4.18 Wildfire

This section describes the existing wildfire conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project. Potential wildfire impacts resulting from construction and operation of the proposed project were evaluated based on a review of existing resources, data, and applicable laws, regulations, guidelines, and standards. This section focuses on the effect of the proposed project on wildfire risk. Fire protection services for the proposed project are addressed in Section 4.14, Public Services and Recreation.

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. Approximately 150 letters were received during this comment period. Comments received related to wildfire hazards were limited to use of the current San Diego County Credit Union (SDCCU) Stadium parking area during evacuations. Please see Appendix 1-1, NOP Scoping Comments, for a complete compilation of comments received on the NOP.

4.18.1 Existing Conditions

4.18.1.1 Regional Characteristics

Fire is a continuous threat in Southern California. A major area of concern is the wildland-urban interface (WUI), an area where urban development is located in proximity to open space or "wildland" areas. The City of San Diego (City) contains over 900 linear miles of WUI, where established development meets open space areas and canyons within urban and suburban areas. The region's climate, severe dry periods, vegetative fuel composition, and steep and varied terrain make the project region susceptible to both wildland and urban fires. The shrub-dominated plant communities occurring throughout the region are highly flammable. Adaptations to the local dry, Mediterranean climate include specialized roots, stems, and leaves. The latter two become available fuels of importance and contribute to wildfire intensity and spread. Santa Ana winds bring hot, dry desert air from the east into the region during late summer and fall, which increases wildland fire hazards during these seasons. Dry vegetation, low humidity, and high air temperature can combine to produce large-scale fire events. As Santa Ana winds blow westward toward denser development, fires driven by these winds have the potential to result in a greater risk of property damage (City of San Diego 2018).

4.18.1.2 Site Setting

The project site is located within the northeastern portion of the Mission Valley community within the City. The project area is surrounded by major freeways, roadways, existing urban development, the San Diego River, and Murphy Canyon Creek. Surrounding land uses include higher density multifamily residential to the northwest, southwest, and east, and office and large commercial retail uses immediately to the west. The project site is bounded by Friars Road to the north. The San Diego River and associated southern riparian woodland habitat is located immediately to the south of the project site. South of the river are additional office uses and Interstate (I) 8. North of Friars Road is San Diego Fire-Rescue Department (SDFD) Fire Station 45, the Kinder Morgan Mission Valley Terminal, undeveloped hillsides, and single-family residences within the Serra Mesa planning area. Murphy Canyon Creek, a partially earthen and concrete-lined channel that conveys flow into the San Diego River, is located immediately to the east, and I-15 is located east of Murphy Canyon Creek.

4.18.1.2.1 Existing Uses/Land Cover

The project site contains a multipurpose Stadium (SDCCU Stadium), a surface parking lot with approximately 18,870 parking spaces, and the existing San Diego Trolley Stadium Station. Two Metropolitan Transit System-owned and operated transformer buildings are present in the southeast and southwest portions of the project site. The project site contains seven vegetation communities/land covers, as summarized in Table 4.18-1.

Table 4.18-1. Vegetation Communities/Land Cover Types on the Project Site and Off-Site Areas

Habitat Types/Vegetation Communities	Oberbauer Code	Project Site (acres)	Off-Site Areas (acres)
Native Vegetation Communities			
Baccharis-dominated Diegan Coastal Sage Scrub (BD-CSS)	32350	0.97	—
Diegan Coastal Sage Scrub (CSS)	32500	0.12	0.04
Southern Willow Scrub (SWS)	63320	0.08	—
Southern Cottonwood Willow Riparian Forest (SCWRF)	61330	2.59	0.04
Southern Riparian Forest (SRF)		0.10	
Subtotal	–	*3.86*	*0.08*
Non-native Vegetation Community/Land Cover Types			
Disturbed Habitat (DH)	11000	0.85	0.84
Urban/Developed (DEV)	12000	165.77	2.68
Non-vegetated Channel or Floodway (NVC)	64200	0.75	—
Disturbed Wetland (DW)	11200	0.89	—
Subtotal	–	*168.26*	*3.51*
Total*	**–**	**172.12**	**3.60**

Note:
* Acreages may not sum due to rounding.

Detailed descriptions of the vegetation types on the project site are provided in Section 4.3, Biological Resources. The distribution of vegetation communities and land cover types on the project site is shown on the biological resources map in Section 4.3 (Figure 4.3-4).

As shown in Table 4.18-1, on the project site, urban/developed land dominates the overall land cover totaling 165.77 acres (98% of the site), and includes paved roads, the large Stadium parking lot, training field, and existing Stadium structure. Urban/developed refers to areas that have been constructed upon or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large amount of debris or other materials.

Variations in vegetative cover type and species composition have a direct effect on fire behavior. Some plant communities and their associated plant species have increased flammability based on plant physiology (resin content), biological function (flowering, retention of dead plant material), physical structure (bark thickness, leaf size, branching patterns), and overall fuel loading. Sage scrub is considered a moderately fine fuel that is loosely compacted with a moderate fuel load. Coastal scrub has a high surface area-to-volume ratio, requiring less heat to remove fuel moisture and raise fuel to ignition temperature. It is subject to early seasonal drying in the late spring and early summer, but does not fully cure in the way that grasses do. Compared to chaparral, coastal scrub tends to have a lower content of volatile organic compounds. The live fuel moisture content reaches its low point in the late summer and early fall months. Dead fuels consist mainly of 1-hour and 10-hour fuel sizes, or twigs and small

stems ranging from 0.25 inches to 1 inch in diameter. Coastal scrub has potential for a high rate of spread, rapid ignition, and extreme fire behavior. The other habitat type(s), southern willow scrub and southern cottonwood willow riparian forest, which typically have higher fuel moisture contents and require more heat to ignite, have the potential for lower spread rates, but greater fire intensity. Should ignition in the San Diego riverbed occur under extreme weather conditions, the scrub-riparian vegetation would be expected to burn aggressively, and possibly generate a crown fire condition, due to the presence of large amounts of biomass from dense stands of trees and exotic plants, which are extremely flammable.

Another important factor is the dynamic nature of vegetation communities. Fire presence and absence at varying cycles or regimes disrupts plant succession, setting plant communities to an earlier state where less fuel is present for a period of time as the plant community begins its succession again. High frequency of wildfires tend to convert shrublands to grasslands or maintain grasslands, while fire exclusion tends to convert grasslands to shrublands, over time. In general, biomass and associated fuel loading will increase over time, assuming that disturbance (fire, farming, or grading) or fuel reduction efforts are not implemented. It is possible to alter successional pathways for varying plant communities through manual alteration.

4.18.1.2.2 Weather

As with most of Southern California, regional climate in the vicinity of the project site is influenced by the Pacific Ocean and is frequently under the influence of a seasonal, migratory, subtropical high-pressure cell known as the Pacific High (WRCC 2019). Wet winters and dry summers with mild seasonal changes generally characterize the Southern California climate. This climate pattern is occasionally interrupted by extreme periods of hot weather, winter storms, or dry, easterly Santa Ana winds (WRCC 2019). Additionally, local vegetation and seasonal drying produce climatic conditions that result in fuel-driven wildfires and fire-associated climatic changes. This type of condition is referred to as a plume-dominated wildfire. Plume-dominated wildfires are fires where the energy produced by the fire in conjunction with atmospheric instability creates significant convective forces and increased winds. Such fires are extremely unpredictable, spread in various directions simultaneously, and exhibit extreme fire behavior. These fires are extremely dangerous and are often large in size.

The regional prevailing wind pattern is from the west, but the presence of the Pacific Ocean causes a diurnal wind pattern known as the land/sea breeze system. During the day, winds are typically from the west–southwest (sea), and at night, winds are from the northeast (land). During the summer season, the diurnal winds can be slightly stronger than the winds during the winter season due to greater pressure gradient forces. Surface winds can also be influenced locally by topography and slope variations. On the project site, the varied topography may affect wind velocity and patterns. The highest wind velocities are typically associated with downslope, canyon, and Santa Ana winds.

The fire season in Southern California typically starts in June, as vegetation begins to dry out after winter and spring rains, and typically ends in October, although fire weather may be present year-round (Schroeder and Buck 1970). The highest fire danger for this area coincides with the Santa Ana winds. 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. They are dry, 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. Santa Ana winds can reach sustained speeds of 40 mph with gusts ranging from 70 to 115 mph possible (Schroeder et al. 1964). Santa Ana winds can lead to serious fire suppression problems.

4.18.1.2.3 Topography

Topography at the proposed project site generally slopes down from the east to west and north to south with the perimeter around the stadium structure elevated to create adequate drainage away from the stadium structure. The elevation of the project site ranges from approximately 45 feet above mean sea level to 100 feet above mean sea level. Along the southern boundary of the project site there is a small berm beyond the parking lot, which descends into the lower floodplain of the San Diego River. Similarly on the eastern boundary of the project site there is a small berm along Murphy Canyon Creek. In the western portion of the project site, there is a flat training field, and beyond that a storm drain outlet channel that conveys water down into the San Diego River floodplain. Native upland habitat occurs west of the storm drain outlet channel and has a flat grade until sloping down towards the San Diego River floodplain.

4.18.1.2.4 Fire History

Fire history data can provide an understanding of fire frequency, fire type, burn severity, significant ignition sources, and other information relevant to understanding the fire and fuels environment in an area. Fire history data was obtained from the California Department of Forestry and Fire Protection's (CAL FIRE) Fire Resource and Assessment Program (FRAP) database (CAL FIRE 2017). FRAP summarizes fire perimeter data dating to the late 1800s, but it is incomplete due to the fact that it includes only fires over 10 acres in size and has incomplete perimeter data, especially for the first half of the twentieth century (Syphard and Keeley 2016). However, the data does provide a summary of recorded fires and can be used to show whether large fires have occurred in the project area, which indicates whether they may be possible in the future.

Fire history records document 11 wildfires within 5 miles of the project site between 1935 and 2003 (CAL FIRE 2017), primarily to the north and east of the site (Figure 4.18-1, Fire History Map). No wildfires in the recorded history have burned across the project site. However, the Normal Heights Fire (1985) burned approximately 300 acres in heavy brush-covered slopes to the south of the project site. Based on a review of the fire history information, average fire return interval for the area within 5 miles of the project site is 8 years, with intervals ranging from 1 to 36 years. (CAL FIRE 2017).

4.18.1.2.5 Fire Hazard Mapping

CAL FIRE has mapped areas of significant fire hazards in the state through FRAP. These maps designate areas of the state into different fire hazard severity zones (FHSZ). CAL FIRE uses FHSZs to classify anticipated fire-related hazards for the entire state and includes classifications for State Responsibility Areas, Local Responsibility Areas, and Federal Responsibility Areas. Fire hazard severity classifications take into account the following elements: vegetation, topography, weather, crown fire production, and ember production and movement.

A large portion of the City, even highly developed areas, is designated as a Very High Fire Hazard Severity Zone (VHFHSZ) (City of San Diego 2018). The very high fire hazard severity designation can be attributed to a variety of factors including highly flammable, dense, drought-adapted desert chaparral vegetation; seasonal strong winds; and a Mediterranean climate that results in vegetation drying during the months most likely to experience Santa Ana winds.

Specific to the project site, the very northern and southern portions of the project site are located within VHFHSZ as mapped by CAL FIRE and the SDFD (City of San Diego 2009). These designations are attributable to vegetated, open space slopes north of Friars Road and the San Diego riverbed to the south of the project site (see Figure 4.18-2, Fire Hazard Severity Zones). The existence of VHFHSZ on the property would require buildings to implement ignition-

resistive construction and provide a minimum 100-foot-wide defensible space area (treated, maintained vegetation) between structures and open space areas. Since a portion of the project site is classified as VHFHSZ, the requirements of Chapter 7A of the 2016 California Building Code (CBC) would apply to all project buildings.

4.18.1.2.6 Emergency Response

Emergency response plans include elements to maintain continuity of government, emergency functions of governmental agencies, mobilization and application of resources, mutual aid, and public information. Emergency response plans are maintained at the federal, state, and local levels for all types of disaster, both natural and human-caused. Local governments have the primary responsibility for preparedness and response activities.

San Diego County has numerous levels of emergency response and evacuation plans, including the Operational Area Emergency Operations Plan, approved in 2018. The Emergency Operations Plan is used by all key partner agencies within the County to respond to major emergencies and disasters, and describes the roles and responsibilities between the County and its departments with local jurisdictions within the County (County of San Diego 2018).

In addition to the Emergency Operations Plan, the City also participates in the County's Multi-Jurisdictional Hazard Mitigation Plan that was last revised in 2017 and identifies risks and ways to minimize damage caused by natural and human-caused disasters. Potential hazards or events that may trigger an emergency response in the County include earthquakes, tsunamis, floods, wildland fires, landslides, droughts, hurricanes, tropical storms, and freezes. Emergency response actions could also be triggered by a hazardous materials incident; water or air pollution; a major transportation accident; water, gas, or energy shortage; a health epidemic; a nuclear accident; or terrorism (County of San Diego 2017a).

The project site is located within the SDFD responsibility area. Emergency response for the project site and surrounding area is provided, initially, by the City from SDFD Station 45, located immediately to the north of the project site across Friars Road. SDFD Station 45 is equipped with a battalion chief's vehicle, fire engine, aerial fire truck, and two hazardous materials response units. Station 45 has a 4.28-square-mile service area and responds to hazardous materials incidents as wells as fire incidents (City of San Diego 2019a). In 2018, Station 45 responded to 926 fire incidents (City of San Diego 2019b). Additional emergency response would be provided from fire stations as identified in Table 4.14-1, in Section 4.14, Public Services and Recreation. As shown in Figure 4.14-1 (in Section 4.14), these fire stations can respond to the project site within 7.5 minutes of receiving the 911 call in fire dispatch, which is the response time goal for urban-suburban areas according to the City's General Plan.

The SDFD provides fire response services within the City. Additionally, the SDFD has "Automatic Aid" agreements with jurisdictions adjacent to the City. Automatic Aid agreements ensure that the closest engine company responds to a given incident. Furthermore, the City has Mutual Aid agreements that allow the City to request additional resources from county, state, and federal agencies to meet the needs of a given incident. The SDFD is responsible for the preparation, maintenance, and execution of Fire Preparedness and Management Plans. The City's Emergency Operations Center trains City staff and outside agencies in their roles and responsibilities and coordinates operations in the event of an emergency or major event or incident (City of San Diego 2018).

4.18.2 Environmental Effects of Wildfires

Although fire can benefit natural ecosystems that have evolved with occasional fire and that benefit from the stimulation of growth through the reproduction of plants and wildlife habitat, fire can also be detrimental to biological and other natural resources, such as air quality and water quality.

Biological Resources

Flora. Grassland communities, usually non-native grasses, will readily establish after wildfires in chaparral and scrub communities. With repeated burning at short intervals of up to several years, it is possible to convert chaparral and scrub to non-native grasslands. Chaparral and scrub vegetation communities will typically re-sprout and absent fire or other disturbances will return to pre-fire conditions. Chaparral communities also tend to repopulate many of the San Diego County forest types following stand-replacing fire. The chaparral may establish for the first several years after the fire event, whereupon the tree cover will begin to establish (USDA 2000a). Because vegetation communities can be converted following fire, these changes in dominant vegetation communities can drastically affect plant and animal habitat and can affect the prevalence of special-status species.

Fauna. Generally speaking, fires injure or kill a relatively small proportion of wild animals. For example, birds and larger mammals can flee wildfire and small mammals and reptiles can seek refuge in subterranean burrows. Habitat changes resulting from fires have a much more profound impact on faunal populations and communities than does the fire itself. Fires can result in short-term increases in vegetation productivity and the availability and nutrient content of forage and browse (USDA 2000b). These increases can in turn lead to increases in herbivore populations. However, any increase in population size is highly dependent upon the population's ability to survive in the post-fire environment (USDA 2000b). In general, fires that devastate a landscape featuring many shrubs and trees reduce habitat cover for species requiring cover and increase habitat for species (such as raptors) that prefer open areas (USDA 2000b).

Air Quality

Carbon dioxide, water vapor, carbon monoxide, particulate matter, hydrocarbons, and other constituent materials are all present in wildfire smoke. The specific composition of smoke depends largely on the fuel type (vegetation types contain different amounts of cellulose, oils, waxes, and starches, which when ignited produce different compounds). In addition, hazardous air pollutants and toxic air contaminants, such as benzene and formaldehyde, are also present in smoke. However, the principal pollutant of concern from wildfire smoke is particulate matter. In general, particulate matter from smoke is very small in size and can be inhaled into the deepest recesses of the lungs, presenting a serious health concern (Stone et al. 2016).

Factors including weather, stage of fire, and terrain can all dictate fire behavior and the impact of smoke on the ground. Wind, for instance, generally results in lower smoke concentrations because wind causes smoke to mix with a larger volume of air. Regional weather systems, such as the Santa Ana winds of Southern California, on the other hand, can spread fire quickly and result in numerous devastating impacts. The Santa Ana winds effectively work to reverse the typical onshore flow patterns and blow winds from dry, desert Great Basin areas westward toward the coast. As a result, coastal communities can be impacted by fires originating in inland areas (Stone et al. 2016).

Large quantities of pollutants can be released by wildland fires over a relatively short period of time. Air quality during large fires can become severely hazardous and can remain impaired for several days after the fire is ignited.

Water Quality

Fire can impact water quality by increasing potential for erosion and sedimentation in areas where vegetation has been burned by fire, resulting in increased water temperature through removal or drastic modification of shade-providing trees and vegetation. Water chemistry can also be altered through the introduction of pollutants and chemical constituents. Aquatic environments may also be impacted through the introduction of fire retardant chemicals used during firefighting activities.

Erosion and Sedimentation. Watersheds severely burned by wildfire are vulnerable to accelerated rates of soil erosion and can experience large amounts of post-fire sediment deposits. Increases in post-fire suspended sediments in streams and lakes (in addition to possible increases in turbidity) can result from erosion and overland flow, channel scouring, and creep accumulations in stream channels after an event (USDA 2005). While less is known regarding the effect of fire on turbidity, it has been observed that post-fire turbidity levels in stream water are affected by the steepness of the devastated watershed (USDA 2005). The little data available regarding post-fire turbidity levels has indicated that U.S. Environmental Protection Agency water quality standard for turbidity can be exceeded after a fire event (USDA 2005). The threat to water quality from erosion following wildfire was analyzed by CAL FIRE (2009). This analysis estimates an expected erosion rate if an area experiences a high severity fire and considers information on fire rotation to better identify locations that are more likely to experience frequent high severity fires (CAL FIRE 2010).

Water Temperature. When fire burns stream bank vegetation and shade trees, water temperature can rise, which in turn can lead to thermal pollution, which leads to increased biological activity in the stream. Increased activity levels place a greater demand on the dissolved oxygen content of the water and can affect the survivability and sustainability of aquatic populations and communities (USDA 2005). Water temperature increases up to 62°Fahrenheit have been recorded in stream flows following fires in which the stream bank vegetation was burned (USDA 2005).

Water Chemistry. Ash deposits generated by a fire can affect the pH of water immediately after the event, potentially increasing to levels that violate water quality standards. In addition, increases in the pH of nearby soil can also cause increases in stream flow pH (USDA 2005). Dissolved nitrogen levels can increase after fires as a result of accelerated mineralization and nitrification (dissolved nitrogen is commonly studied as an indicator of fire disturbance), but these levels do not typically exceed established water quality standards (USDA 2005). Dissolved phosphorous, sulfur, chloride, and total dissolved solids levels can increase after a fire, but studies have shown that these increases typically do not result in violation of drinking water quality standards (USDA 2005).

Fire Retardant. The use of fire retardants to protect communities, sensitive resources, or other assets has proven highly effective, but it can have a direct effect on aquatic environments. The use of ammonium-based retardants can affect water quality and, in some instances, can be toxic to aquatic biota (USDA 2005). Nitrogen-containing retardants can potentially affect drinking water quality, and retardants containing sodium ferrocyanide can potentially be lethal for aquatic organisms (USDA 2005).

4.18.3 Relevant Plans, Policies, and Ordinances

Federal

National Fire Protection Association Codes, Standards, Practices, and Guides

National Fire Protection Association codes, standards, recommended practices, and guides are developed through a consensus standards development process approved by the American National Standards Institute. This process brings together professionals representing varied viewpoints and interests to achieve consensus on fire and other safety issues. NFPA standards are recommended guidelines and nationally accepted good practices in fire protection but are not law or "codes" unless adopted as such or referenced as such by the California Fire Code or the Local Fire Agency.

National Fire Plan

The National Fire Plan was a presidential directive in 2000 as a response to severe wildland fires that had burned throughout the United States. The National Fire Plan focuses on reducing fire impacts on rural communities and providing assurance for sufficient firefighting capacity in the future. The plan addresses five key points: Firefighting, Rehabilitation, Hazardous Fuels Reduction, Community Assistance, and Accountability. The plan continues to provide invaluable technical, financial, and resource guidance and support for wildland fire management across the United States. The U.S. Forest Service and the Department of the Interior are working to successfully implement the key points outlined in the plan (USFS 2019).

International Fire Code

Created by the International Code Council, the International Fire Code addresses a wide array of conditions hazardous to life and property including fire, explosions, and hazardous materials handling or usage. The International Fire Code places an emphasis on prescriptive and performance-based approaches to fire prevention and fire protection systems. Updated every 3 years, the International Fire Code uses a hazards classification system to determine the appropriate measures to be incorporated in order to protect life and property (often times these measures include construction standards and specialized equipment). The International Fire Code uses a permit system (based on hazard classification) to ensure that required measures are instituted.

International Wildland–Urban Interface Code

The International Wildland–Urban Interface Code is published by the International Fire Code and is a model code addressing wildfire issues.

State

California Building Code

Chapter 7A of the CBC applies to building materials, systems and/or assemblies used in the exterior design and construction of new buildings located within a WUI Fire Area. The purpose of this chapter is to establish minimum standards for the protection of life and property by increasing the ability of a building located in any FHSZ within State Responsibility Areas or any WUI Fire Area to resist the intrusion of flames or burning embers projected by a vegetation fire, and to contribute to a systematic reduction in conflagration losses. New buildings located in such areas shall comply with the ignition-resistant construction standards outlined in CBC Chapter 7A.

California Fire Code

The California Fire Code (CFC) is contained within Title 24, Chapter 9 of the California Code of Regulations. Based on the International Fire Code, the CFC is created by the California Buildings Standards Commission and regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. Similar to the International Fire Code, the CFC and CBC use a hazards classification system to determine the appropriate measures to incorporate to protect life and property.

California Public Resources Code

California Public Resources Code Sections 4290 and 4291 are discussed in further detail as follows:

- **Public Resources Code Section 4290** requires minimum fire safety standards related to defensible space that are applicable to State Responsibility Area lands and lands classified and designated as VHFHSZs.
- **Public Resources Code Section 4291** requires a reduction of fire hazards around buildings, which requires 100 feet of vegetation management around all buildings and is the primary mechanism for conducting fire prevention activities on private property within CAL FIRE jurisdiction.

Fire Hazard Severity Zoning

CAL FIRE mapped FHSZs in San Diego County based on fuel loading, slope, fire weather, and other relevant factors as directed by California Public Resources Code Sections 4201–4204 and Government Code Sections 51175–51189. FHSZs are ranked from moderate to very high and are categorized for fire protection within a Federal Responsibility Area, State Responsibility Area, or Local Responsibility Area under the jurisdiction of a federal agency, CAL FIRE, or local agency, respectively. As noted above and depicted on Figure 4.18-2, the project site is located partially within and adjacent to a VHFHSZ.

California Strategic Fire Plan

The 2018 Strategic Fire Plan for California reflects CAL FIRE's focus on (1) fire prevention and suppression activities to protect lives, property, and ecosystem services, and (2) natural resource management to maintain the state's forests as a resilient carbon sink to meet California's climate change goals and to serve as important habitat for adaptation and mitigation. The Strategic Fire Plan provides a vision for a natural environment that is more fire resilient; buildings and infrastructure that are more fire resistant; and a society that is more aware of and responsive to the benefits and threats of wildland fire; all achieved through local, state, federal, tribal, and private partnerships (CAL FIRE 2018). Plan goals include the following:

1. Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the collaborative development and sharing of all analyses and data collection across all ownerships for consistency in type and kind.
2. Promote and support local land use planning processes as they relate to: (a) protection of life, property, and natural resources from risks associated with wildland fire, and (b) individual landowner objectives and responsibilities.
3. Support and participate in the collaborative development and implementation of local, county and regional plans that address fire protection and landowner objectives.

4. Increase fire prevention awareness, knowledge and actions implemented by individuals and communities to reduce human loss, property damage and impacts to natural resources from wildland fires.
5. Integrate fire and fuels management practices with landowner/land manager priorities across jurisdictions.
6. Determine the level of resources necessary to effectively identify, plan and implement fire prevention using adaptive management strategies.
7. Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.
8. Implement post-fire assessments and programs for the protection of life, property, and natural resource recovery.

California Emergency Services Act

The California Emergency Services Act was adopted to establish the state's roles and responsibilities during human-caused or natural emergencies that result in conditions of disaster and/or extreme peril to life, property, or resources of the state. This act is intended to protect health and safety by preserving the lives and property of the people of the state.

California Natural Disaster Assistance Act

The California Natural Disaster Assistance Act provides financial aid to local agencies to assist in the permanent restoration of public real property, other than facilities used solely for recreational purposes, when such real property has been damaged or destroyed by a natural disaster. The California Natural Disaster Assistance Act is activated after a local declaration of emergency and the California Emergency Management Agency gives concurrence with the local declaration, or after the governor issues a proclamation of a state emergency. Once the act is activated, the local government is eligible for certain types of assistance, depending on the specific declaration or proclamation issued.

Local

Because San Diego State University (SDSU) is a component of the California State University (CSU), which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. As such, the 2016 CFC and CBC would be enforced from the authority of the California Office of the State Fire Marshal, per Title 24, Part 9, Chapter 1, Section 1.11.2.1.1. However, for informational purposes, SDSU has considered the following planning documents and the project's site location within, and relationship to, each. The proposed project would be subject to state and federal agency planning documents described above, but would not be subject to regional or local planning documents such as the City's General Plan, Mission Valley Community Plan, or City municipal zoning code.

City of San Diego General Plan

The Conservation Element (City of San Diego 2008a), Urban Design Element (City of San Diego 2008b), and Public Facilities, Services, and Safety Element (City of San Diego 2018) of the City's General Plan contain policies that pertain to wildfire hazards and emergency response in the City, including the following:

- Policy CE-B.6. Provide an appropriate defensible space between open space and urban areas through the management of brush, the use of transitional landscaping, and the design of structures. Continue to implement a citywide brush management system.
- Policy UD-A.3. Design development adjacent to natural features in a sensitive manner to highlight and complement the natural environment in areas designated for development.
    a. Integrate development on hillside parcels with the natural environment to preserve and enhance views, and protect areas of unique topography.
    b. Minimize grading to maintain the natural topography, while contouring any landform alterations to blend into the natural terrain.
    c. Utilize variable lot sizes, clustered housing, stepped-back facades, split-level units or other alternatives to slab foundations to minimize the amount of grading.
    d. Consider terraced homes, stepped down with the slope for better integration with the topography to minimize grading in sensitive slope areas.
    e. Utilize a clustered development pattern, single-story structures or single-story roof elements, or roofs sloped toward the open space system or natural features, to ensure that the visibility of new developments from natural features and open space areas are minimized.
    f. Provide increased setbacks from canyon rims or open space areas to ensure that the visibility of new development is minimized.
    g. Screen development adjacent to natural features as appropriate so that development does not appear visually intrusive, or interfere with the experience within the open space system. The provision of enhanced landscaping adjacent to natural features could be used to soften the appearance of or buffer development from the natural features.
    h. Use building and landscape materials that blend with and do not create visual or other conflicts with the natural environment in instances where new buildings abut natural areas. This guideline must be balanced with a need to clear natural vegetation for fire protection to ensure public safety in some areas.
    i. Ensure that the visibility of new development from natural features and open space areas is minimized to preserve the landforms and ridgelines that provide a natural backdrop to the open space systems. For example, development should not be visible from canyon trails at the point the trail is located nearest to proposed development. Lines-of-sight from trails or the open space system could be used to determine compliance with this policy.
    j. Design and site buildings to permit visual and physical access to the natural features from the public right-of-way.
    k. Encourage location of entrances and windows in development adjacent to open space to overlook the natural features.
    l. Protect views from public roadways and parklands to natural canyons, resource areas, and scenic vistas.
    m. Preserve views and view corridors along and/or into waterfront areas from the public right-of-way by decreasing the heights of buildings as they approach the shoreline, where possible.

n. Provide public pedestrian, bicycle, and equestrian access paths to scenic view points, parklands, and where consistent with resource protection, in natural resource open space areas.

o. Provide special consideration to the sensitive environmental design of roadways that traverse natural open space systems to ensure an integrated aesthetic design that respects open space resources. This could include the use of alternative materials such as "quiet pavement" in noise sensitive locations, and bridge or roadway designs that respect the natural environment.

p. Design structures to be ignition and fire-resistant in fire prone areas or at-risk areas as appropriate. Incorporate fire-resistant exterior building materials and architectural design features to minimize the risk of structure damage or loss due to wildfires.

- Policy PF-D.1. Locate, staff, and equip fire stations to meet established response times as follows:
  a. To treat medical patients and control small fires, the first-due unit should arrive within 7.5 minutes, 90 percent of the time from the receipt of the 911 call in fire dispatch. This equates to 1-minute dispatch time, 1.5 minutes company turnout time and 5 minutes drive time in the most populated areas.
  b. To provide an effective response force for serious emergencies, a multiple-unit response of at least 17 personnel should arrive within 10.5 minutes from the time of 911-call receipt in fire dispatch, 90 percent of the time.
     - This response is designed to confine fires near the room of origin, to stop wildland fires to under 3 acres when noticed promptly, and to treat up to 5 medical patients at once.
     - This equates to 1-minute dispatch time, 1.5 minutes company turnout time and 8 minutes drive time spacing for multiple units in the most populated areas.
- Policy PF-D.12. Protect communities from unreasonable risk of wildfire within very high fire hazard severity zones.
  a. Assess site constraints when considering land use designations near wildlands to avoid or minimize wildfire hazards as part of a community plan update or amendment. (see also LU-C.2.a.4)
  b. Identify building and site design methods or other methods to minimize damage if new structures are located in very high fire hazard severity zones on undeveloped land and when rebuilding after a fire.
  c. Require ongoing brush management to minimize the risk of structural damage or loss due to wildfires.
  d. Provide and maintain water supply systems to supplies for structural fire suppression.
  e. Provide adequate fire protection. (see also PF-D.1 and PF-D.2)
- Policy PF-D.13. Incorporate fire safe design into development within very high fire hazard severity zones to have fire-resistant building and site design, materials, and landscaping as part of the development review process.
  a. Locate, design and construct development to provide adequate defensibility and minimize the risk of structural loss from wildland fires.
  b. Design development on hillsides and canyons to reduce the increased risk of fires from topography features (i.e., steep slopes, ridge saddles).
  c. Minimize flammable vegetation and implement brush management best practices in accordance with the Land Development Code.
  d. Design and maintain public and private streets for adequate fire apparatus vehicles access (ingress and egress), and install visible street signs and necessary water supply and flow for structural fire suppression.
  e. Coordinate with the Fire-Rescue Department to provide and maintain adequate fire breaks where feasible or identify other methods to slow the movement of a wildfire in very high fire hazard severity zones.

- Policy PF-D.14. Implement brush management along City maintained roads in very high fire hazard severity zones adjacent to open space and canyon areas.
- Policy PF-D.15. Maintain access for fire apparatus vehicles along public streets in very high fire hazard severity zones for emergency equipment and evacuation.

Brush Management and Weed Abatement Program

In February 2008, the SDFD expanded the City's Proactive Brush Management Program to cover the entire City. This program requires that brush be managed on properties within WUI areas in the City, in accordance with the City's Brush Management Policy. Annual brush inspections are conducted on properties on canyon rim that have been identified in the Proactive Brush Management program (SDFD 2015). Additionally, privately owned vacant lots are inspected yearly to ensure compliance with the CFC (City of San Diego 2019c).

City of San Diego Brush Management Policy and Landscape Standards

The City's Brush Management Policy and Landscape Standards were adopted in April 2008 and updated in May 2010. This policy regulates the construction, alteration, movement, repair, maintenance, and use of any building, structure, or premises within the WUI areas in the City. It requires that a Brush Management Plan and Program be processed in conjunction with any development that is required to obtain discretionary grading and/or building permits. The policy also includes requirements for thinning and pruning native/naturalized vegetation within WUI areas and allowable coverage, massing, and spacing for plants that would be retained. If the full brush management zone(s) cannot be provided, the policy requires that alternative means of fire protection, including fire-rated construction, be identified by the SDFD and implemented.

San Diego Fire-Rescue Department Fire Access Roadways Policy

The SDFD has adopted the Fire Access Roadways Policy to clarify requirements outlined in CFC Section 503. Fire access roadways for new and existing buildings are regulated by this policy. The policy requires buildings to be accessible to emergency vehicles. Under this policy, fire apparatus access roadways shall not be less than 20 feet of unobstructed width, shall have an adequate roadway turning radius, and shall have a minimum vertical clearance of 13 feet 6 inches.

City of San Diego Municipal Code

Municipal Code Section 55.0304

Municipal Code Section 55.0304 regulates the management of combustible waste material, including vegetation, by requiring vegetation clearance in WUI areas in accordance with Chapter 49 of the CFC and the City of San Diego Land Development Code. Furthermore, this code requires persons who own, control, operate, or maintain electrical transmission or distribution lines to have an approved program in place that identifies poles or towers with equipment and hardware types that have a history of becoming an ignition source, and provides a combustible free space consisting of a clearing of not less than 10 feet in each direction from the outer circumference of such pole or tower during such periods of time as designated by the Fire Code Official.

Municipal Code Section 142.0412

Municipal Code Section 142.0412 requires brush management in all base zones on publicly or privately owned properties that are within 100 feet of a structure and contain native or naturalized vegetation. This code allows for brush management activities within environmentally sensitive lands, excluding wetlands, that are located within 100 feet of an existing structure. Brush management in wetlands may be requested with a development permit in accordance with Section 143.0110 where the Fire Chief deems brush management necessary. Where brush management is required, a comprehensive program is required to be implemented that reduces fire hazards around structures by providing an effective fire break between all structures and contiguous areas of native or naturalized vegetation. The code requires this fire break to consist of two distinct brush management areas called "Zone One" and "Zone Two." Brush management Zone One is the area adjacent to the structure, and must be least flammable and typically consist of pavement and permanently irrigated ornamental planting. Brush management Zone Two is the area between Zone One and any area of native or naturalized vegetation and typically consists of thinned, native, or naturalized non-irrigated vegetation. The code specifies specific brush management measures and landscape standards for these zones. The code requires that the width of Zone One and Zone Two not exceed 100 feet. A site-specific plan that includes brush management measures is required to establish brush management Zones One and Two for new development. Brush management activities are prohibited within coastal sage scrub, maritime succulent scrub, and coastal sage-chaparral habitats from March 1 through August 15, except where documented to the satisfaction of the City Manager that the thinning would be consistent with conditions of species coverage described in the City of San Diego's Multiple Species Conservation Plan Subarea Plan.

County of San Diego Multi-Jurisdictional Hazard Mitigation Plan

The County Multi-Jurisdictional Hazard Mitigation Plan is implemented by the County of San Diego Office of Emergency Services. The Multi-Jurisdictional Hazard Mitigation Plan is a County-wide plan that identifies risks posed by natural and human-caused disasters, and discusses ways to minimize potential damage occurring as a result of these disasters. The plan is intended to serve many purposes, including enhancing public understanding and awareness of potential hazardous situations, creating a decision tool for managing hazards, promoting compliance with state and federal program requirements, enhancing local policies for hazard mitigation capability, providing inter-jurisdictional coordination, and achieving regulatory compliance (County of San Diego 2017b).

Operational Area Emergency Operations Plan

The Office of Emergency Services implements the Operational Area Emergency Operations Plan (Plan) in collaboration with the Unified San Diego County Emergency Services Organization. The Plan is for use by the County and all of the cities within the County to respond to major emergencies and disasters. It describes the roles and responsibilities of all County departments (including many city departments), and the relationship between the County and its departments and the jurisdictions within the County. The Plan contains 16 annexes detailing specific emergency operations for different emergency situations (County of San Diego 2018).

4.18.4 Significance Criteria

The significance criteria used to evaluate the project impacts to wildfire are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related o wildfire would occur if the project is located in or near State Responsibility Areas or lands classified as VHFHSZs and would:

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

As depicted on Figure 4.18-2, portions of the project site are located within a VHFHSZ; therefore, it is appropriate to evaluate the project in the context of the above significance criteria.

4.18.5 Impacts Analysis

Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

An emergency plan describes a comprehensive emergency management system that provides for the planned response to disaster situations associated with natural disasters, technological incidents, terrorism, and nuclear-related incidents. The County of San Diego and all cities within the County use the Operational Area Emergency Operations Plan to respond to major emergencies and disasters. The Plan identifies a broad range of potential hazards and a response plan. According to Annex Q, Evacuation, primary evacuation routes identified in the Plan consist of the major interstates, highways, and prime arterials within San Diego County (County of San Diego 2018). The primary evacuation routes nearest to the project site include I-15, which is located immediately east of the site, I-8, which is located 0.15 miles south of the site, and I-805, which is located 0.7 miles west of the site. However, as noted in the Plan, specific evacuation routes would be determined based on the location and extent of the incident and would include as many predesignated transportation routes as possible (County of San Diego 2018).

The City of San Diego Office of Homeland Security oversees the City's emergency Prevention and Protection Program, Mitigation and Finance Program, Response and Recovery Program, and Regional Training Program. Through these programs, the City Office of Homeland Security supports and coordinates numerous risk management planning efforts; trains City employees; assists with the integration of emergency plans; ensures information flow to the public to assist in their emergency preparation and response; interfaces with County of San Diego, state, and federal jurisdictions; maintains the City's two Emergency Operations Centers; and secures grants from state and federal agencies related to homeland security (City of San Diego Office of Homeland Security 2017).

The City is also responsible for the development and maintenance of the emergency operational documents and guides for the existing SDCCU Stadium (City of San Diego 2008). Current SDCCU Stadium emergency response procedures and evacuation plans include procedures for evacuating the Stadium as well as for emergency responses to fire, earthquake or building collapse, explosions, chemical spills, suspicious packages, bomb threats, power outages, and flooding. Demolition of the existing SDCCU Stadium and construction and operation of the new Stadium and other buildings and facilities included in the proposed project would be performed in accordance with standards, codes, and regulations pertaining to emergency response and evacuation planning, including the Emergency Operations Plan.

However, the new Stadium will have a different on-site location and design, and the proposed project would also include additional buildings and facilities throughout the project site. Therefore, the proposed project would have the potential to conflict with existing emergency response and evacuation plans. Inconsistencies between existing emergency response and evacuation plans and the proposed project would represent a **potentially significant impact** (**Impact WDF-1**).

It is acknowledged that the SDCCU Stadium parking lot has been used for disaster response staging such as during firestorm emergencies over the last two decades. The elimination of a large expanse of parking lot that would occur when the site is redeveloped would not result in a significant impact because other such expanses of publically owned parking lots are located throughout the region, including at local City and County offices or complexes and at the Del Mar Fairgrounds. The availability of other publically accessible spaces coupled with the infrequent need of such disaster staging, would result in a **less-than-significant impact**.

Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The VHFHSZ associated with the hillsides across Friars Road and north of the project site and that associated with the San Diego River to the south of the project site extend onto the project site despite the site's lack of flammable vegetation, steep slopes or wildland terrain which are the drivers of such wildfire hazard designations. While partially designated a VHFHSZ, there are several characteristics of the project site that reduce its susceptibility to wildfire that may occur in adjacent off-site areas (San Diego River and Murphy Canyon Creek riparian areas, wildland areas to the south and east, and the vegetated hillsides located north of Friars Road and several hundred feet north of the project site). First, the project site is nearly flat – wildfire spread rates increase with increasing slope gradients. Second, Friars Road is an approximately 120-foot-wide, six-lane roadway that separates the project site from the potentially flammable vegetated hillsides to the north. This roadway would serve as a buffer between the project site and a potential wildfire burning in this location. Third, SDFD Station 45 is located adjacent to the project site on Friars Road, minimizing emergency response times. Because 95% of all wildfire ignitions are controlled during the initial attack (Smalley 2008), the proximity of firefighting resources would greatly reduce potential wildfire impacts on the project site.

The above notwithstanding, the project site is technically located partially within a VHFHSZ, so CSU/SDSU has evaluated the potential for the proposed project to exacerbate wildfire risk during construction and operational phases.

Construction

As noted, the project site is partially located within a VHFHSZ, and heat or sparks from construction equipment or vehicles, as well as the use of flammable materials, have the potential to ignite adjacent vegetation and start a fire, especially during weather events that include low humidity and high wind speeds that are typically experienced in the summer and fall, but can occur year round in the San Diego region. The following construction-related equipment and practices have the potential to generate heat or sparks that could result in wildfire ignition:

- Earth-moving and excavating equipment, chainsaws and other small gas-powered equipment and tools can cause sparks which serve as a source of fire ignition.
- Tractors, graders, mowers, bulldozers, backhoes, cranes, excavators, trucks, and vehicles may result in heated exhaust which, if it they came into contact with vegetation, may result in fire ignition.
- Welders consist of an open heat source which may result in metallic sparks which could ignite vegetation.

The risk of potential ignitions resulting from construction activities would be considered very low for the vast majority of the project site (98%) with non-combustible land cover (parking lot, existing stadium). Construction activity within the southern and eastern portions of the property adjacent to the San Diego River and Murphy Canyon Creek, respectively, could be subject to increased ignition potential resulting from construction equipment due to the proximity of native vegetation communities (**Impact WLD-2**).

Data indicate that 95% of all wildfire ignitions are controlled during initial attack (Smalley 2008). The potential risk of wildfire ignition and spread associated with construction of the proposed project can be managed and pre-planned so that the potential for vegetation ignition along the Murphy Canyon Creek and the San Diego River interfaces is reduced by having adequate water available to service construction activities; implementing a construction-phase fire prevention plan; providing proper wildfire awareness, reporting, and suppression training to construction personnel; and requiring that all construction-phase components of the defensible space (fuel modification), landscape, and irrigation plans be fulfilled prior to delivery of combustible materials to the project site. Pre-planning and construction personnel fire awareness, reporting, and suppression training not only results in lower probability of ignition, but also in higher probability of fire control and extinguishment in its incipient stages.

Operation

By design, and generally consistent with City of San Diego General Plan policies CE-B.6, UD-A.3, PF-D.12, and PF-3.14, the proposed River Park would create a buffer area of at least 200 feet between existing native vegetation associated with Murphy Canyon Creek and the San Diego River and the nearest proposed structure. The River Park would consist of irrigated and maintained landscape vegetation, turf sports fields, and non-combustible roads, trails, and other hardscape features. Friars Road and proposed landscaping along the project site's northern boundary provide a buffer of at least 100 feet from the nearest proposed structure. Along the western boundary, the project site abuts existing developed land uses. The River Park component of the project would also function as a larger fuel break, positively affecting adjacent developed areas by slowing potential fire spread in the region. The above notwithstanding, given its location in a VHFHSZ and the adjacent and nearby naturally vegetated areas, the proposed project would comply with Chapter 7A of the 2016 CBC and CFC requirements for structural hardening (e.g., Class A roof systems), access, water supply, and fuel modification. Structural hardening requirements address roofs, eaves, exterior walls, vents, appendages, windows, and doors and result in hardened structures that have been proven to perform at high levels (resist ignition) during the typically short duration of exposure to burning vegetation from wildfires. There are two primary concerns for structure ignition: 1) radiant and/or convective heat and 2) burning embers (NFPA 1144 2008, IBHS 2008). Burning embers have been a focus of building code updates for at least the last decade, and structures

built to these codes have proven to be very ignition resistant. Likewise, radiant and convective heat impacts on structures have been minimized through the Chapter 7A exterior fire ratings for walls, windows and doors. Additionally, provisions for defensible space (described below) separating wildland fuels from structures and requirements for interior sprinklers (required in the 2016 Building/Fire Code update) have proven to reduce the number of structure losses in WUI areas.

Following construction, the proposed project would be maintained according to these fire protection standards to reduce the risk of fire ignition and/or spread. Proposed project landscaping along north, east, and southern edges of the project site, including that in the River Park, would be required to be consistent with state level 100-foot defensible space standards (California Public Resources Code Section 4291). Additionally, these landscaped and maintained areas would meet the 100-foot brush management standards outlined in San Diego Municipal Code Sections 55.0304 and 142.0412 and the City's Brush Management Policy and Landscape Standards. Adherence to the CBC and CFC, compliance with best design and management practices similar to what is spelled out in the City's Municipal Code and General Plan, development of the River Park, and installation and maintenance of project landscaping, would result in project-related wildfire impacts being **less than significant**.

Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Given its partial location within a VHFHSZ, SDSU would maintain defensible space around project structures consistent with California Public Resources Code 4291. As noted, this would be consistent with the standards outlined in City Municipal Code Sections 55.0304 and 142.0412. The proposed project would also comply with all applicable CBD and CFC requirements for development in a VHFHSZ, including, but not limited to, specific requirements for structural hardening, water supply and flow, hydrant and standpipe spacing, signage, and fire department access. Proposed project roads and trails would facilitate site access by responding fire agency personnel and project maintenance staff. Power lines would be installed below ground and would not pose an ongoing wildfire risk during project operations. None of the proposed project infrastructure or development features required for development in a VHFHSZ are expected to exacerbate wildfire risk or result in additional temporary or permanent impacts beyond those identified in this EIR. For these reasons, impacts to the environment resulting from installation and maintenance of infrastructure would be **less than significant.**

Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Wildfires can greatly reduce the amount of vegetation from hillsides. Plant roots stabilize the soil and above-ground plant parts slow water, allowing it to percolate into the soil. Removal of surface vegetation resulting from a wildfire reduces the ability of the soil surface to absorb rainwater and can allow for increased runoff that may include large amounts of debris. If hydrophobic conditions exist post-fire, the rate of surface water runoff is increased as water percolation into the soil is reduced (Moench and Fusaro 2012). The potential for surface runoff and debris flows therefore increases significantly for areas recently burned by large wildfires (Moench and Fusaro 2012).

Slope failures, mudflows, and landslides are common in areas where steep hillsides and embankments are present and such conditions would be exacerbated in a post-fire environment where vegetative cover has been removed. However, as presented in Section 4.6, Geology and Soils, the proposed project site is relatively flat, is not adjacent to steep slopes or hillsides, and is therefore not at risk of landslide or mudflow. Given the flat characteristics of the project site, post-fire conditions are not expected to increase risks associated with slope failures, mudflows, or landslides.

Increases in surface runoff and erosion are also possible in a post-fire environment where surface vegetation has been removed and steep slopes can increase runoff flow velocity. As presented in Section 4.9, Hydrology and Water Quality, the significant decrease of impervious surfaces on the project site and the incorporation of stormwater treatment basins, as well as the relatively flat nature of the project site, would greatly reduce the potential for off-site erosion as compared to the project site's current, paved condition. CAL FIRE mapping data also indicates no post-fire erosion threat potential for the project site or the immediate surrounding area (CAL FIRE 2009). Finally, the irrigated and maintained landscaping in River Park is not be expected to be burned (removed) entirely should a fire occur on the project site, unlike post-fire conditions in native vegetation where complete removal is common. Considering these project site features and characteristics, post-fire conditions are not expected to increase risks associated with runoff and erosion. In addition, as described in Chapter 2, Project Description, and analyzed in Section 4.9, Hydrology and Water Quality, proposed project grading would raise the vertical development areas of the proposed project within the project site outside the 100-year and 500-year floodplains, further reducing the potential for such impacts associated with flooding of the project site.

Considering the project site's terrain and proximity of hillsides, and with implementation of project grading, construction and erosion control BMPs, potential impacts associated with runoff, post-fire slope instability, or drainage changes are considered **less than significant**.

Would the project result in a cumulative impact to wildfire?

The cumulative context considered for project wildfire impacts is San Diego County. As discussed in Section 4.18.1, CAL FIRE has mapped areas of fire hazards in the state through its FRAP, based on fuels, terrain, weather, and other relevant factors.

As described above, portions of the northeastern and southern areas of the project site would be located in a VHFHSZ. Such zones are also designated approximately 0.5 miles to the east and 0.75 miles to the west of the site (SDFD 2009). The proposed project, combined with other projects in the region, would increase the population and/or activities and ignition sources in the Mission Valley area, which may increase the chances of a wildfire and increase the number of people and structures exposed to risk of loss, injury, or death.

Individual projects located within the City of San Diego are required to comply with applicable City building codes, which have been increasingly strengthened as a result of severe wildfires that have occurred in the last two decades in the San Diego area. The fire and building codes include fire prevention and protection features that reduce the likelihood of a fire igniting on a specific project and spreading to off-site vegetated areas. These codes also protect projects from wildfires that may occasionally occur in the area through implementation of brush management/fuel management zones, ensuring adequate water supply, preparation of fire protection plans, and other measures. Particularly fire-prone projects may also enter into a Fire Service Agreement, which result in additional project-provided funding to the fire agencies to augment response capabilities. Fire agencies such as the SDFD use the funding to provide the personnel and apparatus needed to respond to the types of emergencies that will be generated from the cumulative projects. The fire and building codes and funding stream are intended to offset the potential impacts so that fire service can be provided, and people and structures are not exposed to significant risk of loss, injury, or death involving wildland fires.

Furthermore, other cumulatively considerable projects would be required to comply with the City's vegetation clearance requirements, as outlined in San Diego Municipal Code Sections 55.0304 and 142.0412 and the City's Brush Management Policy and Landscape Standards to reduce the fuel load on vacant and developed properties in the City. The San Diego County Fire and Building codes, along with project-specific needs assessments and fire

prevention plan requirements ensure that every project approved for construction includes adequate emergency access. Roads are required to meet widths, have all-weather surface, and be capable of supporting the imposed loads of responding emergency apparatus. Therefore, cumulative impacts related to wildfire hazards and emergency response and access would be **less than significant.**

4.18.6 Summary of Impacts Prior to Mitigation

This section provides a synopsis of the conclusion reached in each of the impact analyses. In summary, the proposed project would result in the following potentially significant wildfire impacts:

Impact WLD-1 The proposed project would have the potential to substantially impair an adopted emergency response plan or emergency evacuation plan.

Impact WLD-2 Construction activity within the southern and eastern portions of the property adjacent to the San Diego River and Murphy Canyon Creek, respectively, could be subject to increased ignition potential resulting from construction equipment due to the proximity of native vegetation communities.

4.18.7 Mitigation Measures

The following mitigation measures would be implemented to reduce all impacts described in Section 4.18.5 to levels below significance.

MM-WLD-1 Implement MM-HAZ-9, identified in Section 4.8, Hazards and Hazardous Materials.

MM-WLD-2 To avoid impeding emergency vehicle and evacuation traffic around construction vehicles and equipment, prior to commencement of construction activities California State University/San Diego State University or its designee shall develop an Emergency Vehicle Access Plan that includes the following:

- Evidence of advanced coordination with emergency service providers, including but not necessarily limited to the University Police Department, San Diego Police Department, San Diego Fire-Rescue Department, ambulance services, and paramedic services;
- Notification to emergency service providers of the proposed project locations, nature, timing, and duration of any construction activities, and request for advice about any road access restrictions that could impact their response effectiveness; and
- Project construction schedules and routes designed to avoid restricting movement of emergency vehicles to the best extent possible. Provisions to be ready at all times to accommodate emergency vehicles. Provisions could include the use of platings over excavations, short detours, and/or alternate routes.

MM-WLD-3 Throughout the duration of construction, the construction contractor shall ensure that adequate access to all buildings on the project site be provided for emergency vehicles during all building construction phases.

MM-WLD-4 Throughout the duration of construction, the construction contractor shall ensure that adequate water is available to service all construction activities during all phases.

MM-WLD-5 The construction contractor shall ensure the implementation of all construction-phase defensible space, landscape, and irrigation plan components prior to combustible building materials being delivered to the project site.

MM-WLD-6 Prior to commencement of construction activities, California State University/San Diego State University or its designee shall develop a Construction Fire Prevention Plan that addresses training of construction personnel and provides details of fire-suppression procedures and equipment to be used during construction. Information contained in the plan shall be included as part of project-related environmental awareness training. At minimum, the plan shall include the following:

- Procedures for minimizing potential ignition, including, but not limited to, vegetation clearing, parking requirements/restrictions, idling restrictions, smoking restrictions, proper use of gas-powered equipment, use of spark arrestors, and hot work restrictions;
- Work restrictions during Red Flag Warnings and High to Extreme Fire Danger days;
- Fire coordinator role and responsibility;
- Worker training for fire prevention, initial attack firefighting, and fire reporting;
- Emergency communication, response, and reporting procedures;
- Coordination with local fire agencies to facilitate agency access through the project site;
- Emergency contact information;
- Demonstrate compliance with applicable plans and policies established by state agencies.

MM-WLD-7 California State University/San Diego State University or its designee shall prepare a defensible space plan to address landscape requirements for the perimeter structures along the northern, eastern, and southern edges of development. The defensible space plan shall conform to the standards outlined in California Public Resources Code Section 4291, at a minimum.

4.18.8 Level of Significance After Mitigation

Anticipated impacts to emergency response and evacuation would be potentially significant because the proposed project could potentially conflict with the existing emergency response procedures and evacuation plan for the SDCCU Stadium **(Impact WLD-1)**. Mitigation measure **MM-WLD-1** requires implementation of **MM-HAZ-9**, which is included in Section 4.8, Hazards and Hazardous Materials. This mitigation measure requires plans and policies pertaining to emergency response and evacuation procedures to be updated to reflect the location and design of the new Stadium, new buildings, and other proposed project features. Plans would be required to be submitted to the San Diego Fire-Rescue Department Fire Prevention Bureau and Unified San Diego County Emergency Services Organization for review and comment. Implementation of mitigation measure **MM-WLD-1** would reduce impacts related to emergency response and evacuation to **less than significant** by ensuring that emergency response and evacuation plans are updated to reflect the proposed site design and features.

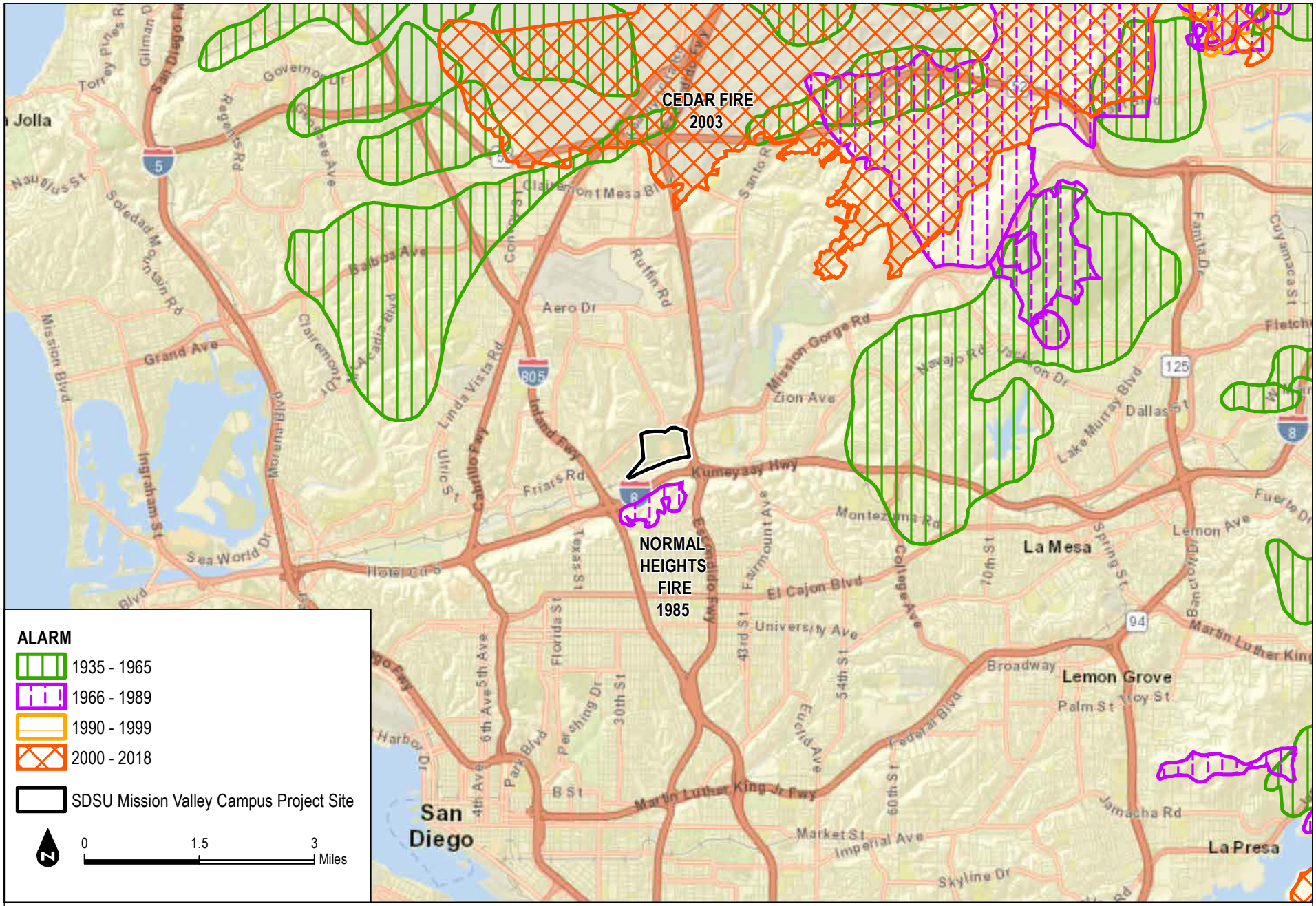
Anticipated impacts to wildfire risk during project construction would be potentially significant because project construction activities have the potential to generate heat or sparks that could result in wildfire ignition within a VHFHSZ **(Impact WLD-2)**. Mitigation measures **MM-WLD-2** and **MM-WLD-3** would ensure that emergency vehicles and evacuation traffic have adequate access in the event that fire suppression is needed during project construction. Furthermore, mitigation measure **MM-WLD-4** would ensure that adequate water supply is available in the event of a fire during project construction. Mitigation measure **MM-WLD-5** would ensure that on-site fuels are

reduced and that landscaping and irrigation is installed prior to combustible building materials being delivered to the project site. Additionally, mitigation measure **MM-WLD-6** and **MM-WLD-7** would require CSU/SDSU to develop a Construction Fire Prevention Plan, which would address the training of construction personnel and provide details of fire-suppression procedures and equipment to be used during construction, and a defensible space plan for buildings along the northern, eastern, and southern perimeters edge of the project site. Implementation of mitigation measures **MM-WLD-2** through **MM-WLD-7** would reduce wildfire hazards during project construction to less than significant. With compliance with the CBC and consistency with City of San Diego Fire Code, operational impacts would be less than significant.

With compliance with CBC and Fire Code requirements, and consistency with San Diego Municipal Code Sections 55.0304 and 142.0412 and the City's Brush Management Policy and Landscape Standards, anticipated impacts to wildfire risk associated with project-related infrastructure would be **less than significant.**

As presented in Section 4.18.5, compliance with existing regulations and construction and erosion-control BMPs would ensure that anticipated impacts associated with post-fire erosion, flooding, or landslides would be **less than significant.**

As presented in Section 4.18.5, consistency with San Diego County Fire and Building Codes, the San Diego Municipal Code, and the City's Brush Management Policy and Landscape Standards would ensure that anticipated impacts associated with cumulative wildfire impacts would be **less than significant.**



SOURCE: ESRI; CAL FIRE 2017

SDSU Mission Valley Campus Master Plan EIR

SAN DIEGO STATE UNIVERSITY

Figure 4.18-1
Fire History Map

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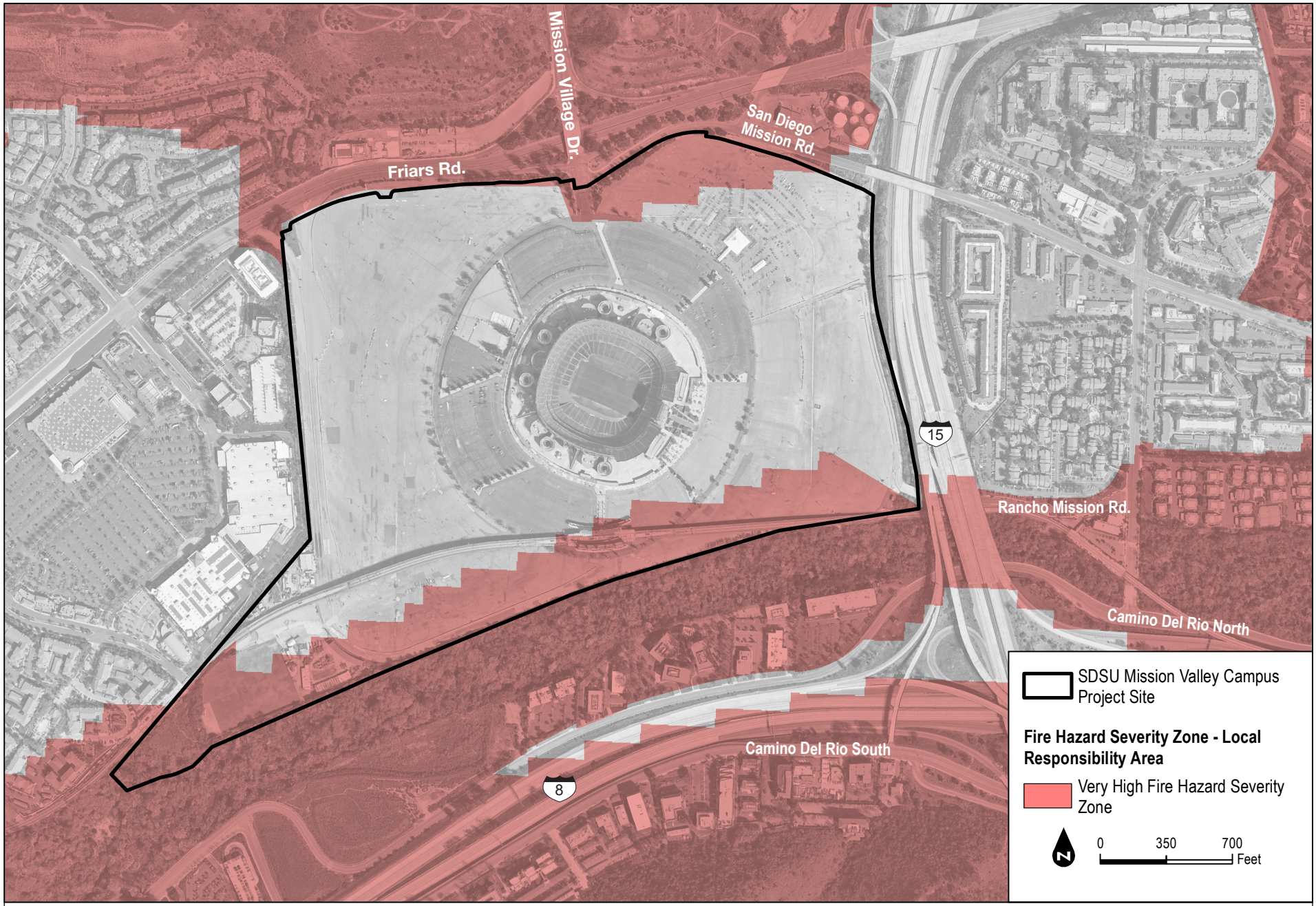

SOURCE: ESRI; CAL FIRE 2007

SDSU Mission Valley Campus Master Plan EIR

SAN DIEGO STATE UNIVERSITY

Figure 4.18-2

Fire Hazard Severity Zones

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