazard Assessment

Project implementation would result in the construction of residential areas, commercial and office uses, mixed-uses, business parks, institutional uses, and utilities in areas that have been designated as VHFHSZ or HFHSV. Current characteristics of the Project site that contribute to this designation include (1) limited access, (2) lack of existing adequate fire flows, (3) topography, and (4) types of vegetative cover. These characteristics would be addressed as the Project site is developed. An analysis of the Project site's fire hazard potential relative to these four factors is presented below.

1. **Access.** The Project includes an extensive backbone vehicular circulation system that would provide five points of access to the site via SR-138. The design of the Project's internal circulation system would implement the County standards, as applicable, regarding access (i.e., roadway widths, length of single access streets, cul-de-sac dimensions, street parking restrictions) (see Section 5.10, Traffic, Access and Circulation, for additional discussion of roadway design). Additionally, the Project will incorporate up to four new fire stations within the Project site. Consequently, access would be improved from the existing condition and impacts associated with emergency fire response would be less than significant with incorporation of emergency response requirements (MM 3-7).
2. **Fire Flows.** Exhibit 4-13, Centennial Project – Conceptual Domestic Water System, shows the Project's water system that would provide water supplies to support proposed land uses and provide adequate fire flows and pressure to support any fire-suppression activity in the event of wildland or structural fires (refer to Section 5.18, Water Resources, for further discussion of the water system). The proposed

water system includes water mains, water tanks, pump stations (where necessary), and fire hydrants to ensure sufficient fire flows and water pressure to meet County of Los Angeles Department of Public Works' and LACFD's fire-suppression standards for improved property and development. These standard requirements must be met prior to the approval of building permits; therefore, the Project would implement a water system that would meet all County requirements in support of fire-suppression activities so that less than significant water-related fire hazards would occur.

- 3. Topography.** Topography is connected to wildland fire hazards because steep slopes are not only inaccessible to fire fighting vehicles, but steep canyons can create updraft conditions (much like a chimney) and a fire in a steep canyon can spread rapidly into adjacent areas. Steep canyons that are densely covered with combustible vegetation are especially hazardous. The Project's land uses would be developed in accordance with fuel modification requirements to ensure appropriate buffer zones for protection from wildfire events (MM 3-9). Areas of the Project site that are undeveloped and contain steep slopes would restrict human access to the use of trails. Despite limited access to the general population, and the portions of the site with the greatest topographic relief would be accessible to fire-fighting equipment via helicopter, other air transport access, and existing unpaved fire roads. As required by the LACFD, upon their Project-level review (e.g., tract map review), clearance for fire access roads and gates would be incorporated into developed areas. Implementation of the Fuel Modification Plan (MM 3-9) for the Project would ensure that potential impacts would be less than significant.
- 4. Vegetative Cover.** The majority of residential development is proposed for the flatter portions of the Project site. Some residential development, however, is proposed in areas that would be adjacent to large open space areas with moderate vegetative cover. The plant communities that make up this cover are highly combustible and would therefore present a high fire hazard and pose a potentially significant impact to development in these areas. With MM 3-9 for fuel modification requirements, impacts related to fire hazards would be less than significant.

As development of the Project site proceeds, fire hazards associated with the natural vegetative cover would be eliminated through its replacement with urban landscape vegetation, which is irrigated and less combustible than the existing vegetation. However, the potential for wildland fire hazards would still exist at the wildland/urban interface due to (a) the presence of brush; (b) increased human activity; and (c) the increased potential for fires due to accidental and arson-related causes. The boundaries of this interface would change over time as the Project reaches buildout. With the implementation of the Fuel Modification Plan as mandated by the LACFD's requirements for fuel modification and construction in Fire Hazard Severity Zones, ensured with implementation of MM 3-9, the fire hazard potential in this interface zone would be less than significant.

Fuel Modification and Fire Codes

The Project would comply with State law and with all County requirements related to development in a designated VHFHSZ or HFHSV. Specifically, as required by Section 4908.1 of the County of Los Angeles Code (Title 32, Fire Code), a Fuel Modification Plan would be

submitted with any subdivision of land located in an area designated as a Fire Hazard Severity Zone in a State Responsibility Area, which includes the entirety of Project site. Under current LACFD regulations, the Fuel Modification Zone for the Project should extend 200 feet from structures; the three fuel modification zones (A, B, and C) are detailed above.

Preliminary discussions with the LACFD indicate that, due to a variety of variables such as topography and nearby vegetation, it may be appropriate to utilize a fuel-modification buffer that is less than 200 feet (Condon and Pontes 2007). The extent and location of the fuel zone clearance area, along with conditions under which the setback may be reduced would be finalized with LACFD review and approval of the Fuel Modification Plan. Based on conversations between the Applicant and the LACFD, the buffer from structures for the majority of the Project site would be 100 feet because the Project site is predominantly characterized by annual grassland. Because this is low combustible vegetation, an alternative compliance of a 100-foot setback from structures is likely more appropriate for the majority of the property. However, in some instances, an alternative compliance of a 150-foot setback from the structure may be appropriate, especially in cases where a number of trees are in the immediate vicinity of lots but are at a grade uphill from the lots.

In order to reduce potential impacts associated with wildfire hazards, MM 3-9 requires that new property owners are informed of their individual responsibilities for maintaining fuel modification zones on their property, either via the Covenants, Conditions, and Restrictions (CC&Rs) or disclosure statements. In accordance with the Landscape Plan for the Project (see MM 7-13 in Section 5.7, Biological Resources), the Fuel Modification Plan (see MM 3-9) will utilize a plant palette that is tailored to the unique environmental conditions of the Project site and that borrows extensively from the existing landscape, allowing for both native and adopted species of oaks, willows, cottonwoods, and grasses. The design of this plan would take the Project site's topographical features into consideration. Transitional slopes and some greenways would be enhanced with regionally appropriate species that relate to the historic background of this region such as stone fruits (i.e., peaches, plums, avocados) and orchards (i.e., citrus and nuts). Furthermore, species selected for modification would be adapted to the conditions found on the Project site by surviving hot, dry summers without high irrigation demands. A partial species list includes evergreens and deciduous trees that may be modified by the Community Forester in consultation with County Biologists.

As indicated previously, all projects must adhere to State and County Fire Codes, standards, and guidelines, including the CAL FIRE's Fire Plan. While the Fire Plan does not include requirements for individual projects, it does describe collaborative wildfire-related planning efforts with local agencies (such as the LACFD) and establishes the levels of statewide fire protection services for State Responsibility Area lands. These service levels recognize other fire protection resources at the federal and local level that collectively provide a regional and statewide emergency response capability. In addition, California's integrated mutual aid fire protection system provides fire protection services through automatic and mutual aid agreements for fire incidents across all ownerships (CAL FIRE 2016). It is the expectation that, as the Project is built out over 20 years, the Fire Codes, standards, and guidelines would be continually updated by the State and County agencies as the knowledge gained from past fires is increased; these updated code requirements, as finalized through discussions with the LACFD, would be applied to subsequent development phases of the Project.

As discussed above under Relevant Plans, Policies, and Regulations, the AVAP includes a goal and several related policies related to fire hazard planning. The Project is consistent with the AVAP land use designations, and therefore is consistent with Policy PS 1.1. As discussed in detail above, the Project would provide appropriate emergency access and evacuation routes; would implement all appropriate wildland fire-prevention measures; and would implement all Fire Code requirements and other regulations. The Project, therefore, is consistent with Policies PS 1.2 through 1.4. With adherence to the required and best-accepted practices for fuel-modification zone management, emergency access, building materials and methods, as well as the changes in land use, the potential impact of the Project related to wildfires is considered to be less than significant.

Proximity to Potentially Dangerous Fire Hazard Land Uses

As described above under Section 5.3.2, Hazards and Hazardous Materials, Phase I ESAs were prepared to address potentially hazardous current and historic land uses that could adversely affect Project site development. Based on these reports, there are no adjacent land uses that represent fire hazards. The National Cement Company is an industrial land use, but it does not utilize flammable materials or otherwise have a risk of explosion. The sole risk of reasonably foreseeable explosion on or near the Project is related to flammable materials transport on SR-138.

The increased potential for an accident involving a hazardous material transporter on SR-138 and Interstate (I) 5 due to increased traffic from the Project would also be less than significant. Such materials are transported daily on arterial roadways and railways that traverse through populated areas throughout Southern California. Additionally, the traffic analysis prepared for the Project determines that, with implementation of mitigation, all mainline freeways in the Project area, including SR-138 and I-5, would continue to flow in an acceptable manner with the Project. Therefore, the traffic analysis quantitatively determines that increased traffic would not create a greater hazard. There would be no impact related to proximity to a dangerous fire hazard condition and no mitigation is required.

Off-Site Impacts

The off-site Project features (intersections with SR-138, utility connections, water wells, and California Aqueduct crossings) would not include land uses that would, by themselves, increase the risk of fire hazards. With Project implementation, adequate access, adequate water pressures and flows, and fuel modification would be provided on the site and would either include the locations of off-site features or support the adequate water pressures and flows (i.e., water wells and infrastructure in 300th Street West). These features do not represent dangerous fire hazards, nor would they be located proximate to a fire hazard. There would be no impact and no mitigation is required.

Impact Summary: With adherence to State and County requirements for fuel modification zone management, emergency access, building materials and methods, as well as change in land use, to be ensured with implementation of MM 3-9, the impact of the Project related to wildfires is considered to be less than significant.

The Project would not result in significant impacts related to proximity of a land use representing a potential fire hazard, and no mitigation would be required.

Mitigation Measures

MM 3-9 The Project Applicant/Developer shall prepare a Fuel Modification Plan demonstrating compliance with the County Fire Code Title 32 and shall provide all new residents and business owners with recorded Covenants, Conditions, and Restrictions (CC&Rs) or disclosure statements that identify the responsibilities for maintaining the fuel modification zone(s) on their property, as defined in the approved Fuel Modification Plan. The CC&Rs or disclosure statements prepared by the Project Applicant/Developer shall be submitted to the County of Los Angeles to confirm that new property owners will be informed of their responsibilities for maintaining the fuel modification zone(s) on their property.

Level of Significance after Mitigation

Impacts related to fire hazards would be less than significant with implementation of MM 3-9.

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