HAZARDS AND HAZARDOUS MATERIALS

Risks from hazards and hazardous materials are typically associated with historical land uses involving the use of hazardous materials for building construction or for operation. Lead and asbestos may be found in the building materials of older buildings. Additionally, soils and groundwater at some sites in the vicinity of the Zoo may be contaminated due to historical spills and leaking underground storage tanks. Demolition and renovation proposed to occur at the Zoo would facilitate the removal of existing hazardous building materials that may be present, as well as the cleanup of potentially contaminated sites, thus reducing the level of risk at the Zoo. Risks from hazards and hazardous materials can be adequately addressed through compliance with existing federal, state, and local regulations and/or implementation of mitigation measures.

This section analyzes the potential for the implementation of the Los Angeles Zoo (Zoo) Vision Plan (Vision Plan) to expose people and the environment to hazards and hazardous materials. The information in this section is informed by a site-specific Phase I Hazardous Materials Assessment prepared by Ninyo & Moore and peer reviewed by Wood Environment & Infrastructure Solutions, Inc. (Wood) in October 2019. The Phase I Hazardous Materials Assessment includes a records review of applicable federal, state, tribal, and local regulatory agency databases, and available historical information for the site, as well as a site reconnaissance conducted on August 13, 2019.

Hazardous materials are defined as substances with physical and chemical properties of flammability, corrosivity, reactivity, or toxicity, which may pose a threat to human health or the environment. The term “hazardous materials” describes chemicals such as petroleum products, solvents, pesticides, herbicides, paints, metals, asbestos, and other regulated materials. Additionally, the term “release” includes known historical spills, leaks, illegal dumping, or other discharges of hazardous materials to soil, sediment, groundwater, or surface water. Areas where historical releases of hazardous materials have occurred could pose a risk to public health and the environment.

Hazards may include exposure to both natural and man-made hazards. These could include hazards associated with aircraft operations at nearby airports or natural hazards such as wildfires. Other types of hazards are addressed in other sections of this EIR as follows: geologic hazards, such as earthquakes, landslides and bluff stability are addressed in Section 3.7, Geology and Soils; air pollution hazards, such as toxic air contaminants (TACs) and particulate matter (PM), are addressed in Section 3.2, Air Quality; hazards related to water pollution, such as groundwater contamination and surface runoff, are addressed in Section 3.10, Hydrology and Water Quality; wildfire hazards are discussed in Section 3.17, Wildfire; urban fire hazards and response/suppression systems are discussed in Section
3.9. Hazards and Hazardous Materials

3.13, Public Services; and hazardous solid waste disposal is addressed in Section 3.16, Utilities.

3.9.1 Environmental Setting

Regulatory Setting

Federal, state, and local laws and regulations address safe handling and use of hazardous materials and hazardous wastes, as well as management and remediation of sites contaminated by hazardous substances.

The Certified Unified Program Agency (CUPA) is the agency responsible for enforcing applicable laws and regulations for the handling and cleanup of specific materials determined to pose a risk to human health or the environment. The Los Angeles Fire Department (LAFD) is the CUPA for the City. Enforcement agencies at the state level include two branches of the California Environmental Protection Agency (CalEPA): the DTSC and the Regional Water Quality Control Board (RWQCB). The federal enforcement agency is the U.S. Environmental Protection Agency (EPA).

Federal Regulations

Several federal agencies regulate hazardous materials, including the U.S. EPA, the Department of Labor, Occupational Safety and Health Administration (OSHA), the Office of Resource Conservation and Recovery (ORCR), and the Department of Transportation (DOT). Applicable federal regulations are contained primarily in Titles 10, 29, 40, and 49 of the Code of Federal Regulations (CFR). In particular, Title 49 of the CFR governs the manufacture of packaging and transport containers, packing and repacking, labeling, and the marking of hazardous material transport, and Title 42, Chapter 82 governs solid waste disposal and resource recovery. Some of the major federal laws include the following statutes (and regulations promulgated):

- Comprehensive Environmental Response, Compensation, and Liability Act (1980) – Superfund Law
- Emergency Prevention and Community Right to Know Act (EPCRA, 1986)
- Resource Conservation and Recovery Act (RCRA, 1976)
- Clean Water Act (1977)
3.9 Hazards and Hazardous Materials

- Clean Air Act (1970)
- Toxic Substances Control Act (TSCA) (1976)
- Residential Lead-Based Paint Hazard Reduction Act (1992), also known as Title X
- Hazardous Materials Transportation Act (1975)

U.S. EPA Pacific Southwest Region 9

The Project site lies within U.S. EPA Pacific Southwest Region 9, which administers programs for Arizona, California, Hawaii, Nevada, Pacific Territories, and 148 Native American tribes, including the following:

- Superfund is U.S. EPA's program to identify, investigate and clean up uncontrolled or abandoned hazardous waste sites throughout the U.S.
- Region 9’s Brownfields Program work to clean up and redevelop potentially contaminated lands in the Pacific Southwest region, making it easier for such lands to become vital, functioning parts of their communities. The material below describes Brownfields activities within Region 9’s states, tribes, and territories. The U.S. EPA’s National Brownfields home page provides information on applying for Brownfields grants, recent legislation, news, and more. It is also Region 9’s program to prevent, prepare, and respond to environmental emergencies.
- Region 9’s PCB Program regulates the processing, distribution, use, cleanup, storage, and disposal of PCBs under the Toxic Substances Control Act (TSCA) and also provides support for TSCA compliance to limit the manufacture, processing, and distribution of PCBs.

Federal Hazardous Waste Programs

*Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)*: The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), commonly known as Superfund act, was developed to protect the nation’s water, air, and land resources from the risks created by past chemical disposal practices. Under CERCLA, the U.S. EPA is authorized to undertake short-term or long-term actions for the cleanup of abandoned contaminated sites in the nation, known as Superfund sites, which pose a risk to human health or the environment. The U.S. EPA maintains the CERCLIS database, which contains information on current Superfund sites, former Superfund sites, and remediation activities. CERCLIS includes Superfund sites that are on the National Priorities List (NPL) or are being considered for the NPL.
Emergency Planning and “Community Right-to-Know.” The Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 was created to help communities plan for emergencies involving hazardous substances. The Act establishes requirements for federal, state, and local governments, Indian tribes, and industry regarding emergency planning and reporting on hazardous and toxic chemicals. There are four major provisions of EPCRA: Emergency Planning (Sections 301 – 303); Emergency Release Notification (Section 304); Hazardous Chemical Storage Reporting (Sections 311 – 312); Toxic Chemical Release Inventory (Section 313); and the Clean Air Act Risk Management Plan Regulations (CAA 112[r]).

Federal Aviation Administration (FAA)

FAA Heliport Design Advisory Circular (AC 150/5390-2B), issued on September 30, 2004 recommends the establishment of a Helicopter Protection Zone (HPZ) for each approach/departure surface to enhance the protection of people and property on the ground. The HPZ is the area starting at the edge of the Final Approach and Takeoff (FATO) area perimeter and extending upward at 8:1 (8 units horizontal in 1 unit vertical) for a distance of 280 feet. The FATO is a defined area over which the pilot completes the final phase of the approach to a hover or a landing and from which the pilot initiates takeoff. HPZ areas should be clear of incompatible objects and activities, including residences and places of public assembly. Additionally, the FAA recommends locating hazardous materials, including fuel, outside of the HPZ.

American National Standards Institute (ANSI)

The ANSI is a private non-profit organization that oversees the development of voluntary consensus standards for products, services, processes, systems, and personnel in the U.S. ANSI B77.2-2004, American National Standard for Funiculars–Safety Requirements, establishes a standard for the design, manufacture, construction, operation, and maintenance of funiculars for passenger transport. Additionally, ANSI B77.1 – updated in 2006 – addresses operating personnel, clearances, structures, and foundations from the American National Standards for Passenger Ropeways. This standard includes engineering and operational safety requirements for aerial transit systems (ATS) in the U.S.

Association of Zoos and Aquariums (AZA)

The Zoo is AZA-accredited. AZA actively works to develop and provide guidance on various issues in safety and security through two initiatives, the Zoo and Aquarium All Hazards Preparedness, Response, and Recovery (ZAHP) Fusion Center and the AZA Safety Committee. The ZAHP Fusion Center was created to bridge the gap in communication between the managed wildlife community and the emergency management sector. The Center disseminates critical information on prevention, protection, mitigation, response, and recovery to the greater managed wildlife community while developing new partnerships with federal agencies, local and state emergency responders, and private sector groups
concerned with animal welfare and emergency management. The AZA Safety Committee is comprised of members from various AZA institutions who research and develop guidance on safety and security issues currently effecting our member institutions (AZA 2019). The AZA also develops Accreditation Standards and Related Policies as well as Animal Care Manuals (ACMs) to provide a compilation of animal care and management knowledge that has been gained from recognized species experts (AZA 2019a). The ultimate goals of these standards are to provide the safest work environment for animal care professionals in addition to providing the highest quality of animal management and care.

**State Regulations**

Primary state agencies with jurisdiction over hazardous chemical materials management include CalEPA, the DTSC, and the State Water Resources Control Board (SWRCB). Other state agencies involved in hazardous materials management are the Department of Industrial Relations (state OSHA implementation), State Office of Emergency Services (OES – California Accidental Release Prevention implementation), California Air Resources Board (CARB), California Department of Transportation (Caltrans), State Office of Environmental Health Hazard Assessment (OEHHA – Proposition 65 implementation), and the California Integrated Waste Management Board (CIWMB). The enforcement agencies for hazardous materials transportation regulations are the California Highway Patrol (CHP) and Caltrans. Hazardous materials waste transporters are responsible for complying with all applicable packaging, labeling, and shipping regulations.

Hazardous chemical and biohazardous materials management laws in California include the following statutes (and general regulation(s) promulgated thereunder):

- Hazardous Materials Management Act – business plan reporting
- Hazardous Waste Control Act – hazardous waste management
- Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) – release of and exposure to carcinogenic chemicals
- Hazardous Substances Act – cleanup of contamination
- Hazardous Waste Management Planning and Facility Siting (Tanner Act) – preparation of hazardous waste management plans and the siting of hazardous waste facilities
- Hazardous Materials Storage and Emergency Response – including response to hazardous materials incidents

**DTSC EnviroStor Database**

DTSC maintains a database that contains information on properties in California where hazardous substances have been released, or where the potential for a release exists. This database is known as EnviroStor (formerly CalSites) and is one of a number of databases that comprise the Cortese List and Spills, Leaks, Investigations, and Cleanups (SLIC) List. EnviroStor provides a brief history of cleanup activities, contaminants of concern, and
3.9. Hazards and Hazardous Materials

scheduled future cleanup activities. The EnviroStor database also includes properties that have been remediated and certified by DTSC.

**SWRCB GeoTracker Database**

The GeoTracker is the SWRCB’s online database that 1) provides access to statewide environmental data, and 2) tracks regulatory data for the following types of sites:

- Leaking Underground Fuel Tank (LUFT) cleanup sites;
- Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites);
- Military sites (consisting of: Military UST sites; Military Privatized sites;
- Military Cleanup sites [formerly known as Department of Defense [DoD] non-UST]);
- Land Disposal sites (Landfills); and
- Permitted UST facilities.

**Site Mitigation and Brownfields Reuse Program (SMBRP)**

The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) and the Voluntary Cleanup Program allow DTSC to provide oversight to motivated parties and address Brownfield sites. DTSC maintains a list of sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents land use restrictions that are active. Some sites have multiple land use restrictions. No properties within the Downtown are identified by the SMBRP to have land use restrictions, and there are currently no clean-up efforts underway within the Downtown as of December 2015.

**Certified Unified Program Agency (CUPA)**

Senate Bill 1082, passed in 1993, created the CUPA. The Unified Program consolidates six state environmental programs into one program at the local level, under the authority of a Certified Unified Program Agency. The SMFD was certified by the CalEPA as the CUPA for the City in 1997. The SMFD is responsible for protecting the public and environment by being the first responders to emergencies and overseeing hazardous waste, underground storage tanks, above-ground tanks, hazardous materials, community right-to-know, and accidental release prevention programs. The Division conducts both CUPA regulatory inspections and Fire Code inspections for all program elements, with the exception of the hazardous waste program. The Division contracts with the Los Angeles County Fire Department (LACoFD) Health Hazardous Materials for hazardous waste inspection and enforcement of the hazardous waste program.

**2010 State of California Multi-Hazard Mitigation Plan (SHMP)**

The SHMP is the official statement of the state's hazard identification, vulnerability analysis, and hazard mitigation strategy. The goal of the SHMP is to guide implementation activities to achieve the greatest reduction of vulnerability, which results in saved lives,
reduced injuries, reduced property damages, and protection for the environment. In particular, the SHMP helps administer the Local Hazard Mitigation Plan (LHMP) program for the state. The California Emergency Management Agency (CalEMA) supports and assists local governments in the development of LHMPs and tracks the progress and effectiveness of plan updates and projects. It provides local governments with information on integrating hazard identification, risk assessment, risk management, and loss prevention into a comprehensive approach to hazard mitigation and helps them identify cost-effective mitigation measures and projects.

**California Department of Occupational Safety and Health Agency (Cal/OSHA)**

ATS development and operation in California is governed by Cal/OSHA, with specifications set forth in the California Code of Regulations (CCR), Title 8, Chapter 6.1 Passenger Tramway Safety Orders, Article 8 Wire Rope And Strand Requirements.

**California Code of Regulations (CCR) – Asbestos and Lead**

The CCR regulate potential asbestos exposure in construction when construction, alteration, repair, maintenance, renovation or demolition of structures, substrates, or portions thereof contain asbestos [8 CCR §1529 (a)(1)(C)]. Additionally, in California, materials containing greater than one-tenth of one percent (>0.1%) asbestos by weight are regulated as ACM.

The CCR Title 17, Division 1, and Chapter 8 (Title 17) pertains to all public and residential buildings in California. Pursuant to Title 17 and USEPA regulations, lead-based paint (LBP) is defined as paint or other surface coatings containing an amount of lead equal to or greater than one milligram per square centimeter (1.0 mg/cm²) or more than half of one percent [>0.5% or 5,000 parts per million(ppm)] by weight. Title 17 also defines a lead hazard as deteriorated LBP, disturbance of LBP or presumed LBP without containment, or any other nuisances which may result in persistent or quantifiable lead exposure. Additionally, worker exposure to materials containing lead during construction work is regulated by CCR Title 8 §1532.1(a). These regulations require worker protection during construction “where lead or materials containing lead are present.”

**Regional and Local Regulations**

**South Coast Air Quality Management District (SCAQMD)**

The SCAQMD regulates asbestos through Rule 1403, Asbestos Emissions from Renovation/Demolition Activities. Rule 1403 defines asbestos as a toxic material and controls the emissions of asbestos from demolition and renovation activities by specifying agency notifications, appropriate removal procedures, and handling/cleanup procedures. Rule 1403 applies to owners and operators involved in the demolition or renovation of asbestos-containing structures, asbestos storage facilities, and waste disposal sites.

The SCAQMD also regulates volatile organic compound (VOC) emissions from contaminated soil through Rule 1166, Volatile Organic Compound Emissions from...
Decontamination of Soil. Rule 1166 sets requirements to control the emission of VOCs from excavating, grading, handling, and treating soil contaminated with volatile organic compounds as a result of leakage from storage or transfer operations, accidental spillage, or other deposition, including hydrocarbons.

**Los Angeles County**

The Los Angeles County Department of Public Works (DPW), Environmental Programs Division (EPD), prepares and administers the Los Angeles County Integrated Waste Management Plan and Hazardous Waste Management Plan, which provide direction for proper management of all waste generated within the county. As the county’s lead agency, it advises the Los Angeles County Board of Supervisors regarding all waste management issues. EPD implements numerous programs to meet state-mandated solid waste reduction goals, including recycling, composting, source-reduction, household hazardous waste management, and public education programs. These programs regulate USTs in the county’s unincorporated areas and more than 76 cities to protect groundwater resources.

**Certified Unified Program Agency (CUPA)/Los Angeles Fire Department (LAFD)**

Senate Bill 1082 consolidates six state programs into a single environmental control program managed by a CUPA at the regional or local level. These programs regulate business and industry’s use, storage, handling, and disposal of hazardous materials. The CUPA is certified by CalEPA to implement the six state environmental programs within the local agency’s jurisdiction, as follows:

- Uniform Fire Code Business Plan
- Hazardous Waste Generation and Onsite Treatment
- Accidental Release Prevention
- Above-ground Storage Tank
- Underground Storage Tank

The City’s CUPA is the LAFD and is the primary local agency with responsibility for implementing federal and state laws and regulations pertaining to hazardous materials management. The LAFD maintains the records regarding location and status of hazardous materials sites in the City and administers programs that regulate and enforce the transport, use, storage, manufacturing, and remediation of hazardous materials. The LAFD contracts with the LACoFD for hazardous waste inspection and enforcement components of the Unified Program.
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City of Los Angeles Bureau of Sanitation (LA Sanitation)
LA Sanitation is responsible with collecting, cleaning, and recycling solid and liquid waste (including hazardous waste) generated by residential, commercial, and industrial users in the City of Los Angeles and surrounding communities.

City of Los Angeles Fire Department Hazardous Materials Section
The City of Los Angeles Fire Department Hazardous Materials Section is the administrative agent for the California Health and Safety Code, CCR sections related to emergency planning and community right-to-know laws, and the federal Superfund Amendments and Reauthorization Act, Title III. Three units within this department process information related to hazardous materials. The Disclosure Unit is responsible for enforcing the disclosure law, which requires all establishments that store, produce, or use hazardous substances to inventory the materials on site; this includes new and existing businesses. The Business Plan Unit ensures that businesses take the right measures to mitigate any dangers. The Risk Management and Prevention Unit is responsible for evaluating Risk Management Prevention Plans that businesses must submit according to state law.

City of Los Angeles Fire Department Bureau of Fire Prevention and Public Safety (USTs)
The Bureau of Fire Prevention and Public Safety maintains an Underground Storage Tank (UST) Unit, which implements and enforces the Underground Storage Tank Program. All USTs that are used to store fuel, solvents, or other liquids must be monitored for leakage. The law requires UST installations, removals, or alterations to be regulated under permit from the LAFD.

City of Los Angeles Building Code
Division 71 of the City of Los Angeles Building Code sets forth regulations for the control of methane intrusion emanating from geologic formations. The methane seepage regulations specify site testing requirements and methane mitigation standards for all new buildings and paved areas (i.e., 5,000 square feet of paved area within 15 feet of an exterior wall of a commercial, industrial, institutional, or residential building) within designated methane zones or within methane buffer zones.

Existing Setting
The Project site is located in the City in the northeast corner of Griffith Park, where urban development transitions to natural open space and recreational areas. Griffith Park was established in 1896 and included property immediately west of the Project site. The western portion of the site was primarily undeveloped with a few dirt roads and the eastern portion of the site was developed as part of the Griffith Park Aerodrome, an unpaved airplane runway used by the National Guard Service. Properties north of the Project site were used for agriculture. By 1938, the airplane runway on the eastern portion of the site was paved, structures were developed on the central portion of the site, and the southern portion of the
site was developed as part of a golf course. The National Guard Squadron eventually moved to Van Nuys Airport and the Aerodrome was demolished. In 1946, the eastern portion of the Project site which had formerly been the Aerodrome was developed as a portion of Rodger Young Village, a housing development, which was demolished in the mid-1950s. A portion of the site was redeveloped as the Los Angeles Zoo in 1966, with the eastern portion of the site paved for use as the Zoo parking lot. Several additional developments were constructed and renovated at the Zoo between 1980 and 2010.

The nearest school to the Project site is North Hollywood High School Magnet Center located in the southwest portion of the Zoo’s main parking lot. The nearest airport to the Project site is the Bob Hope Airport (BUR), located approximately 4.4 miles northwest of the Zoo. Additionally, the helicopter pad for Dreamworks Hellistop Glendale is located approximately 0.5 miles north of the Zoo’s parking lot. Grand Central Air Terminal, located approximately 0.75 miles north of the Project site, is historical air terminal no longer in operation.

The proposed Grayson Power Plant is located approximately 0.35 miles northeast of the Project site at 800 Air Way, Glendale, CA 91201, just northeast of the Interstate (I-) 5 and State Route (SR-) 134 interchange at the Grayson Power Plant. Under the proposed Grayson Repowering Project, the City of Glendale is proposing to replace all of the power plant’s existing generation facilities, units, and their related infrastructure (built between 1941 and 1977), with the exception of Unit 9 (completed in 2003), by removing existing aboveground and belowground equipment and facilities, and building new generation facilities located entirely within the existing Grayson Power Plant. The existing generation facilities (with the exception of Unit 9) would be replaced with a combination of combined cycle and simple cycle gas turbine generation units with operation planned for Summer 2022 (City of Glendale Water & Power 2018). According to the Grayson Repowering Project EIR, demolition and excavation activities would involve the removal of hazardous materials, including ACM and LBP. Additional hazardous materials may be encountered during subsurface demolition activities (City of Glendale Water & Power 2018).

The former Toyon Canyon Landfill is located approximately 0.16 miles (860 feet) west and upgradient from the Gottlieb Animal Health and Conservation Center. During its operation from 1957 to 1985, the Class III landfill was used for disposal of refuse such as residential waste, street sweepings, and construction and demolition materials. From 1985 to 2015 a power plant was operated at the site using natural gas generated from the landfill materials. The plant began producing 9MW of electrical power in 1985 and during its 30 years of operation the production gradually declined to 1.4 MW as the landfill gas flow decreased, finally shutting down in 2015 because there was not enough gas to operate the system. Closure activities for Toyon Canyon Landfill were completed as of December 2008 with a monolithic cover system in accordance with the landfill’s Final Closure/Post-Closure Maintenance Plan (FCPCMP). In accordance with the Los Angeles RWQCB’s conditional approval of the FCPCMP, two moisture monitoring stations were constructed in November
and December of 2008 and operated from December 2008 through December 2010 to ensure that the final cover system prevents infiltration of moisture into the waste mass. Currently, the site is undergoing post-closure tasks such as maintenance of landscaping/irrigation systems, maintenance of landfill gas collection systems, and minor grading work where necessary to maintain adequate stormwater drainage. According to the LA Sanitation, potential future use of the site includes public use facilities, such as a low intensity open meadow area intended for passive recreational activities. All closure construction work completed by LA Sanitation is documented by the Construction Completion Report as specified in the Construction Quality Assurance Plan of the FCPCMP. Due to the completion of closure activities in accordance with the landfill’s FCPCMP, which was reviewed and approved by the Los Angeles RWQCB, the former landfill is not considered to be an environmental concern for the Project site.

Hazardous Materials in Existing Zoo Facilities

Asbestos-Containing Material and Lead-Based Paint

The Phase I Hazardous Materials Assessment did not include an asbestos survey, LBP survey, or testing of materials in buildings proposed for demolition or renovation under the proposed Vision Plan. However, the majority of the buildings at the Zoo were constructed in the 1960s and 1970s (refer to Section 3.4, Cultural and Tribal Cultural Resources). Based on the age of the buildings, the following hazardous materials are of concern:

- **Asbestos-Containing Materials** – Asbestos is a carcinogenic mineral fiber that was widely used in a variety of building construction materials for insulation, as well as in friction and heat-resistant products. The use and manufacturing of ACMs was banned in 1977 in California. Older buildings constructed prior to 1978 may contain ACMs. Asbestos release can occur after ACMs are disturbed by cutting, sanding, or other remodeling or demolition activities. Improper attempts to remove ACMs can release asbestos fibers into the air, increasing asbestos levels and affecting human respiratory health.
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- **Lead-Based Paint** – Lead is a harmful environmental pollutant with potential exposure pathways through air, drinking water, food, contaminated soil, deteriorating paint, and dust. Before the dangers of lead were documented, it was widely used in paint. In 1978, the State banned the use of LBPs. Older buildings constructed prior to 1978 may contain LBPs. If LBPs are improperly removed from surfaces by dry scraping or sanding, LBP can be absorbed into the body and can pose a potential public health risk.

- **Mold** – The presence of visible water damage, damp materials, visible mold, or mold odor in buildings increases the potential risks of respiratory disease for occupants. Known health risks include the development of asthma, allergies, respiratory infections, increased wheeze, cough, difficulty breathing, and other symptoms.

Disturbance of ACMs, LBPs, or mold during renovation or demolition activities may cause risk of release of these hazardous materials, which can be harmful to human health.

**Hazardous Materials Storage**

Daily operation of the Zoo includes the routine use, storage, disposal, and transportation of potential hazardous materials typical of zoo facilities. Hazardous materials and waste storage at the Zoo are limited to the visitor-restricted area in the upper western reaches of the Zoo. A fueling station is located immediately south of the Carpenter Shop in the Zoo Construction Shop and Support area. The fueling station includes one 1,000-gallon capacity diesel fuel UST, a 2,000-gallon unleaded fuel UST, and a 1,000-gallon propane AST. These materials are used for operation of construction equipment at the Zoo, as well as the existing ground tram.

The Carpenter Shop contains small quantity (less than 5-gallon) containers of degreasers, paints, motor oil, gasoline in plastic containers, solvents, compressed oxygen, and acetylene cylinders. Four fire closets within the Carpenter Shop contain gasoline, solvents, paint, and wood stain. Additionally, the Zoo’s Hazardous Waste Storage Area is located at the eastern boundary of the Construction Shop and Support area. During the site reconnaissance performed for the Phase I Hazardous Materials Assessment, the Hazardous Waste Storage Area was reported to contain canned aerosols, three 55-gallon drums of solvents with secondary containment, fifteen 5-gallon buckets of primer/sealer, equipment cleaner and paint, two 55-gallon drums of machine oil, and three 55-gallon drums of used oil, with fire closets containing parts cleaners and 5 gallons of gear oil.
South of the Zoo Construction Shop and Support area, the Gottlieb Animal Health and Conservation Center houses the Zoo’s veterinarian facilities for daily and preventative medical procedures on the Zoo’s animal residents. As such, the facility contains typical veterinarian equipment and medical materials, including less than 5-gallon containers of formaldehyde, xylenes, ethyl alcohol, and corrosives in fire closets, and cylinders of compressed oxygen and nitrogen. Additionally, an emergency diesel generator is maintained at the Gottlieb Animal Health and Conservation Center.

Within the central portion of the Zoo, an Aquatic Tank Storage Facility and a Construction Materials Storage Area contain additional potentially hazardous substances. The aquatic tank storage facility, located southeast of the Elephant Barn, contains muriatic (hydrochloric) acid, sodium bicarbonate (baking soda), a sodium hypochlorite AST, and two 200-gallon containers of bleach with secondary containment – all of which are used for water purification and/or surface cleaning of the aquatic Life Support System (i.e., recirculating water treatment system) tanks and animal enclosures. North of the Treetops Terrace, the Construction Material Storage Area consists of three storage sheds containing pesticide storage in 5-gallon containers (i.e., Round-up ProMax). Pesticides are utilized by Service staff to maintain the landscaping and vegetation at the Project site.

The Parking Lot Storage Area along the southeast periphery of the Zoo’s parking lot consists of one propane AST and shipping containers containing four 5-gallon diesel and unleaded gasoline containers, as well as small quantities of engine oil, paint, and hydraulic oil. In
3.9 Hazards and Hazardous Materials

addition, an old septic tank is located at the Parking Lot Storage Area. According to site records, the septic system, which was used for office personnel in the adjoining temporary office structures, was emptied and inactivated 4 to 5 years prior to the 2019 site reconnaissance. Therefore, this septic tank is no longer in operation.

Regulated UST and AST Facilities

Sites with USTs are required to be regulated by the CUPA under the authority of the LAFD. As shown in Table 3.9-1, there are several active permitted USTs and ASTs located throughout the Zoo. In 1999, the Zoo obtained permits to remove one 2,000-gallon unleaded gasoline UST and associated piping, dispensers, leak detection system, concrete island and water reels, and to install one 2,000-gallon unleaded fuel UST and one 1,000-gallon diesel fuel UST, with two single product dual-hose dispensers and associated piping. In July 1999, a Tank Certification Report reported that the 2,000-gallon steel UST previously containing gasoline was removed from the site address, inspected, and found free of gasoline. Records from the LAFD UST Division include a notice of violation for inability to test diesel line leak detector, dated January 9, 2017. Records were not available indicating soil sampling was conducted as part of the removal and replacement of the UST or that a No Further Action (NFA) letter was issued for the removed UST in 1999.

Table 3.9-1. Underground and Aboveground Storage Tanks at the Project Site

<table>
<thead>
<tr>
<th>Type of Storage Tank</th>
<th>Capacity</th>
<th>Hazardous Material</th>
<th>Facility</th>
<th>Location Onsite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underground</td>
<td>1,000-gallon</td>
<td>Diesel Fuel</td>
<td>Fueling Station</td>
<td>Western portion</td>
</tr>
<tr>
<td>Underground</td>
<td>2,000-gallon</td>
<td>Unleaded Gasoline</td>
<td>Fueling Station</td>
<td>Western portion</td>
</tr>
<tr>
<td>Aboveground</td>
<td>1,000-gallon</td>
<td>Propane</td>
<td>Fueling Station</td>
<td>Western portion</td>
</tr>
<tr>
<td>Aboveground</td>
<td>200-gallon</td>
<td>Sodium Hypochlorite</td>
<td>Aquatic Tank Storage Facility</td>
<td>Central portion</td>
</tr>
<tr>
<td>Aboveground</td>
<td>55 pounds</td>
<td>Sodium Bicarbonate</td>
<td>Aquatic Tank Storage Facility</td>
<td>Central portion</td>
</tr>
<tr>
<td>Aboveground</td>
<td>--</td>
<td>Propane</td>
<td>Parking Lot Storage Area</td>
<td>Southeast portion</td>
</tr>
</tbody>
</table>

Note: A 100-gallon AST containing citric acid was reported in 2010 and 2011 LAFD hazardous materials inventories but has since been removed as confirmed during the 2019 Phase I Hazardous Materials Assessment.

Source: see Appendix K.
3.9. Hazards and Hazardous Materials

Vapor Encroachment

A preliminary vapor encroachment screen (pVES) was conducted at the site as part of the Phase I Hazardous Materials Assessment to identify a potential vapor encroachment condition (VEC), which is the presence or likely presence of hazardous vapors in subsurface soils caused by the release of vapors from contaminated soil or groundwater either on or near the Project site. Based on the results of the pVES and the presence of USTs, a VEC may exist beneath the fueling station at the Zoo Construction Shop and Support area (see Figure 3.9-1).

Hazardous Materials Site Listings

A computerized, environmental information database search was also performed as part of the Phase I Hazardous Materials Assessment on April 3, 2019. The search included federal, state, tribal, and local databases to evaluate whether the Project site or properties within the Project vicinity have been documented for potentially hazardous environmental conditions. This includes significant unauthorized releases of hazardous substances or other events with potentially adverse environmental effects.

According to the SWRCB GeoTracker database, the property located adjacent to the southwest corner of the Zoo parking lot is permitted for a UST. This property, listed in the database as 4730 Crystal Springs Drive, is also included in the Historic UST database for the presence of six USTs: one 3,500-gallon cement sump registered as empty in June 1988, a 2,000-gallon, carbon steel, single-walled diesel fuel UST installed in 1980, a 500-gallon and a 700-gallon carbon steel, single-walled, unleaded fuel UST, as well as one 2,000-gallon and one 7,500-gallon carbon steel, single walled, unleaded fuel USTs installed in 1971 and 1980, respectively. While no leaks or spills were reported on the Historic UST database, the City’s Department of Recreation and Parks listed the site on the GeoTracker website for a leaking UST (LUST) case, involving an unauthorized release of gasoline to the soil on March 18, 1992. The case was considered closed as of June 27, 2000. Based on the closed case status, this listing is not considered a concern to the Project site.

The Autry Museum of the American West, located immediately east of the Zoo parking lot, was also listed for the historic presence of a UST. No additional information regarding the UST(s) was provided and no leaks or spills have been reported for the site. As such, this listing is not considered a concern to the Project site.

Approximately 0.1 miles to the northeast of the eastern portion of the site, a property listed on the DTSC EnviroStor database as “State Guard Air Field” is reported as a Site Cleanup location. Due to the site’s location at the I-5 and SR-134 interchange, this cleanup site is likely associated with the former Griffith Park Aerodrome. The case status was listed as “needs evaluation as of July 1, 2005.” Based on the absence of reported leaks or spills, this listing is not considered an environmental concern to the Project site.
According to the Superfund National Priorities List (NPL) database, the San Fernando Valley Area 2 (Crystal Springs Wellfield Area) is a Superfund site with tetrachloroethylene and trichloroethylene-contaminated groundwater underlying an area of approximately 6,680 acres. According to the mapped contamination plume prepared by the U.S. Army Corps of Engineers (USACE) Seattle District (dated September 21, 2018), the boundary of the Superfund site is located north, east, and southeast of the Project site, with nearest edge of the plume located approximately 0.11 miles (600 feet) to the northeast of the eastern portion of the Zoo parking lot (see Figure 3.9-1). The EnviroStor database indicates that sources of contamination are considered to be chemicals released by aeronautical, automotive, dry cleaning, and metal plating facilities during prewar, postwar, and current industrial operations in the area. The case was opened in January 1984, and cleanup and investigation activities are ongoing. Due to the distance of the site’s contamination plume from the Project site, this listing is not considered an environmental concern to the Project site.

Other listed sites greater than 0.25 miles from the Project site were determined not to be an environmental concern for proposed Project site (see Appendix K for further information regarding listed sites in the vicinity of the Project site).

The Project site itself was included on the following federal and state databases:

- California Integrated Water Quality System Project (CIWQS),
- Facility Index System (FINDS),
- Resource Conservation and Recovery Act Small Quantity Generator (RCRA-SQG),
- UST,
- Enforcement Compliance History Online (ECHO),
- EPA Exposure Model for Individuals (EMI),
- Hazardous Waste Information System (HAZNET),
- New York (NY) MANIFEST, and
- Well Investigation Wetland Identification Program (WIP).

A majority of the database listings did not contain information regarding the environmental condition of the site. However, the following information was obtained from the RCRA-SQG, UST, ECHO, and HAZNET databases.

- **RCRA-SQG** – The site was listed on the RCRA-SQG database as a municipal small-quantity generator of an unreported type of hazardous waste in 1991, with no violations found.
- **UST** – The UST database as well as the GeoTracker website report that the Project site was permitted for a UST.
- **ECHO** – According to the ECHO database, violations were not reported for the site.
• **HAZNET** – Information for the Project site included a report of hazardous waste from the site in 2016, including hydrocarbon solvents (e.g., benzene, hexane, Stoddard, etc.) and unspecified aqueous solution.

In addition to federal and state databases, the SCAQMD Facility Information Detail Search (FIND) website was reviewed as part of the Phase I Hazardous Materials Assessment for records regarding the Project site and adjoining addresses. Four Notices of Violation for the Zoo were recorded between August 1998 and December 2006; however, all known cases of violation have been closed with the Zoo in compliance.

1. On August 12, 1998, the Zoo was reported for failure to conduct the required reverification/performance tests (i.e., static pressure-leak decay/dynamic pressure) prior to January 1, 1998 for the gasoline fueling and dispensing equipment. This case was closed as of December 3, 1998.

2. On January 26, 2002, the Zoo was reported for installing and operating a stationary emergency internal combustion engine and two portable internal combustion engines installed in June 2000 without a valid permit to construct and/or operate. The Zoo was considered in compliance on July 5, 2002.

3. On June 24, 2005, the Zoo was reported for failure to maintain gas equipment in good working condition, as a phase II dispensing hose was recorded as torn/cracked (greater than 5 inches). This is also a violation of permit requirement to maintain permitted equipment in proper order. The case was closed as of December 14, 2005, with the Zoo recorded as in compliance.

4. On December 11, 2006, a notice of violation was filed due to operation of a diesel fueled portable internal combustion engine without a valid permit to operate. The Zoo was recorded as in compliance, and the case was closed as of September 27, 2011.

**Transport of Hazardous Materials**

The transport of hazardous materials through the City is regulated by the CHP and Caltrans. As regional transportation corridors, I-5 and SR-134 provide regional routes through northeast Los Angeles and are used for transport of the hazardous materials listed above (e.g., gasoline, propane) to the Zoo. In addition, within the Project vicinity, there are primary streets over which hazardous materials are routinely transported, such as Zoo Drive.
and Western Heritage Way. The LACoFD Health Hazardous Materials Division maintains a list of registered hazardous waste transporters and the types of wastes that they are authorized to transport.

### 3.9.2 Impact Assessment Methodology

#### Significance Thresholds

According to Appendix G of the State CEQA Guidelines, a project would have a significant impact related to hazardous materials or wastes if it would:

- a. create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- b. create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involved the release of hazardous materials into the environment;
- c. emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- d. be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- e. for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area;
- f. impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- g. expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

In addition to the thresholds identified in Appendix G, the City CEQA Thresholds Guide holds that a project would normally have a significant impact if it would:

- h. be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area.

Non-applicable threshold(s):

- Thresholds (e) and (h) (Private Air Strip and Public Airport): The nearest public airport to the Project site is the Bob Hope Airport (BUR), located approximately 4.4 miles northwest of the Zoo. Los Angeles International Airport (LAX) is located approximately 15 miles southwest. The Zoo is not within the Runway Protection Zones (RPZs) or the Area of Influence (AIA) of either BUR or LAX according to the Los Angeles County ALUP (Los Angeles County Airport Land Use Commission (ALUC) 2004). Further, there are no private airstrips in the vicinity of the Project.
site. The Dreamworks Heliport Glendale is a private heliport located approximately 0.5 miles north of the Project site; however, as described in Section 3.9.1, this heliport is located outside of the FAA’s recommended 280-foot HPZ. Therefore, the proposed Project would not result in a safety hazard for people visiting or working at the Zoo and this issue is not analyzed further in this EIR.

- Threshold (g) *(Wildfire)*: Potential hazards associated with wildfire in the Project vicinity are discussed in Section 3.17, *Wildfire*. Therefore, this issue is not discussed in this section.

**Methodology**

The methodology used in this assessment includes review of available information and site reconnaissance to assess the potential presence of hazards and hazardous materials within the Project site and vicinity. The information obtained from the records review and site reconnaissance were included in a site-specific Phase I Hazardous Materials Assessment prepared by Ninyo & Moore and peer reviewed by a Hazardous Materials Specialist from Wood Environment & Infrastructure Solutions, Inc. (Wood) in October 2019. The records search consisted of a computerized, environmental information database search performed by Environmental Data Resources Inc. (EDR) on April 3, 2019. The search included applicable federal, state, tribal, and local regulatory agency databases. The records review also included a historical record search, which consisted of evaluating historical fire insurance maps, historical aerial photographs, and topographic maps. In addition, a site reconnaissance was conducted on August 13, 2019 to obtain information indicating the potential for recognized environmental conditions (RECs) in connection with the Project site. The site reconnaissance consisted of walking on site access roads and entering site structures to observe potential RECs, if any. The site reconnaissance did not include observation of the interior of properties outside of the Project site boundaries.

The following analysis evaluates potential effects related to hazards and hazardous materials resulting from implementation of the Project. The impact analysis assesses direct and indirect impacts related to hazards and hazardous materials from implementation of the near-term and long-term phases under the proposed Vision Plan (refer to Section 3.0, *Methodology*), given the existing conditions described above, and determines whether they would exceed any of the thresholds listed below.

### 3.9.3 Environmental Impacts Analysis

| HAZ-1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? |

**Construction**

Construction of the proposed Vision Plan components would require transportation, use, storage, and disposal of small quantities of commercially available hazardous materials.
Construction of the proposed Project components would involve the use of potentially hazardous materials, including vehicle fuels, oils, transmission fluids, and hydraulic fuels. However, applications of such materials would likely be in limited quantities (i.e., not commercially reportable) and would be handled in compliance with federal, state, and local regulations pertaining to their transport, use, or disposal. As such, the potential for hazardous materials release would be limited to disturbance of contaminated soil during ground-disturbing activities (see HAZ-2 below) and accidental spill of chemicals, petroleum, oils, and lubricants within the construction staging areas on the Project site or transportation routes.

The transport of potentially hazardous materials would continue to occur on I-5, SR-134, and local streets, such as Zoo Drive or Crystal Springs Drive. The transport of large quantities of hazardous materials is subject to applicable federal, state, and local regulations to reduce the risk of accidental spills, leaks, fire, or other hazardous conditions. Further, appropriate documentation for all hazardous materials that are transported in connection with individual Project construction activities would be provided as required for compliance with the existing hazardous materials regulations described in Section 3.9.1, Regulatory Setting. The U.S. Department of Transportation, Office of Hazardous Materials Safety prescribes strict regulations for the safe transportation of hazardous materials, as enforced by the CHP and Caltrans. Compliance with applicable regulations as well as oversight by the appropriate federal, state, and local agencies would minimize the risk of hazardous materials exposure during transport. Therefore, the proposed Vision Plan would result in a less than significant impact with regard to the transport of hazardous materials.

Federal, state, and local regulations govern the disposal of hazardous wastes. ACM, LBP, contaminated soils, or other hazardous material encountered during demolition or construction activities would be disposed of in compliance with all pertinent regulations for the handling of such waste including SCAQMD Rule 1403 (asbestos) and CCR Title 8, Industrial Relations. Therefore, the proposed Vision Plan would result in a less than significant impact with regard to the disposal of hazardous waste.

**Operation**

The Zoo’s operational use, storage, and disposal of hazardous materials, substances, and waste would be similar to existing conditions. Operation of the proposed Project would continue to include existing routine cleaning and maintenance procedures using chemicals such as cleaners, paints, solvents, vehicle fuels, etc. Additionally, the Zoo would continue to utilize potentially hazardous materials (i.e., pesticides, herbicides, etc.) for landscaping and cleaning purposes. However, projected growth at the Zoo (refer to Section 3.0, Methodology) would require an increase in the use of operational equipment and materials, particularly during the near-term phases due to implementation of the proposed Zoo Entry, California planning area, Rainforest planning area, Africa planning area, and associated service areas. Potentially hazardous materials that would be used and stored in the Zoo
would be typical of those found currently at the Zoo (e.g., paints, fuels/lubricants, cleaning solvents, adhesives, sealers, and pesticides/herbicides) and would be consistent with what already occurs in the Zoo. Additionally, operation of the designated service area at the southern boundary of the Zoo would provide a visitor-restricted area for hazardous materials and waste storage, rather than several locations throughout the Zoo.

All hazardous materials used onsite would be subject to all applicable regulation and documentation for the handling, use, and disposal of such materials consistent with all appropriate federal, state, and local regulations and standards established by the U.S. EPA, CalEPA, SCAQMD, Los Angeles County, and the City to protect the public health and safety as described in Section 3.9.1, Regulatory Setting. Businesses are required to comply with health and safety and environmental protection laws and regulations, including the CUPA program as administered by the LAFD. The CUPA program requires that businesses handling or storing certain amounts of hazardous materials prepare a Business Emergency Plan that includes an inventory of hazardous materials stored onsite, an emergency response plan, and procedures to be used in the event of a significant or threatening significant release of a hazardous material. The LAFD maintains all public records regarding the use and storage of hazardous materials and conducts routine annual inspections to ensure that hazardous materials are handled and stored properly. If necessary, appropriate permits, worker training, and agency inspections would be obtained and provided. Implementation of standard good housekeeping measures, best management practices (BMPs), site maintenance and security precautions, as well as compliance with standards and regulations would ensure potential impacts related to the routine transport, use, or disposal of hazardous materials are less than significant.
HAZ-2: Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involved the release of hazardous materials into the environment?

Construction

Off-site Contamination Migration to the Site

The Project site is located near multiple regulated hazardous material sites, including one LUST with a closed status and one Superfund cleanup site that was opened in January 1984, and is undergoing continuing cleanup and investigation activities. However, the contamination plume map prepared by the USACE Seattle District in September 2018 locates the nearest edge of the plume approximately 0.11 miles (600 feet) northeast of the eastern portion of the Zoo parking lot. Therefore, the nearest Project component to the Superfund site is the Phase 7 parking structure, which would not be implemented until 2037. It is unlikely that existing contaminants identified on other nearby sites would have an impact on the Project site, due to distance, hydraulic gradient in relation to the Project site, or due to past cleanup efforts. These findings are consistent with the regulatory database search executed as part of the Phase I Hazardous Materials Assessment (see Appendix K).

In addition to existing hazardous materials sites in the vicinity of the Project site, the Grayson Power Plant has the potential to affect the Project site due to the risk of release of hazardous materials. Use, handling, and transport of hazardous materials associated with energy production at the plant has the potential to impact workers and the public if not handled and contained properly. Additionally, the potential exists for fuels, oil, and grease to drip from equipment or spill if not conducted properly. However, spills are limited to the immediate area and spill response plans would address containment and clean up; therefore, it is unlikely that the volume of spills will travel beyond the immediate area of the spill and impact offsite receptors such as the Zoo. Therefore, it is unlikely that off-site contamination would affect the Project site and impacts would be less than significant.

ACM and LBP

The proposed Project would involve the demolition and renovation of several buildings at the Zoo that were constructed before 1970. Due to the age of the buildings, there is a potential for hazardous materials such as ACM and LBP to be present onsite. As such, the potential exists that workers or the public could be exposed to these materials during demolition of the onsite buildings and hauling of debris materials. The Phase II Environmental Site Assessment (ESA) required under MM HAZ-1 would identify the potential presence of ACM and LBP in the buildings proposed for demolition or renovation under the Vision Plan. If asbestos is detected during the Phase II ESA, compliance with SCAQMD Rule 1403 would be required, which would require the abatement and control of ACM prior to demolition. Similarly, CCR Title 8, Industrial Relations would require the
removal and control of LBP prior to demolition. Additionally, standard BMPs would be applied, as necessary (e.g., protective equipment, fugitive dust controls etc.). If not properly abated, the accidental release of asbestos and/or lead could pose a hazard to the environment and public health. However, with the implementation of appropriate mitigation, impacts associated with ACM and LBP would be less than significant with mitigation.

**Soil Contamination**

Potential contamination from the USTs located adjacent to the South Parking area and Autry Museum may be disturbed during implementation of the circulation improvements at Zoo Drive and Western Heritage Way during Phase 1 of the Project. However, no reports of contamination were recorded for the UST north of the Autry Museum and the LUST case reported at the South Parking area has been closed since June 2000.

The fueling station located within the visitor-restricted Zoo Construction Shop and Support area is considered a REC and VEC due to the potential release of petroleum products to the subsurface from the fueling dispensers, USTs, and associated piping, which have operated for over 20 years. No other RECs are located at the Project site. The Project construction and demolition activities would not affect the existing REC at the Zoo’s fueling station and it would continue to operate under existing regulations and maintenance requirements. Due to the fueling station’s location, the areas planned for Zoo development under the Vision Plan that may be affected by the VEC include Condor West, the Construction Shop and Support area, the Gottlieb Animal Health and Conservation Center, and the northwest corner of the Africa planning area. The proposed redevelopment of the southwestern portion of the Project site to construct the Africa planning area is a near-term improvement planning to occur during Phase 3 of the Vision Plan (2027). The proposed improvements to Condor West, the Construction Shop and Support area, and the Gottlieb Animal Health and Conservation Center are long-term improvements planned for Phase 4 of the Vision Plan (2030). As such, ground-disturbing activities (i.e., excavation, trenching, grading) during these Project components has the potential to disturb historic contaminated soil and hazardous vapors. Following Phase 4 of the Vision Plan, no soil contamination or hazardous vapors are anticipated to be encountered during construction or operation.
Implementation of **MM HAZ-1** would require a Phase II ESA to evaluate the presence of hazardous soil contamination and vapor intrusion in the vicinity of the existing fueling station, the South Parking area, and north of the Autry Museum prior to demolition and grading activities. In the event that the Phase II ESA identifies soil and/or groundwater contamination at or above regulatory levels, implementation of **MM HAZ-2** would require remediation activities prior to the issuance of grading permits to ensure no adverse impacts from exposure to soil contamination. Implementation of **MM HAZ-1** and **MM HAZ-2** would reduce potential impacts related to the REC and VEC at the fueling station to less than significant. Therefore, impacts related to the potential for exposure to hazardous soil contamination or vapors under the Vision Plan would be *less than significant with mitigation*.

**Operation**

**Hazardous Materials and Wastes**

Operational impacts related to hazardous materials, substances, and wastes are not considered significant as the types and amounts of potentially hazardous materials used and stored for operation of the proposed Project would not substantially change from existing conditions (refer to Impact HAZ-1). Users of such materials are required to follow manufacturer instructions and dispose of excess solutions and empty containers properly. Therefore, the risk of an accidental release of hazardous materials into the environment during operation of the proposed Project would be reduced and this impact would be *less than significant*.

**ATS and Funicular Safety**

Development of the proposed ATS and funicular at the Zoo would increase the potential for safety hazards associated with engineering functions. The ATS would comply with the current Safety Requirements for Passenger Tramways (ANSI B77.1) as well as CCR Title 8, Subchapter 6.1, Article 8 Wire Rope And Strand Requirements. The standards included in ANSI and CCR require tramway inspection by a qualified engineer or tramway specialist and a certificate of inspection attesting to the adequacy and safety of the installation and equipment prior to public operation of the tramway. Similarly, design, construction, operation, and maintenance of the California planning area’s funicular would comply with the current American National Standard for Funiculars—Safety Requirements (ANSI B77.2). Implementation of the current engineering design and operational standards for the proposed ATS and funicular would ensure there are no near-term or long-term safety impacts associated with operation of these structures. Therefore, incorporation of the ATS and funicular at the Zoo under the Vision Plan would result in no significant impacts to safety.
Animal Safety

Implementation of the proposed Vision Plan would result in additional animal residents at the Zoo, which increases the risk for escape and safety hazards. Many of the existing animal enclosures at the Zoo were constructed prior to 1980 and are outdated. The Vision Plan proposes to construct updated animal enclosures at various exhibits throughout the Zoo. All new animal enclosures would be constructed in compliance with current AZA structural engineering and design standards to include safety measures, such as safety entrances and emergency lighting.

Additionally, the Zoo currently maintains operational procedures pursuant to the AZA Accreditation Standards and Related Policies in order to protect the safety of the animals, zookeepers, and Zoo visitors alike. Under operation of the Vision Plan, the Zoo would continue to comply with existing safety procedures. Therefore, safety hazards related to Zoo animals would not occur due to implementation of the Vision Plan, and safety impacts would be less than significant.

HAZ-3: Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The only school located within 0.25 miles of the proposed Project site is the North Hollywood High School Magnet Center located in the southwest portion of the Zoo's parking lot. Based on a review of the Los Angeles Unified School District (LAUSD) website, new schools are not proposed within the vicinity of the Zoo.

Construction

The proposed Project components that would be implemented in the immediate vicinity of the North Hollywood High School Magnet Center are the circulation and parking improvements and Zoo Entry renovation in Phase 1 and the parking structure proposed for Phase 7. Adverse impacts resulting from incidental hazardous spills during near-term and long-term construction activities may be potentially significant depending on the location, extent, and duration of the spill. However, all construction activities associated with the proposed Project components would comply with applicable federal, state, and local regulations relating to protection of the public and the environment from exposure to hazardous materials. Further, MM HAZ-1 would require the preparation of a Phase II Environmental Site Assessment (ESA) to ensure no adverse impacts related to hazardous emissions or spills would occur during implementation of the proposed near-term and long-term improvements. As such, construction impacts related to hazardous emissions and hazardous materials, substances, and waste within 0.25 miles of a school would be less than significant with mitigation.
3.9 Hazards and Hazardous Materials

**Operation**

After construction is complete and the heavy equipment is removed from the Project site, the potential for hazardous spills would be low and similar to existing conditions at the Project site. As previously described, the Zoo would continue to operate similarly to existing conditions under the Vision Plan. As such, the Zoo would continue to use, store, and dispose of hazardous materials, substances, and waste in accordance with applicable federal, state, regional, and local policies and regulations. Therefore, operational impacts related to hazardous emissions and hazardous materials, substances, and waste within 0.25 miles of a school would be less than significant.

HAZ-4: Would the project be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

While the Project site is included on several databases for its operation as a small quantity generator of hazardous waste, the Zoo is not included on the DTSC EnviroStor or the SWRCB GeoTracker databases compiled pursuant to Government Code Section 65962.5. As described in Section 3.9.1, Existing Setting, the Project site is located in proximity to one site listed on the SWRCB GeoTracker database and one site listed on the DTSC EnviroStor database. The GeoTracker-listed site is a property located adjacent to the southwest corner of the Zoo parking lot at 4730 Crystal Springs Drive. This property is permitted for a UST. The Historic UST database documents the presence of six USTs at the site (refer to Section 3.9.1, Existing Setting, above). Additionally, the City’s Department of Recreation and Parks listed the site on the GeoTracker website for a LUST case, involving an unauthorized release of gasoline to the soil on March 18, 1992. The case was considered closed as of June 27, 2000. Due to the closed status of the listing, this site is not considered a concern to the Project site.

Implementation of Phase 1 of the proposed Vision Plan would include the reconfiguration of Crystal Springs Drive along the periphery of the Zoo parking lots, which would affect the area adjoining the GeoTracker-listed LUST site. As such, ground-disturbing activities associated with grading for the reconfigured road would increase the risk of disturbing potentially contaminated soil. In the event that contamination is observed during construction activities, implementation of MM HAZ-2 would be implemented to ensure contaminated soils are properly removed, handled, and transported to an appropriately licensed disposal facility, in accordance with local and state regulations. Therefore, impacts from implementation of near-term improvements included in the proposed Vision Plan would be less than significant with mitigation.

In addition to the LUST, a property located approximately 0.1 miles northeast of the Zoo parking lot is listed on the DTSC EnviroStor database as “State Guard Air Field” and is reported as a Site Cleanup. This cleanup site is likely associated with the former Griffith
3.9. Hazards and Hazardous Materials

Park Aerodrome previously located on the eastern portion of the Project site (i.e., Zoo parking lot) and to the northeast of the Project site. The case status was listed as “needs evaluation as of July 1, 2005.” As no leaks or spills are reported for this site, this listing is not considered an environmental concern to the Project site. However, similar to the proposed road configuration, implementation of MM HAZ-2 would be implemented if contaminated soils are encountered during ground-disturbing activities associated with the proposed parking structure on the northeast corner of the Project site in Phase 7. Therefore, impacts from implementation of long-term improvements included in the proposed Vision Plan would be less than significant with mitigation.

With implementation of MM HAZ-2, near-term and long-term construction activities associated with the Project would have a less than significant impact to sites included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5, and as such, would not create a significant hazard to the public or the environment.

HAZ-5: Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Zoo maintains emergency preparedness procedures in the event of an emergency and/or evacuation in accordance with the AZA Accreditation Standards and Related Policies (AZA 2019a). The Project lies within the service area of the LAFD and would be built in accordance with applicable building and fire codes to meet current fire protection standards. The Project components would be built in compliance with the applicable state and City building, fire, and emergency access codes. Additionally, I-5 and SR-134, both adjacent to the Project site, are designated Primary Disaster Routes by the County of Los Angeles (County of Los Angeles DPW 2013). The Project does not propose changes, obstructions, or reconfigurations to public evacuation routes, so the Project would not result in physical interference or impairment to implementation of this existing emergency and evacuation plan. Construction activities associated with the proposed Project would add vehicles (e.g., construction equipment, worker vehicles, etc.) to regional and local roads that could increase congestion. However, emergency access would be maintained during implementation of near-term and long-term improvements to the maximum extent feasible during construction and impacts related to emergency access would be less than significant (see Section 3.15, Transportation and Circulation, and Section 3.17, Wildfire). Therefore, Project implementation would not impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan. Please also see Section 3.13, Public Services for analysis of increased demand on emergency response services (e.g., fire and police protection).
3.9 Hazards and Hazardous Materials

3.9.4 Mitigation Measures

**MM HAZ-1 Phase II Environmental Site Assessment (ESA)**

Prior to Project implementation, the City shall prepare a Phase II ESA to address the following:

- **Potential soil contamination around known USTs on site.** Prior to ground-disturbance, a qualified environmental specialist (e.g., a licensed Professional Geologist [PG], a licensed Professional Engineer [PE] or similarly qualified individual) shall perform soil sampling and analysis to determine whether contamination exists and, if so, the extent of contamination from the following UST locations within the Project site; if contaminants are detected in soil at or above regulatory levels, then the results of the soil sampling shall be reviewed and acted upon by the LAFD and other regional or state regulatory agencies as needed:
  - The fueling station in the Zoo Construction Shop and Support area
  - West of the South Parking Area
  - North of the Autry Museum.

- **ACM, LBP, and Molds in Buildings.** Prior to any building demolition, the City shall conduct a comprehensive survey of ACM, LBP, and molds. If such hazardous materials are found to be present, the Zoo shall follow all applicable local, state and federal codes and regulations, as well as applicable best management practices, related to the treatment, handling, and disposal of ACM, LBP, and molds to ensure public safety.

If the Phase II ESA identifies contamination at or above regulatory levels, prior to the issuance of grading permits for development, it shall be the responsibility of the Zoo to conduct and conclude all investigation and/or remediation activities under the oversight of the applicable regulatory agency (e.g., LAFD, DTSC, SWRCB). Remediation shall be accomplished in accordance with the requirements of the appropriate oversight agency. No Project construction shall occur in the affected area until case closure reports have been approved by the appropriate oversight agency.

**MM HAZ-2 Discovery of Contamination**

In the event that previously unknown or unidentified soil and/or groundwater contamination that could present a threat to human health or the environment is encountered during construction at a development site, construction activities in the immediate vicinity of the contamination shall cease immediately. At the start of construction, all construction contractors shall be instructed to immediately stop all subsurface activities in the event that potentially hazardous materials are encountered, an odor is identified, or significantly stained soil is visible. Contractors shall be instructed to follow all applicable regulations regarding discovery and response for hazardous materials.
encountered during the construction process. A qualified environmental specialist (e.g., a licensed PG, a licensed PE or similarly qualified individual) shall investigate to identify and determine the level of soil and/or groundwater contamination.

If contamination is encountered, a Human Health Risk Management Plan shall be prepared and implemented that: (1) identifies the contaminants of concern and the potential risk each contaminant would pose to human health and the environment during construction and post-development, and (2) describes measures to be taken to protect workers, and the public from exposure to potential site hazards. Such measures could include a range of options, including, but not limited to, physical site controls during construction, remediation, long-term monitoring, post-development maintenance or access limitations, or some combination thereof. Depending on the nature of contamination, if any, appropriate agencies shall be notified (e.g., LAFD). If needed, a Site Health and Safety Plan that meets Occupational Safety and Health Administration requirements shall be prepared and in place prior to commencement of work in any contaminated area.

### 3.9.5 Impacts Summary

With implementation of mitigation measures MM HAZ-1 and -2, impacts to potential hazards and hazardous materials would be less than significant. Therefore, significant unavoidable adverse impacts to hazards and hazardous materials would not occur.