

4.8 HAZARDS AND HAZARDOUS MATERIALS

4.8.1 INTRODUCTION

This section describes the existing hazardous materials within the vicinity of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed SDSU New Student Housing Project (project or proposed project). The analysis contained herein is primarily based on the Hazards and Hazardous Materials Technical Report for the proposed project, prepared by Dudek in March 2017 (included as **Appendix H**), as well as design information provided by SDSU.

4.8.2 METHODOLOGY

The Hazards and Hazardous Materials Technical Report summarizes potential hazards and hazardous materials environmental concerns associated with the project. The potential environmental concerns were identified by reviewing available online regulatory files, a previous Phase I Environmental Site Assessment (ESA) prepared by Dudek in 2007, and a database report prepared by EDR. The EDR database report includes the following, and are included as separate Appendices within **Appendix H**: search of regulatory records (EDR Radius Report), historical aerial photographs and topographic maps, Sanborn fire insurance maps, and City Directory listings.

4.8.3 EXISTING CONDITIONS

General topographic information for the project site and project area was obtained from the EDR Radius Report and the U.S. Geological Survey topographic map for La Mesa, California, as well as Google Earth (**Appendix H**). The project area is located in the upper elevations of a mesa and valley south of Alvarado Canyon. The elevation of the project site ranges from approximately 300 feet to 400 feet above mean sea level (**Appendix H**). The project site generally slopes toward the valleys located on the northern, eastern, and western property boundaries (**Appendix H**).

The EDR Radius Report indicates that the soil at the project site consists of the Olivenhain soil series, a cobbly loam (**Appendix H**). No oil or gas wells were noted within 1 mile of the project site as shown on the California Division of Oil, Gas, and Geothermal Resources online mapping tool (DOGGR 2017).

According to the Flood Insurance Rate Map (No. 06073C1639H, revised May 12, 2012), the project site is not located within a 100-year flood zone (FEMA 2012).

Wetlands are located in the canyons along the western and northern portions of the project site, as mapped in the EDR Radius Report (**Appendix H**).

Dudek reviewed reports for nearby sites on Geotracker (SWRCB 2017), the California Water Quality Control Board's online database, to determine the depth to groundwater and groundwater flow direction in the vicinity of the project site. Recent groundwater data was not available for the nearby sites. In 1997, a site located approximately 0.63 mile northwest of the project site reported depth to groundwater ranging from 11 feet to 31 feet below ground surface (bgs) with a southerly flow direction. In 1996/1997, two sites located approximately 0.5 mile southeast of the project area reported depth to groundwater of 50 feet bgs with a northerly flow direction. Based on this information, it is likely that groundwater at the project site would flow to the north, toward Alvarado Canyon.

4.8.3.1 REGULATORY AGENCY DATABASE FINDINGS

The regulatory database listings identify sites within a 1-mile radius of the project site that are known to be chemical handlers, hazardous waste generators, or polluters. Information in these listings includes the location of the site relative to the project site, sources of pollution, and the status of the site listing. EDR conducted the search for this assessment in January 2017. The information from the EDR Radius Report is discussed in this section. The complete database search report is included as part of **Appendix H**.

The project site was not listed in any of the databases searched by EDR. **Table 4.8-1** lists the databases accessed.

A total of 14 unique sites were identified in the database search within 1 mile or less of the project site. Additionally, 15 unique sites were listed as unmapped. Upon further research, it was determined that the unmapped sites were either not located within 1 mile of the project site or were not listed in databases indicative of a release. Thus, it is unlikely that these unmapped sites have impacted the environmental conditions of the project site and, as such, are not discussed further in this report. The databases that were searched, and number of sites identified within those databases, are discussed below in **Table 4.8-1**.

**Table 4.8-1
Regulatory Databases Searched**

| Acronym | Database | Search Distance | Site Listed? | Number of Sites Listed |
|-----------------------|--|-----------------|--------------|------------------------|
| NPL | National Priorities List (NPL; including proposed NPL sites) | 1 mile | No | 0 |
| Delisted NPL | NPL Deletions | 1 mile | No | 0 |
| CERCLIS -SEMS | Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) – Superfund Enterprise Management System | 0.5 mile | No | 0 |
| CERCLIS –SEMS Archive | CERCLA – Superfund Enterprise Management System, Archive | 0.5 mile | No | 0 |
| CORRACTS | Resource Conservation and Recovery Act (RCRA) Corrective Action | 1 mile | No | 0 |
| RCRA TSDF | RCRA - Transportation, Storage, and Disposal | 0.5 mile | No | 0 |
| RCRA GEN | RCRA registered small or large generators of hazardous waste | 0.25 mile | No | 0 |
| RCRA-LQG | RCRA Large Quantity Generators | 0.25 mile | No | 0 |
| RCRA-SQG | RCRA Small Quantity Generators | 0.25 mile | No | 0 |
| RCRA-CESQG | RCRA Conditionally Exempt Small Quantity Generators | 0.25 mile | No | 0 |
| ERNS | Emergency Response Notification System | Target Property | No | 0 |
| US ENG CONTROLS | Sites with Engineering Controls | 0.5 mile | No | 0 |
| US INST CONTROLS | Sites with Institutional Controls | 0.5 mile | No | 0 |
| RESPONSE | State- and Tribal-Equivalent NPL | 1 mile | No | 0 |
| ENVIROSTOR | State- and Tribal-Equivalent CERCLIS | 1 mile | No | 2 |
| SWF/LF | State and Tribal Landfill and/or Solid Waste Disposal Site | 0.5 mile | No | 0 |
| LUST | State and Tribal Leaking Storage Tank | 0.5 mile | No | 11 |
| SLIC | State and Tribal Leaking Storage Tank | 0.5 mile | No | 2 |
| Indian LUST | State and Tribal Leaking Storage Tank | 0.5 mile | No | 0 |
| UST | State and Tribal Registered Storage Tank | 0.25 mile | No | 0 |
| AST | State and Tribal Registered Storage Tank | 0.25 mile | No | 0 |
| Indian UST | State and Tribal Registered Storage Tank | 0.25 mile | No | 0 |
| FEMA UST | State and Tribal Registered Storage Tank | 0.25 mile | No | 0 |
| LUCIS | Institutional Control/Engineering Control | 0.5 mile | No | 0 |
| Indian VCP | State and Tribal Voluntary Cleanup | 0.5 mile | No | 0 |
| VCP | State and Tribal Voluntary Cleanup | 0.5 mile | No | 0 |
| US Brownfields | State and Tribal Brownfields | 0.5 mile | No | 0 |
| SWEEPS UST | Statewide Environmental Evaluation and Planning System Underground Storage Tank | 0.25 mile | No | 0 |
| HIST UST | Historical Underground Storage Tank | 0.25 mile | No | 0 |
| HIST CORTESE | Historical Hazardous Waste and Substances List | 0.5 mile | No | 4 |

**Table 4.8-1
Regulatory Databases Searched**

| Acronym | Database | Search Distance | Site Listed? | Number of Sites Listed |
|----------------------------------|--|-----------------|--------------|------------------------|
| EDR Hist Auto | Historical Gas Stations | 0.125 mile | No | 0 |
| RGA LUST | Recovered Government Archives Leaking Underground Storage Tank | Target Property | No | 0 |
| Additional Environmental Records | | Varies | No | 13 |

Each of the 14 unique sites identified in the EDR Radius Report within 1 mile of the proposed project are listed in various databases. Of these 14 sites, 8 are listed in the CA Notify 65 database, which is a database that is associated with permitting and is not indicative of a release. Thus, sites on the CA Notify 65 database are not likely to impact the environmental conditions of the project area. The remaining six sites in databases other than the CA Notify 65 are discussed below.

- SDSU, 5500 Campanile Drive, is listed in federal and state databases, is located approximately 0.35 mile southeast of the project site. The databases are: CA LUST, CA SAN DIEGO CO. SAM, CA UST, CA AST, CA San Diego Co. HMMD, CA EMI, CA ENF, CA NPDES, RCRA-LQG, CA SWEEPS UST, CA HIST UST, PADS, FINDS, CA HIST CORTESE, NY MANIFEST, and ECHO. The following database entries contain informational/permit data and do not contain information related to environmental impacts to the project area and are, therefore, not discussed: CA AST, CA EMI, CA NPDES, RCRA-LQG, SWEEPS UST, HIST UST, PADS, FINDS, NY MANIFEST, and ECHO. The CA ENF listing indicates violations related to waste discharge requirements (sewer system); no additional information was included in the listing. The CA UST listing indicates that 21 underground storage tanks (USTs) were present; 8 of the USTs were installed between 1976 and 1984; the others did not have installation years reported. All but two of the USTs were reported as removed. The two reportedly active USTs are one 12,000-gallon gasoline and one 4,000-gallon diesel. The San Diego Co. HMMD listing documented violations at the site including: red bags not labeled/containerized; inadequate Hazardous Materials Business Plan inventory; incomplete monthly inspections; unlabeled and open containers of fuel filters; inadequate contingency plan; waste stored on site exceeding allowable time; unlabeled waste containers; unauthorized waste disposal; inadequate employee training; failure to report manifests to California Department of Toxic Substances Control (DTSC); operating a Transportation, Storage, or Disposal Facility without a permit; no secondary containment tests; unreported release/threatened release; improper waste accumulation;

obstruction of aisle space; fire release not minimized; alarm not monitored; illegal disposal of universal waste; no warning signs posted; unsanitary containers; and an uncalibrated thermometer. The CA LUST, CA HIST CORTESE, and San Diego Co. SAM listings indicate that three soil-only releases were reported at the site. The releases were closed in 1989, 1997, and 1998 and are further summarized in **Table 4.8-2** below.

Table 4.8-2
Regulatory Agency Case Listings for 5500 Campanile Drive

| Case Number | Location | Address | Impacts to the Project Site | Notes |
|-------------|-------------------------------|---|--|--|
| H15140-001 | 0.41 mile NE of project site | Physical Plant and Engineering Building | Unlikely. Release to soil only. Case closed in 1989. | Chapultepec Hall was built sometime between 1989 and 1994. Parking lot 9 was constructed on the southeast portion of the project site prior to the construction of Chapultepec Hall; it is unlikely that USTs were used in conjunction with the parking lot. |
| H15140-002 | 0.65 mile SE of project site | 6125 Montezuma Road | Unlikely. Release to soil only. Case closed in 1997. | The release was reported at the Zura Residence Hall and it not likely to impact the project site. |
| H15140-003 | 0.45 mile ENE of project site | Chemistry Geological Sciences Building | Unlikely. Release to soil only. Case closed in 1998. | The release was reported at the Chemistry Geological Sciences Building on Aztec Circle. It is not likely that this release has impacted the project site. |

- Unocal Service Station #3991 (also listed as Unocal), 5140 College Avenue, is located 0.25 to 0.50 mile southeast of the project site. The site was identified in the CA LUST, CA SWEEPS UST, CA HIST UST, CA HIST CORTESE, CA SLIC, CA HAZNET, CA San Diego Co. HMMD, and CA SAN DIEGO CO. SAM databases. The CA HAZNET and HIST UST database entries contain informational/permit data and do not contain information regarding environmental impacts to the project area and, therefore, are not discussed. The CA SWEEPS UST and San Diego Co. HMMD listings indicate that USTs are present at the site. The CA LUST, CA SLIC, San Diego Co. SAM, and CA HIST CORTESE listings indicate that four releases have been reported at the site. Two of the releases were reported due to failed integrity tests and were closed in 1989 and 1995. One release of gasoline and oil to soil only was reported in 1995. According to a Case Closure Summary document reviewed on Geotracker, approximately 526 cubic yards of impacted soil was excavated and disposed of off-site. The document also reports that an estimated 2,500 cubic yards of contaminated soil from 10 feet to 40 feet bgs are in place at the site; this case was closed in 2005. The remaining LUST case at the site is reported as an open remedial investigation site. Dudek spoke with the San Diego County Site Assessment and Mitigation Division (SAM) regarding this case during preparation of

another hazards report in 2006 (Dudek 2006). The open case listing is for the impacted soil that remains in the ground. While there is currently no anticipated human health risk, as the site is covered with asphalt, the case is listed as open so that the impacted soil is properly dealt with, should there be construction in the future.

- College Mobil Service (also reported as Former Mobil Station 18-EHB), 5130 College Avenue, is located 0.25 to 0.50 mile southeast of the project site. The site is listed in the CA HIST CORTESE, CA LUST, CA San Diego Co. HMMD, and CA SAN DIEGO CO. SAM databases. The San Diego Co. HMMD listing indicated that an inspection was conducted on February 2, 1995; no violations were reported, and the permit is inactive. The CA HIST CORTESE, CA LUST, and CA SAN DIEGO CO. SAM databases indicated that three releases have been reported for the site. Two of the cases were reported as oil releases to soil only and were closed in 2000 and 2002. The remaining case was reported as a gasoline release to groundwater; the case was opened in 1992 and site closure was granted in 2000. Aerial photographs show that the site was redeveloped sometime after 1995 and again in 2015 (Google Earth 2017). Based on the distance from the project area, the case status (closed), and the redevelopment of the site, this site does not appear to have impacted the environmental conditions of the project area.
- College ARCO (also reported as Obrien Pacific Inc., Chevron, and Edward Cramer), 5111 College Avenue, is located 0.25 to 0.50 mile east-southeast of the project site. The site was identified in the CA LUST, CA SWEEPS UST, CA San Diego Co. HMMD, CA SAN DIEGO CO. SAM, CA HIST CORTESE, CA SLIC, and CA EMI databases. The CA EMI and San Diego Co. HMMD database entries contain informational/permit data and do not contain information regarding environmental impacts to the project area and, therefore, are not discussed. The CA SWEEPS UST listing indicates that USTs are present at the site. The CA HIST CORTESE, CA LUST, CA SLIC, and CA SAN DIEGO CO. SAM databases indicate that four releases have been reported for the site. Two of the cases were reported as oil releases to soil only and were closed in 1990 and 1991. The remaining cases were reported as gasoline releases to groundwater; these cases were closed in 1990 and 2001. Based on the distance from the project area and case status (closed), this property does not appear to have impacted the environmental conditions of the project area.
- Chevron Station (Former), 4525 Waring Road, is located 0.50 to 1 mile north-northwest of the project site. The site was identified in the CA HIST CORTESE, CA LUST, CA SLIC, CA SWEEPS UST, CA San Diego Co. HMMD, and CA ENVIROSTOR databases. The SWEEPS UST database reports four active USTs at the site, but the San Diego Co. HMMD reports the USTs as removed in 1988. The CA HIST CORTESE, CA LUST, and CA SLIC databases indicated that three releases/cases have been reported for the site—two releases to groundwater and one unknown release. One of the release cases reported groundwater depths ranging between 11 and 31 feet bgs with a southerly flow direction;

this case was closed in 1998. The other groundwater release case was also closed in 1998. According to a document reviewed on Geotracker, the remaining case was listed in the CA LUST and CA ENVIROSTOR databases and was reportedly initiated due to a change in land use from commercial to residential; the DTSC transferred the case to the County in August 2004. A letter from the County indicated that the cleanup goals were previously established and the case was closed in October 2004. Based on the distance from the proposed project and case status (closed), this site does not appear to have impacted the environmental conditions of the project area.

- Fuji Trucolor Inc.-San Diego, 4782 Alvarado Canyon Road, is located 0.50 to 1 mile west-northwest of the project site. The site was identified in the CA SLIC, CA ENVIROSTOR, and CA SAN DIEGO CO. SAM databases. The CA ENVIROSTOR database listing indicates that the site was enrolled in the tiered permit program, but the status is reported as Inactive – Needs Evaluation. The CA SLIC and CA SAN DIEGO CO. SAM database listings report a release of silver to soil reported in March 2006. According to a document reviewed on Geotracker, the silver concentration was below the preliminary remediation goals, and the case was subsequently closed in July 2006. Based on the type of release (soil only), case status (closed), and distance from the project area, this site does not appear to have impacted the environmental conditions of the project area.

4.8.3.2 SITE HISTORY

Historical Sanborn fire insurance maps were requested from EDR. Sanborn maps provide information regarding the historical uses of the project area and surrounding properties. However, Sanborn fire insurance maps were not found for the project area (**Appendix H**).

City directory listings were requested from EDR as another source of historical information. Historical City directories were reviewed for the period from 1903 to 2013. The address 5400 Remington Road was listed as SDSU in 2013. In 2000, the address 5410 Remington Road was listed as “SDU RSDNC” and “Chapultpc.” No other listings for the project site were provided in the City directory listings.

The nearby properties were listed as residences, including apartment complexes. The City directory listings did not identify any potential environmental conditions.

4.8.3.3 AERIAL PHOTOGRAPHS

Dudek reviewed historical aerial photographs from EDR for the years 1949, 1953, 1964, 1966, 1970, 1979, 1985, 1989, 1994, 2005, 2009, 2010, and 2012 (**Appendix H**). The photographs

provided background information needed to assess the possibility of historical activities that could pose environmental concerns at the project area.

The photographs indicate that the project area consisted of unimproved areas until portions of the project area were developed with a residence hall and parking lots. The aerial photographs are described in **Table 4.8-3**.

**Table 4.8-3
Historic Uses Determined from Aerial Photographs**

| Date | Description |
|------------------------------|---|
| 1949, 1953 | Orchards or other agricultural development is present on a small portion of the southwestern project site along Remington Road. The remainder of the project area to appears to consist of unimproved land with native vegetation. The area surrounding the project site to the north and west appears to consist of vacant, undeveloped land. The area to the south and portions of areas to the east appear to have been graded/cleared of vegetation. Dirt roads are present on the adjacent properties. Construction of SDSU is visible to the east. |
| 1964 | A paved parking lot with an access road is present in the southeastern portion of the project site. A small part of the southwest portion of the project site appears to have been graded or cleared of vegetation. The area surrounding the project site has undergone extensive development. Residential houses are present to the west and multi-unit dwellings are present to the east and northeast of the project site. Sports fields and associated structures are present to the south of the project site. Remington Road and other surrounding roads have been paved. The property to the north is a steep canyon and remains undeveloped. |
| 1966, 1970, 1979, 1985, 1989 | The project site and area appear unchanged compared to the 1964 aerial photograph. Additional residential and college development is present in the project area. |
| 1994 | The Chapultepec Hall building and a building to the southeast of Chapultepec Hall are present in the central portion of the project site, west of the existing parking lot. The remainder of the project site and surrounding properties appear unchanged compared to the 1989 aerial photograph. |
| 2005 | The project site appears unchanged compared to the 1994 aerial photograph. Several structures located to the west of the sports complex (south of the project site) have been removed and replaced by tennis courts, an additional sports field, and parking. A U-shaped access road is present at the northern end of the sports complex. A parking lot was constructed to the east of the sports fields. The remainder of the surrounding project area appear unchanged from the 1994 aerial photograph. |
| 2009-2012 | The project site and surrounding project area appear unchanged as compared to the 2005 aerial photograph. |

4.8.3.4 TOPOGRAPHIC MAPS

EDR provided historical topographic maps. Historical topographic maps are another historical source that can be used to document the prior use of the property and surrounding area. Topographic maps from 1903, 1942, 1947, 1953, 1967, 1975, 1994, and 2012 were reviewed (**Appendix H**).

The topographic maps from 1903 through 1953 depict the project site and project area as undeveloped; portions of the SDSU campus are first depicted in the project area on the 1942 topographic map, with additional structures shown in subsequent years. On the 1967 topographic map, an east–west trending road is depicted on the southeastern portion of the project site; the western extent of the road curves to intersect with Remington Road. The project area in the 1967 topographic map show built-up areas, residential housing, and SDSU campus expansion. The project site and project area on the 1975 topographic map appear to be similar to the 1967 topographic map. The 1994 map depicts built-up areas on the southwestern and eastern portions of the project site. The remaining portions of the project site are depicted as undeveloped areas. The 2012 topographic map shows streets but no structures on the project area or surrounding areas.

No indications of properties that may have impacted the proposed project area were observed on these maps.

4.8.3.5 PREVIOUS REPORTS

Dudek conducted a Phase I ESA in 2007 for the SDSU Campus Master Plan Revision (Dudek 2007). Several “Areas of Focus” throughout the SDSU campus were studied as part of the Phase I ESA. One of the Areas of Focus was the U Parking Lot, which is the existing Parking Lot 9, the parking lot that is part of the proposed project.

Observations made during the site reconnaissance in 2007 included the presence of stains associated with transformers in the U Parking Lot. The staining was noted to be *de minimus*. It was also noted that SDSU Environmental Health Services manages all transformers on campus and any transformer containing polychlorinated biphenyls (PCBs) is labeled. The transformers in the U Parking Lot (currently Parking Lot 9) are not labeled.

Additional photos taken during the site reconnaissance showed areas of staining in the U Parking Lot, which is typical of parking lots. This staining was considered *de minimus*.

There were no recognized environmental conditions with respect to the U Parking Lot.

4.8.3.6 SITE RECONNAISSANCE

A site reconnaissance of the exterior of Chapultepec Residence Hall, Lot 9, Lot 10A and adjacent canyon (proposed project) was performed on March 31, 2017 by Keith Blackmon of Dudek. Site reconnaissance activities consisted of walking accessible areas of the proposed project area,

taking notes on what was observed and taking photographs. A site Reconnaissance Memorandum and related photographs are presented in **Appendix H**. A summary of the site reconnaissance is detailed below.

A cooling tower was located northeast of Chapultepec Residence Hall. One cement pad-mounted transformer was located on the eastern side of Chapultepec Residence Hall. No staining was observed near the transformer. Surface water flows to the north on the proposed project towards a storm drain located at the north end of Chapultepec Residence Hall and towards the canyon. Water was leaking from one of the pipes that provides Chapultepec Residence Hall with water. Parking Lot 9 located on the eastern side of the proposed project and Parking Lot 10A located on the western side of the proposed project are asphalt parking lots. Both lots had minor staining and cracking of asphalt. Storage containers were observed near the southwestern corner of Parking Lot 9. Surface water flows to the north on the proposed project towards a storm drain located at the north end of Chapultepec Residence Hall and towards the canyon. Small pools of water were observed in the canyon during the site reconnaissance. Distressed vegetation was observed north of Chapultepec Residence Hall towards the canyon area and down in the canyon area. Solid debris was observed in the canyon. This debris consisted of glass bottles, metal bins, wood, bricks, and old furniture. No chemical storage, hydraulic equipment, unnaturally discolored pools of water, wells or septic tanks, sumps, abnormal odors, disturbed soils or underground storage tanks were observed during the site reconnaissance. Overall, conditions were similar to those reported in the previous 2007 report (see **Section 4.8.3.5** Previous Reports).

4.8.3.7 FIRE HAZARDS

A Fire Fuel Load Analysis was completed by Dudek for the proposed project to discuss the site and its fire environment, fire risk assessment, including fire behavior modeling (see **Appendix H**).

Vegetation (Fuels)

Based on species composition and general physiognomy, the proposed student housing project site supports three land cover types: (1) native coastal sage scrub, (2) disturbed habitat, and (3) developed landscapes (**Table 4.8-4**). These vegetation communities/land cover types are described in detail in **Section 4.3, Biological Resources**.

Table 4.8-4
Project Area Vegetation Communities/Land Cover Types

| Habitat Types/Vegetation Communities | Existing Acres |
|---|----------------|
| <i>Upland Scrub and Chaparral</i> | |
| Diegan Coastal Sage Scrub (CSS) | 3.31 |
| <i>Non-native Vegetation Community/Land Cover Types</i> | |
| Ornamental Plantings (ORN) | 1.47 |
| Disturbed Habitat (DH) | 0.29 |
| Urban/Developed (DEV) | 2.92 |
| Non-vegetated Channel or Floodway (UVC) | 0.04 |
| <i>Subtotal</i> | 4.72 |
| Total | 8.02* |

Ornamental, disturbed, and developed areas account for 59% of the site acreage, and native Diegan coastal sage scrub accounts for 41% of the site acreage. The site's vegetation fire risk is primarily determined by adjacent vegetation (coastal sage scrub). The growth of vegetation types/fuel models is influenced by aspect (orientation), soil constituents, soil depth, soil moisture, and weather. The vegetation occurring on the slopes adjacent to the site represents the site's fuel load, an important component of the existing site's wildfire risk assessment. Each vegetation community corresponds to a designated fuel model (pre-determined vegetation type, densities, and structural characteristics) for fire-behavior modeling purposes. Site-adjacent vegetation is important relative to wildfire as some vegetation, such as brush and grassland habitats, are highly flammable, while other vegetation, such as wetland communities, irrigated landscape, or maintained vegetation, are less flammable due to their higher plant moisture content, compact structure, and reduced fuels.

Climate

Typically, the highest fire danger in the San Diego area is produced by the high-pressure weather systems that occur in the Great Basin, which result in the Santa Ana winds of Southern California. Sustained wind speeds recorded during recent major fires in San Diego County exceeded 30 mph and may exceed 50 mph during extreme conditions. The Santa Ana wind conditions are a reversal of the prevailing southwesterly winds that usually occur on a region-wide basis during late summer and early fall. Santa Ana winds are warm winds that flow from the higher desert elevations in the north through the mountain passes and canyons. As they converge through the canyons, their velocities increase. Consequently, peak velocities are highest at the mouths of canyons and dissipate as they spread across valley floors or mesas. Winds funneled through mountains and onto the flat mesas dissipate and produce lower

average wind conditions. Santa Ana winds generally coincide with the regional drought period and the period of highest fire danger. The proposed project site is affected by Santa Ana winds.

Fire History

Fire history data provides valuable information regarding fire spread, fire frequency, ignition sources, and vegetation/fuel mosaics across a given landscape. Fire frequency, behavior, and ignition sources are important for fire response and planning purposes. One important use for this information is as a tool for pre-planning. It is advantageous to know which areas may have burned recently and, therefore, may provide a tactical defense position, or, what type of fire burned on the site, and how a fire may spread. According to available data from the California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program (FRAP 2014), several fires have burned in the vicinity of the project site since the beginning of the historical fire data record (**Appendix H**). These fires occurred in 1944, 1981, 1983, 1985, 1986, 1988, and 2003, burning within a roughly 5-mile radius of SDSU. None of the fires in the historical record burned onto the project site. The 1944 fire burned within 0.5 mile of the site. The SDFD may have data regarding smaller fires (less than 10 acres) that have occurred near the site that are not included in CAL FIRE's dataset.

4.8.4 RELEVANT PLANS, POLICIES, AND ORDINANCES

Federal

Federal Toxic Substances Control Act and Resource Conservation and Recovery Act

The federal Toxic Substances Control Act of 1976 (15 U.S.C. 2601 et seq.) and the Resource Conservation and Recovery Act (RCRA) of 1976 (42 U.S.C. 6901 et seq.) established a program administered by the U.S. Environmental Protection Agency (EPA) for regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (PL 98-616), which affirmed and extended the "cradle-to-grave" system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Act. Under the authority of RCRA, the regulatory framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and dispose of hazardous waste, is found in Title 40 of the Code of Federal Regulations, 260–299.

Hazardous Materials Transportation Act

The U.S. Department of Transportation regulates hazardous materials transportation under Title 49 of the United States Code. State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation (Caltrans). These agencies also govern permitting for hazardous materials transportation. Title 49 of the Code of Federal Regulations reflects laws passed by Congress as of January 2, 2006.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 U.S.C. 9601 et seq.), commonly known as “Superfund,” was enacted by Congress on December 11, 1980; the Superfund Amendments and Reauthorization Act amended CERCLA on October 17, 1986. This law provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, provides for liability of persons responsible for releases of hazardous waste at these sites, and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enables the revision of the National Contingency Plan. The National Contingency Plan provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants.

International Fire Code

The International Fire Code (IFC; ICC 2015), created by the International Code Council, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International Building Code use a hazard classification system to determine what protective measures are required to protect life safety in relation to fire. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the IFC employs a permit system based on hazard classification. The IFC is updated every 3 years.

Federal Response Plan

The Federal Response Plan of 1999 (FEMA 1999) is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a presidential declaration of a major disaster or emergency.

Robert T. Stafford Disaster Relief and Emergency Assistance Act

Code of Federal Regulations Sections 206.31-206.48 provide the statutory framework for a presidential declaration of an emergency or a declaration of a major disaster. Such declarations open the way for a wide range of federal resources to be made available to assist in dealing with an emergency or major disaster. The Stafford Act structure for the declaration process reflects the fact that federal resources under this act supplement state and local resources for disaster relief and recovery. Except in the case of an emergency involving a subject area that is exclusively or preeminently in the federal purview, the governor of an affected state, or Acting governor if the governor is not available, must request such a declaration by the president.

State

Primary state agencies with jurisdiction over hazardous chemical materials management are the DTSC and the local Regional Water Quality Control Boards (RWQCBs). Other state agencies involved in hazardous materials management are the Department of Industrial Relations (State Occupational Safety and Health Administration implementation), Office of Emergency Services (California Accidental Release Prevention implementation), California Department of Fish and Wildlife, California Air Resources Board, Caltrans, State Office of Environmental Health Hazard Assessment (Proposition 65 implementation), and the California Integrated Waste Management Board.

The enforcement agencies for hazardous materials transportation regulations are the California Highway Patrol and Caltrans. Hazardous materials and waste transporters are responsible for

complying with all applicable packaging, labeling, and shipping regulations. San Diego Air Pollution Control is the local agency responsible for enforcing the rules and regulations for asbestos removal and demolition operations. Hazardous chemical and biohazardous materials management laws in California include the following statutes and regulations:

- ***Hazardous Materials Management Act*** – This act requires that businesses handling or storing certain amounts of hazardous materials prepare a hazardous materials business emergency plan that includes an inventory of hazardous materials stored on site (above specified quantities), an emergency response plan, and an employee training program.
- ***Hazardous Waste Control Law*** – Codified at California Health and Safety Code, Division 20, Chapter 6.5, Article 2, Section 25100 et seq., this act authorizes the DTSC and local Certified Unified Program Agencies (CUPAs) to regulate facilities that generate or treat hazardous waste.
- ***Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)*** – This act requires the governor to publish and update, at least annually, a list of chemicals known to the state to cause cancer, birth defects, or other reproductive harm, and to inform citizens about exposures to such chemicals.
- ***Hazardous Waste Management Planning and Facility Siting*** – also known as the Tanner Act – Assembly Bill (AB) 2948 (1986), requires counties to prepare hazardous waste management plans for DTSC approval, and prescribes specific public participation activities that must be carried out during the local land use permit process for siting new or expanding off-site commercial treatment, storage, and disposal facilities.
- ***Hazardous Materials Storage and Emergency Response Plans*** – AB 2185, which regulates hazardous materials storage and emergency response plans, requires immediate reporting to local fire departments and the Office of Emergency Services of any release or threatened release of a hazardous material, regardless of the amount handled by the business.
- ***Land Disposal Restrictions*** – codified in 22 CCR 18. These restrictions identify hazardous wastes that are restricted from land disposal and define those limited circumstances under which an otherwise prohibited waste may continue to be land disposed.

State regulations and agencies pertaining to hazardous materials management and worker safety are described in the following subsections.

California Environmental Protection Agency

The California Environmental Protection Agency (CalEPA) has broad jurisdiction over hazardous materials management in the state. Within CalEPA, the DTSC has primary regulatory responsibility for hazardous waste management and cleanup. Enforcement of regulations has been delegated to local jurisdictions that enter into agreements with the DTSC for the generation, transport, and disposal of hazardous materials under the authority of the Hazardous Waste Control Law.

Along with the DTSC, the RWQCB is responsible for implementing regulations pertaining to management of soil and groundwater investigation and cleanup. RWQCB regulations are contained in Title 27 of the CCR. Additional state regulations applicable to hazardous materials are contained in Title 22 of the CCR. Title 26 of the CCR is a compilation of those sections or titles of the CCR that are applicable to toxics.

Government Code Section 65962.5, Cortese List

California Government Code Section 65962.5 requires that information regarding environmental impacts of hazardous substances and wastes be maintained and provided at least annually to the Secretary for Environmental Protection. Commonly referred to as the Cortese List, this information must include the following: sites impacted by hazardous wastes; public drinking water wells that contain detectable levels of contamination; USTs with unauthorized releases; solid waste disposal facilities from which there is migration of hazardous wastes; and all cease and desist and cleanup and abatement orders. This information is maintained by various agencies, including the DTSC, the State Department of Health Services, the State Water Resources Control Board, and the local CUPA. As each of the regulatory agencies typically maintains these records in an electronic format, those requesting a Cortese List for a site are directed to the individual regulatory agencies. Typically, records searches are conducted via a regulatory database search company (e.g., EDR). Unless otherwise requested, the records search companies typically conduct the records searches in accordance with American Society for Testing and Materials (ASTM) Standard of Practice E 1527-13, Standard Practice for Phase I ESAs. The list of databases searched is more comprehensive than the Cortese List.

Metallic Discards Act

The Metallic Discards Act, Public Resources Code Sections 42160–42185, is a state program for the disposal of major appliances, vehicles, and other metallic discards that contain enough

metal to be economically feasible to salvage. The Metallic Discards Act was established by the Integrated Waste Management Act (Public Resources Code Section 40000 et seq.).

Hazardous Materials Release Response Plans and Inventory

Two programs found in California Health & Safety Code Chapter 6.95 are directly applicable to the California Environmental Quality Act (CEQA) issue of risk due to hazardous substances release. These two programs are referred to as the Hazardous Materials Business Plan (HMBP) program and the California Accidental Release Prevention (CalARP) program. In the San Diego region, the San Diego County Department of Environmental Health (DEH) is responsible for implementing the HMBP and CalARP programs. The HMBP and CalARP programs provide threshold quantities for regulated hazardous substances. When the indicated quantities are exceeded, a HMBP or Risk Management Plan is required pursuant to the regulation. Congress requires the EPA Region 9 to make Risk Management Plan information available to the public through the EPA's Envirofacts Data Warehouse. The Envirofacts Data Warehouse is considered the single point of access to select EPA environmental data.

Aboveground Petroleum Storage Act

The Aboveground Petroleum Storage Act, Health and Safety Code Section 25270, requires registration and spill prevention programs for aboveground storage tanks that store petroleum. In some cases, aboveground storage tanks for petroleum may be subject to groundwater monitoring programs that are implemented by the RWQCBs and the State Water Resources Control Board. The San Diego County DEH is the local administering agency for this program within the project area.

Local

CUPA

In order to ensure consistency in the administrative requirements, permits, inspections, and enforcement related to the handling and storage of hazardous wastes and materials, CalEPA oversees the Unified Program and certifies local government agencies as CUPAs to implement hazardous waste and materials standards. The San Diego County DEH is the CUPA for the proposed project site. As the CUPA, the DEH is responsible for programs, permitting, and fees related to hazardous material disclosure, business emergency plans, hazardous waste, USTs, aboveground petroleum storage tanks, and the CalARP program.

4.8.5 THRESHOLDS OF SIGNIFICANCE

The significance criteria used to evaluate the project impacts related to hazards and hazardous materials are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hazards and hazardous material would occur if the project would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
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 result, would is create a significant hazard to the public or the environment.
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.
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.
7. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
8. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including, where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.
9. Result in a cumulative impact when considered with other present and probable future projects in the region.

4.8.6 IMPACTS ANALYSIS

Following issuance of the Notice of Preparation (NOP) for the proposed projects, CSU/SDSU received fourteen (14) comment letters from public and private entities related to hazards. These

comment letters were concerning, the project's proximity to a fire-prone canyon; historic site uses and request for a Phase I Environmental Assessment; adequate emergency access; and historic mold problems. The analysis presented below addresses each of these topics.

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

Construction/Temporary Impacts – Phases I, II, and III

Construction of the project would involve the use of hazardous materials, such as gasoline, diesel fuel, lubricating oil, grease, and solvents. These materials would be used and stored in designated construction staging areas within the boundaries of the project site. These materials would be transported, handled, and disposed of in accordance with all applicable federal, state, and local laws and regulations regulating the management and use of hazardous materials. The use of these materials for their intended purpose would not pose a significant risk to the public or environment. Therefore, construction impacts would be **less than significant**.

Potential Concerns during Demolition – Phases I, II, and III

The buildings on the project site were constructed after 1989. Asbestos and lead-based paint were banned for use in the United States in 1977 and 1978, respectively; therefore, these materials are not anticipated to be encountered during demolition. However, there are other hazardous materials/waste typically found in buildings. As such, a qualified environmental specialist shall inspect the existing buildings on the proposed project for the presence of PCBs, mercury, and other hazardous building materials prior to any demolition. If found, these materials shall be managed in accordance with applicable federal and state guidelines and regulations (e.g., Metallic Discards Act of 1991, Public Resources Code Sections 42160-42185). Demolition plans and contract specifications shall incorporate any necessary abatement measures in compliance with all applicable federal and state regulations (e.g., Metallic Discards Act, particularly Section 42175, Materials Requiring Special Handling for the removal of mercury switches, PCB-containing light ballasts, and refrigerants). The potential impacts from PCBs, mercury, and other hazardous materials released during demolition would be mitigated to a level that is **less than significant** with the implementation of Mitigation Measure (MM) **MM-HAZ-1**.

Operational/Permanent Impacts — Phases I, II, and III

The operational phase of the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The project involves housing facilities, with associated landscape and facility maintenance. Hazardous materials would be limited to use of commercially available cleaning products, landscaping chemicals and fertilizers, and various other commercially available substances. Although the project would introduce dwelling units to the site resulting in an increased use of commercially available potentially hazardous materials, the use of these substances is subject to all applicable federal, state, and local health and safety laws and regulations that are intended to minimize health risk to the public associated with hazardous materials. Therefore, impacts related to the operational phase of the project would be **less than significant**.

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 into the environment?

Construction/Temporary Impacts

Phase I

Phase I of the proposed project area is currently used as a parking lot (Parking Lot 9). Oil staining was observed in the parking lot during a site reconnaissance in 2007 for a Phase I ESA (Section 3.3.3; Dudek 2007); the staining was considered *de minimus*. Given its long-time use for parking and the previously observed staining, limited oil-impacted soil may be encountered beneath the parking lot area during grading and redevelopment activities. However, oil staining on parking lot surfaces typically constitutes a limited release and is not likely to present a threat to human health or the environment. Thus, impacts related to the release of hazardous materials from the soil beneath the parking lot areas of Phase I would be **less than significant**.

Phases II and III

Phases II and III of the proposed project are currently vacant, undeveloped land. Historic aerial photographs reviewed for 1949 and 1953 indicate that orchards were present on a small portion of the southwestern project area. The orchards were located in the footprint of the current Chapultepec Hall and Remington Road. Thus, given that the area of the former orchards was developed, it is unlikely that there are residual pesticides. Based on the aerial photographs reviewed and the database reports, **no impacts** are anticipated in the Phase II and III areas.

Operational/Permanent Impacts—Phases I, II, and III

The proposed project would entail the introduction of residential housing and a food service building. During operation of the project, hazardous materials would be limited to private use of commercially available cleaning products, landscaping chemicals and fertilizers, and various other commercially available substances. Although the project would introduce dwelling units resulting in an increased use of commercially available potentially hazardous materials, the use of these substances is subject to all applicable federal, state, and local health and safety laws and regulations that are intended to minimize health risk to the public and the environment associated with hazardous materials. As such, these proposed land uses would not result in the foreseeable upset and accident conditions involving the release of hazardous chemicals into the environment. Therefore, impacts for this phase of the proposed project are **less than significant**.

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?

Construction/Temporary Impacts—Phases I, II, and III

The proposed project site is located on the SDSU campus, an existing university. Construction activities will include the use of hazardous materials which will be predominantly associated with the operation and maintenance of construction equipment. These materials would be used and stored in designated construction staging areas within the boundaries of the project site. These materials would be transported, handled, and disposed of in accordance with all applicable federal, state, and local laws and regulations regulating the management and use of hazardous materials. The use of these materials for their intended purpose would not pose a significant risk to the public or environment. Therefore, construction impacts would be **less than significant**.

In addition, the use and generation of hazardous materials above reportable quantities will trigger the requirement for an HMBP pursuant to California Health and Safety Code Section 25500 within 30 days of beginning operations. The reportable quantities of hazardous materials are 55 gallons for a liquid and 500 pounds of a solid. The HMBP should contain information on hazardous materials inventory, inspections, training, recordkeeping, and reporting. The HMBP should be submitted electronically through the California Environmental Reporting System. Therefore, construction or temporary impacts from the emission of hazardous materials within 0.25 mile of an existing or proposed school would be less than significant. Further, the use of hazardous materials for their intended purpose and compliance with all applicable federal,

state, and local laws and regulations would not pose a significant risk to the public or environment. Therefore, construction impacts would be **less than significant**.

Operational/Permanent Impacts —~~Phases I, II, and III~~

The proposed project would entail the introduction of residential uses. Aside from the hazards associated with on-site use, storage and disposal of household cleaners and solvents associated with janitorial activities on the future project site, these proposed land uses would not entail the introduction of a new hazardous emission or hazardous material source within 0.25 mile of a school; thus, **no impacts** are anticipated.

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 result, would is create a significant hazard to the public or the environment?

Construction/Temporary and Operational/Permanent Impacts —~~Phases I, II, and III~~

The proposed project site is not located on a site that is included on a list of hazardous materials sites and would, therefore, not create a significant hazard to the public or environment; **no impacts** are anticipated.

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?

Construction/Temporary and Operational/Permanent Impacts —~~Phases I, II, and III~~

The proposed project site is not located within an airport land use plan. The closest airport to the proposed project site is Montgomery Field, which is located approximately 3.5 miles northwest of the project area. **No impacts** are anticipated.

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?

Construction/Temporary and Operational/Permanent Impacts —~~Phases I, II, and III~~

The proposed project site is not located within the vicinity of a private airstrip. The closest airport (which is public) is Montgomery Field, which is located approximately 3.5 miles northwest of the project area. The helipad associated with Sharp Grossmont Hospital is located

approximately 4.1 miles east of the project site. Construction of the proposed project would not result in introduction of a new hazard within the vicinity of a private airstrip that could endanger people residing or working in the project area. **No impacts** are anticipated.

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

Construction/Temporary Impacts – Phases I, II and III

SDSU maintains a Vehicle Evacuation Plan that is implemented in the event an on- or off-campus emergency warrants the evacuation of the campus. The plan states that in the event of an emergency, College Avenue would be utilized as an evacuation route and that the roadway is likely to experience heavy traffic congestion during emergencies. The proposed project would result in increased traffic along Remington Road and 55th Street, however, it would not directly impact traffic loads to College Avenue (see **Section 4.14, Traffic/Circulation and Parking**, of this EIR for further traffic analysis). This additional traffic generated by the proposed project would not increase the difficulty of evacuating a substantial component of the campus population along College Avenue. Therefore, construction of the proposed project would result in a **less-than-significant** impact to the Campus Emergency Plan.

Operational/Permanent Impacts – Phases I, II, and III

As discussed above, the proposed project would not increase traffic volumes along the College Avenue evacuation route. The additional traffic generated along Remington Road and 55th Street by the proposed project would not increase the difficulty of evacuating a substantial component of the campus population along College Avenue. Therefore, operation of the proposed project would result in a **less-than-significant impact** to the Campus Emergency Plan.

Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including, where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Construction/Temporary and Operational/Permanent Impacts – Phases I, II, and III

Based on an analysis of the CAL FIRE fire history data set (previously discussed in **Section 4.8.3.7**, above), specifically the years in which the fires burned, the average interval between wildfires burning within a 5-mile radius of the project site was calculated to be 10 years, with intervals ranging between 1 and 37 years. Based on this analysis, the project area is expected to

be subject to periodic wildfire that may include smaller fires during typical weather conditions and has the potential for larger wildfires during extreme weather conditions.

The coastal sage scrub (high load, dry climate native shrubs) on the unmodified slopes in the canyon north of the proposed structures would pose the greatest threat to the project with up to 41-foot-tall flame lengths, fireline intensities up to 19,042 Btu/ft/s, and spread rates up to 6.4 mph under extreme weather conditions (97th percentile with 50 mph wind gusts). A fire approaching the project from the west under an on-shore flow pattern (50th percentile weather) and burning in sage scrub would produce approximately 9-foot-tall flame lengths, fireline intensities of 715 Btu/ft/s, and spread rates of 0.3 mph.

Based on the results of fire behavior modeling, a fire occurring during extreme weather conditions (Red Flag Warning) in the project vicinity will be a coastal sage scrub-fueled fire that moves quickly, burning with moderate to high intensity up slope toward the project site during Santa Ana wind conditions. Such fires are anticipated to be wind-driven, approaching the project site from the north and burning up toward the project in small drainages and canyons that serve as tributaries to larger north–south oriented canyons that border proposed residence hall structures on the east and west. With inclusion of the Brush Management Zones (BMZs) proposed below, the flame lengths would be reduced in height and the fire intensity reduced to acceptable levels for structure protection.

Based on this assessment, it is expected that wildfires will have the possibility of occurring in the canyons to the north of the project (~~and east and west of Phases II and III~~) post-development. The most likely scenario would be an on-shore wind, summer condition fire with higher live and dead fuel moistures than under extreme fire weather conditions. In this scenario, a fire in the open space (i.e., canyon) down slope of the site would be aided upslope toward the southern or southeastern exposures of the project through coastal sage scrub at a slow spread rate of 0.3 mph, low fire intensity of roughly 715 Btu/ft/s, and flame lengths up to 9 feet high. Fires on the slopes adjacent the project may produce embers when shrub groupings combust, but would not continue producing embers for more than a short period (estimated 15 to 30 minutes) as the fuel moistures are high and the fuels are not heavy enough or extensive enough to support ongoing ember production. Under extreme weather conditions (Santa Ana winds), a wildfire can move rapidly through site drainage fuels. Based on the topography, Santa Ana winds would tend to push fire up the drainages toward the proposed project. In the site's northern exposure, the project is adjacent to native fuels that could produce up to 41-foot-tall flame lengths, higher fire intensity, and fast spread rates, but would be reduced as the wildfire

pushed into the fuel modification zones surrounding ~~Phase III~~ the proposed structures. These potential fire risks would be considered potentially significant, therefore mitigation is provided (see **Section 6**, Mitigation Measures, Mitigation Measure **MM-HAZ-2**).

Brush Management Zones

As indicated in preceding sections of this analysis, Brush Management Zones (BMZs) are an important component of a fire protection system. BMZs are typically designed to gradually reduce fire intensity and flame lengths from advancing fire by strategically placing thinning zones and irrigated zones adjacent to each other on the perimeter of the WUI exposed structures. BMZs for the project are proposed to include a reduced Zone 1 that is provided on the developed portion of the project (*Appendix H*). The landscaping and paved areas around the project's buildings would be maintained to Zone 1 standards. ~~Zone 2 areas are less than 100 total feet for all perimeter locations. There would be no Zone 2 provided adjacent to proposed Phase I structures.~~ This reduction is related to the non-combustible, vertical retaining wall ranging between 10 and 36 feet tall and that vertically separates the proposed buildings from the canyon slope's native fuels, and the Zone 1 north of these buildings exceeds the standard 35 feet (totals 50 to 60 feet wide), which will be composed of a paved access road. ~~Zone 2 BMZ adjacent to Phases II and III vary between 6 and 65 feet. The Zone 2 width varies based on the available space within property limits. The proposed Zone 2 FMZ is considered suitable based on the type of fuels adjacent to these structures and the structures' extreme ignition resistant exterior construction materials.~~

A typical landscape/brush management installation in the City of San Diego consists of a 35-foot-wide, irrigated Zone 1 and a 65-foot wide, non-irrigated Zone 2. ~~The majority of the proposed, perimeter BMZs at the proposed project will not include irrigated zones and would consist of low-fuel, native plantings, consistent with Zone 2.~~ Reductions in the BMZ width are considered appropriate for this project because the proposed ignition-resistant structures (concrete exterior construction) will be capable of withstanding the fire intensity that is predicted from the surrounding fuel types.

Given the climatic, vegetative, wildland-urban interface (WUI), and topographic characteristics along with the fire behavior modeling results and fire history of the area, as discussed above and in the Fire Fuel Load Analysis (see **Appendix H**), the project site, once the project is constructed, would continue to be at moderate risk of wildfire starting on or burning onto the project site. Wildfire is not expected to have readily ignitable fuels in the project buildout landscape, but canyon areas that include native and unmaintained

vegetation, would provide fuels that, under favorable conditions, could facilitate fire ignition and spread. Potential for off-site wildfire encroaching on, or showering embers on the site is considered moderate, but risk of structure ignition from such encroachments or ember showers is considered low based on the type of construction and fire protection features that would be provided for all proposed structures. The potential impacts related to wildland fire risk would be mitigated to a level that is **less than significant** with the implementation of the BMZs and Mitigation Measure (MM) MM-HAZ-2.

Would the project result in a cumulative impact relative to hazards or hazardous materials when considered with other present and probable future projects in the region?

Cumulative impacts related to hazards and hazardous materials would result from projects that combine and increase exposure to hazards and hazardous materials. Contaminated soil and groundwater soils, leaking USTs, and other existing sources of hazardous materials are generally site specific and handled on a project-by-project basis. None of the identified cumulative projects listed in **Chapter 3, Cumulative Methods and Projects**, would be expected to increase exposure to or the chances of release of hazardous materials, because proposed land uses (residential, public facilities, and infrastructure improvements) do not typically involve large quantities of potentially hazardous materials. Further, cumulative projects would be required to comply with all applicable federal, state, and local standards regarding the handling, use, transportation, storage, and disposal of hazardous materials, which are intended to minimize risk to public health and the environment. In addition to these standards, cumulative projects would be required to minimize pollution discharge through compliance with RWQCB permits and implementation of project-specific best management practices and stormwater pollution prevention plans (or equivalent, per project). As such, the project would not result in a cumulatively considerable impact related to the transportation, use, or storage of hazardous materials or related to a hazardous materials site.

4.8.7 MITIGATION MEASURES

The following Mitigation Measure would reduce the potential for impacts on the proposed project and surrounding area by ensuring that contingency plans are in place to address construction health and safety, as well as hazardous waste identification, management, and disposal.

MM-HAZ-1 There are hazardous materials/waste typically found in buildings, including mercury switches, polychlorinated biphenyl (PCB)-containing light ballasts, and refrigerants. If building materials are to be removed for construction, a qualified

environmental specialist shall inspect the existing buildings on the proposed project for the presence of these and any other hazardous wastes/materials. If found, these materials shall be managed in accordance with all applicable federal and state guidelines and regulations (e.g., Metallic Discards Act of 1991, Public Resources Code Sections 42160–42185). Demolition plans and contract specifications shall incorporate any necessary abatement measures in compliance with all applicable federal and state regulations (e.g., Metallic Discards Act, particularly Section 42175, Materials Requiring Special Handling for the removal of mercury switches, PCB-containing light ballasts, and refrigerants).

MM-HAZ-2 In order to “mitigate” potential structure fire exposure related to BMZs less than 100 feet in width, the following measures are customized for this site, its unique topographical and vegetative conditions, and focus on providing functional equivalency as a full fuel modification zone.

In order to provide compensating structural protection in the absence of a full BMZ, and in addition to all new structures being built to the latest ignition resistant codes, all structures which are exposed to the urban wildland-urban interface and with less than 100 feet of BMZ must incorporate the following fire protection measures:

1. ~~Phase I—west:~~ A concrete or non-combustible heat-deflecting retaining wall shall be installed at the northwestern edge of the retaining wall proposed project along the fire access road. The BMZ would include 30 feet of paved road with no combustible fuels. The building shall be further separated from fuel a total of 7 to 32 feet above natural fuel levels in open space.
2. ~~Phase I—east:~~ A concrete or non-combustible heat-deflecting retaining wall shall be installed at the northeastern edge of the retaining wall proposed project along the fire access road. The BMZ would include 47 to 60 feet of paved road with no combustible fuels. The building shall be further separated from fuel a total of 19 to 42 feet above natural fuel levels in open space.
3. ~~Phase II: The building would provide 5 to 15 feet of Zone 1, 50 to 60 feet of Zone 2, and would be separated from fuels vertically as it is built on piers. This building shall receive upgraded windows of at least 2 tempered panes or equivalent for the lower three floors.~~

Phase III: The buildings would provide 6 to 65 feet of Zone 2, and would be separated from fuels vertically as they are built on piers (particularly the three western most structures). These buildings shall receive upgraded windows of at least two tempered panes or equivalent for the lower three floors on wildland exposed sides.

4.3. All structures shall be fitted with ember resistant vents to prevent embers from entering any portion of the structure. Phases I through III:

~~The undersides of all buildings on piers that are exposed shall be finished such that they meet at least a 1-hour fire rating.~~

~~The ground beneath the raised buildings shall be treated with concrete, rock, or another non-combustible ground cover that prevents the growth of weeds.~~

~~ALL STRUCTURES SHALL BE FITTED WITH EMBER RESISTANT VENTS TO PREVENT EMBERS FROM ENTERING ANY PORTION OF THE STRUCTURE.~~ 4.8.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the proposed Mitigation Measure **MM-HAZ-1 and MM-HAZ-2**, all potentially significant impacts relating to hazards and hazardous materials would be reduced to a level below significant. Therefore, the proposed project would not result in any unavoidable significant impacts relative to hazards.

4.8.9 REFERENCES

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Scenario Run #2

Model Run: Summer Fire
 Slope: 35%
 Fuel Model: Coastal Sage Scrub (sh5)
 Wind: 5 mph sustained winds
 Maximum Flame Length: 9.2 Ft.
 Fireline Intensity: 715 Btu/ft/s
 Spread Rate: 0.3 mph
 Spot distance: 0.2 mi

Scenario Run #1

Model Run: Peak Fire
 Slope: 30%
 Fuel Model: Coastal Sage Scrub (sh5)
 Wind: 9 mph sustained winds
 Maximum Flame Length: 17.8-Ft.
 Fireline Intensity: 2,972 Btu/ft/s
 Spread Rate: 1 mph
 Spot Distance: 0.4 mi

Wind: 50mph gusts
 Maximum Flame Length: 41.9Ft
 Fireline Intensity: 19,042 Btu/ft/s
 Spread Rate: 6.4 mph
 Spot Distance: 2.3 mi

Project Site

Fire Modeling Inputs:

| | |
|-------------------------------|--|
| Summer Weather (Onshore Flow) | Peak Weather (Offshore/ Santa Ana Condition) |
| 1 hr Fuel Moisture: 8% | 1 hr Fuel Moisture: 2% |
| 10 hr Fuel Moisture: 9% | 10 hr Fuel Moisture: 3% |
| 100 hr Fuel Moisture 16% | 100 hr Fuel Moisture 9% |
| Live Herbaceous Moisture: 60% | Live Herbaceous Moisture: 30% |
| Live Woody Moisture: 102% | Live Woody Moisture: 59% |
| 20-Ft Wind Speed: 5 mph | 20-Ft Wind Speed: 9-50 mph |
| Wind Adjustment Factor: 0.4 | Wind Adjustment Factor: 0.4 |
| Slope Steepness: 35% | Slope Steepness: 30% |

SOURCE: National Weather Service, Camp Elliott RAWs (2016)

0 100 200 Feet

AERIAL SOURCE: SANDAG IMAGERY 2014

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