4.14 WILDFIRE

This section describes the existing setting and wildfire risks on and in the vicinity of the project site and evaluates the potential impacts of the proposed project with regard to wildfire and post-wildfire environmental risks.

4.14.1 Environmental Setting

A wildfire is a nonstructural fire that occurs in vegetative fuels. Wildfire generally does not include prescribed or controlled fires set by firefighters to manage fuel loads in fire-prone landscapes. Wildfires can occur in undeveloped areas and spread to urban areas where the landscape and structures are not designed and maintained to be ignition resistant. A wildland-urban interface (or WUI) is an area where urban development is in proximity to open space or "wildland" areas. The potential for wildland fires represents a hazard where development is adjacent to open space or within close proximity to wildland fuels or a designated Fire Hazard Severity Zone (FHSZ). Steep hillsides and varied topography can also contribute to the risk of wildland fires. Fires that occur in WUI areas may affect natural resources as well as life and property.

Wildfire ignition sources may include lightning, improperly managed campfires, cigarettes, arson, sparks from automobiles, power lines coming in contact with trees, lawnmowers and maintenance equipment, and other sources. Wildfire spread is often dramatically exacerbated when prolonged hot and dry weather conditions are coupled with strong wind events (Diablo winds). In the San Francisco Bay Area, wildfire season has historically extended from late summer through fall, when most vegetative fuels are dried out and Diablo wind events are most common. However, climate change has increasingly led to conditions that are conducive to wildfire spread throughout much of the year. Key factors in assessing wildland fire risk include potential ignition sources, building materials and design, community design, structural density, the presence of slopes and vegetative fuels, fire occurrence and weather, as well as occurrences of drought.[1]

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped areas of significant fire hazards in the State through its Fire and Resources Assessment Program (FRAP). These maps place areas of California into different FHSZ, based on a hazard scoring system using subjective criteria for fuels, fire history, terrain influences, housing density, and occurrence of severe fire weather where urban conflagration could result in catastrophic losses. As part of this mapping system, land where CAL FIRE is responsible for wildland fire protection and generally located in unincorporated areas is classified as a State Responsibility Area (SRA). Where local fire protection agencies (e.g., Fairfield Fire Department) are responsible for wildfire protection, the land is classified as a Local Responsibility Area (LRA). CAL FIRE identifies the project site as an LRA. In addition to establishing local or State responsibility for wildfire protection in a specific area, CAL FIRE designates areas as very high fire hazard severity zones (VHFHSZ) or non-VHFHSZ. According to the CAL FIRE Very High Fire Hazard Severity Zone Maps for the Solano County Region, the project site is

[1] County of Orange & Orange County Fire Authority (OCFA). 2015. *Local Hazard Mitigation Plan*. November. Website: http://cams.ocgov.com/Web_Publisher/Agenda07_12_2016_files/images/O00216-000668A.PDF (accessed April 27, 2022).

designated as Urban Unzoned (non-VHFHSZ).[2] According to CAL FIRE, there are no LRA areas in Solano County that are designated as a VHFHSZ.[3] The closest SRA VHFHSZ to the project site is 6.5 miles to the northwest.[4]

Wildfire events in Solano County are a major concern and since 1952, there have been 90 wildfire events that have occurred in unincorporated areas of the county. The 1981 Atlas Fire (approximately 33,600 acres) and the 1988 Miller Fire (34,500 acres) were the two largest wildfire events recorded in the County.[5] In 2020, a 300-acre wildfire (unnamed) burned just south of Kellogg Street and Maple Street in unincorporated Solano County, approximately 5.5 miles east of the project site and a 75-acre wildfire burned in unincorporated Solano County near Mountain Meadows Drive and Cedar Creek Court, approximately 1 mile southeast of the project site.[6]

The *City of Fairfield General Plan* defines three potential fire zones within Fairfield.

- **Extreme Wildfire Risk Areas** are those lands where severe burning conditions prevail (chaparral and heavy woodland, steep slopes, poor access, winds). This includes hilly areas to the west and northwest of Fairfield, Cement Hill area, the hills above Green Valley and the hills above Interstate Highways 80 and 680 (I-80 and I-680) just south of Cordelia.

- **High Wildfire Risk Areas** are those lands where high potential for burning prevails due to mixed woodland-grassland, grassland, steep slopes, poor access, and winds. Areas of high fire risk are intermixed within areas of extreme fire risk.

- **High Grassfire Risk Areas** are areas which have a high ignition potential in combination with periodic high winds. Fire risk is significant here, although not as severe as the mountainous wildfire risk areas.

The *City of Fairfield General Plan Environmental Impact Report* (EIR), Figure 7-4 Fire Hazards, shows the location of these fire zones within Fairfield. The proposed project is not in any of these wildfire risk areas as designated by the City of Fairfield.[7]

4.14.2 Project Site

The project site is currently vacant and covered with natural vegetation that is regularly disked to reduce fuel loads. The project site is surrounded on three sides by a residential neighborhood,

2 California Department of Forestry and Fire Protection (CAL FIRE), Fire Hazard Severity Zones Maps, Solano County. Website: https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/ (accessed April 27, 2022).

3 Ibid.

4 Ibid.

5 Solano County Office of Emergency Services and Department of Resource Management. Solano County Local Multi-Hazard Mitigation Plan, Table 5-4: Solano County Wildfire Occurrences, March 2012, page 5-9.

6 CAL FIRE. 2020 Incident Archive. Website: https://www.fire.ca.gov/incidents/2020/ (accessed April 27, 2022).

7 Jones & Stokes, *Draft Program Environmental Impact Report for the Comprehensive Amendment to the City of Fairfield General Plan*, Figure 7-4 Fire Hazards, Page 7-17, August 2001.

business center, and a hotel that is under construction. A riparian area associated with a drainage ditch is located adjacent to the western boundary of the project site, and Green Valley Road is located west of the riparian corridor. Due to existing development in the area, water supply for firefighting is available in the area.

Access to the project site is via Business Center Drive which connects to Green Valley Road to the south and Suisun Valley Road to the north. Green Valley Road connects to I-80, which provides regional access to the project site. I-80 is also accessible via Business Center Drive, Suisun Valley Road, and the Suisun-Pittman Road interchange.

The project site is well located relative to fire service. As noted in **Section 4.11: Public Services and Recreation**, Fire Station 35, located at 600 Lopes Road, is currently the closest City of Fairfield Fire Department Station to the project site, about 1.7 miles from the site. Fire Station 36 is currently under construction (scheduled to be operational by 2024) and will be located approximately 0.5 mile east of the project site.

4.14.3 Regulatory Setting

The following discusses applicable laws, regulations, standards, and policies related to wildfire, including those from federal, State, and local agencies. Standard City Conditions of Approval (COAs) are also identified.

4.14.3.1 Federal Laws and Regulations

National Incident Management System (NIMS). The NIMS provides a systematic, proactive approach to guide government agencies, nongovernmental organizations, and the private sector to work together to prevent, report, recover from, and mitigate the effects of emergency incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment. The City participates in NIMS, which improves its ability to prepare for and respond to potential incidents and hazard scenarios.

Healthy Forests Restoration Act. The federal Healthy Forests Restoration Act of 2003 appropriates funding to address the five main subcategories of the National Fire Plan (NFP): preparedness, suppression, reduction of hazardous fuels, burned-area rehabilitation, and state and local assistance to firefighters.

4.14.3.2 State Laws and Regulations

CAL FIRE and Resources Assessment Program. CAL FIRE publishes maps that predict the threat of fire for each county within the State. LRAs, SRAs, or Federal Responsibility Areas (FRAs) are classified as either VHFHSZ or non-VHFHSZ based on factors including fuel availability, topography, fire history, and climate. The 2019 Strategic Fire Plan for California was prepared by CAL FIRE to provide guidelines and objectives for wildfire reduction, property protection from wildfires, and human life protection from wildfires.

California Fire Code (CFC). The CFC includes regulations for emergency planning, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant

locations and distribution. Fire safety requirements in the CFC include: installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas. The CFC is updated every 3 years.

California Strategic Fire Plan. This Statewide plan is a strategic document that guides fire policy for much of California. The plan is aimed at reducing wildfire risk through pre-fire mitigation efforts tailored to local areas through assessments of fuels, hazards, and risks.

California State Hazard Mitigation Plan. The purpose of the State Hazard Mitigation Plan (SHMP) is to significantly reduce deaths, injuries, and other losses attributed to natural- and human-caused hazards in California. The SHMP provides guidance for hazard mitigation activities emphasizing partnerships among local, State, and federal agencies as well as the private sector.

California Government Code. California Government Code Section 51175 defines VHFHSZ and designates lands considered by the State to be very high fire hazard areas.

California Government Code Section 51189 directs the Office of the State Fire Marshal to create building standards for wildland fire resistance. The code includes measures that increase the likelihood of a structure withstanding intrusion by fire (e.g., building design and construction requirements that use fire-resistant building materials) and provides protection of structure projections (e.g., porches, decks, balconies, and eaves) and structure openings (e.g., attics, eave vents, and windows).

California Public Resources Code (PRC). The State's Fire Safe Regulations are set forth in PRC Section 4290, which include the establishment of SRAs. PRC Section 4291 sets forth defensible space requirements, which are applicable to anyone that "…owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush covered lands, grass-covered lands, or land that is covered with flammable material." (PRC Section 4291(a)).

Assembly Bill 337. Per Assembly Bill (AB) 337, local fire prevention authorities and CAL FIRE are required to identify VHFHSZ in LRAs. Standards related to brush clearance and the use of fire-resistant materials in FHSZ are also established.

California Code of Regulations The California Code of Regulations (CCR) is the official compilations of the regulations adopted, amended, or repealed by state agencies pursuant to the Administrative Procedure Act (APA). The following Titles of the CCR would apply to the proposed project pertaining to fire and wildfire:

> ***CCR Title 8 (Industrial Relations).*** In accordance with CCR Title 8 Section 1270 and Section 6773 (Fire Prevention, and Fire Protection and Fire Equipment), the California Occupational Safety and Health Administration (Cal/OSHA) establishes fire suppression service standards. The standards range from fire hose size requirements to the design of emergency access roads.

CCR Title 14 (Natural Resources). Division 1.5 (Department of Forestry and Fire Protection), Title 14 of the CCR establishes a variety of wildfire preparedness, prevention, and response regulations.

CCR Title 19 (Public Safety). Title 19 of the CCR establishes a variety of emergency fire response, fire prevention, and construction and construction materials standards.

CCR Title 24 (California Building Standards Code). The CFC is set forth in Part 9 of the Building Standards Code. The CFC, which is pre-assembled with the International Fire Code (IFC) by the International Code Council (ICC), contains fire-safety building standards referenced in other parts of Title 24.

California Health and Safety Code Section 13000 et seq. and California Building Code (CBC). State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, which is divided into "Fires and Fire Protection" and "Buildings Used by the Public." The regulations provide for the enforcement of the CBC and mandate the abatement of fire hazards.

The California Health and Safety Code establishes broadly applicable regulations, such as standards for buildings and fire protection devices, in addition to regulations for specific land uses, such as childcare facilities and high-rise structures.

California Health and Safety Code Division 11 (Explosives). Division 11 of the California Health and Safety Code establishes regulations related to a variety of explosive substances and devices, including high explosives and fireworks. Section 12000 et seq. establishes regulations related to explosives and explosive devices, including permitting, handling, storage, and transport (in quantities greater than 1,000 pounds).

California Health and Safety Code Division 12.5 (Buildings Used by the Public). Division 12.5 establishes requirements for buildings used by the public, including essential services buildings, earthquake hazard mitigation technologies, school buildings, and post-secondary buildings.

California Residential Code Section R337. Section R337 establishes minimum standards for the protection of life and property by increasing the ability of a building located in any FHSZ within an SRA or any WUI Fire Area to resist the intrusion of flame or burning embers projected by a vegetation fire and contributes to a systematic reduction in conflagration losses. This section regulates materials and construction methods for exteriors susceptible to wildfire exposure.

California Building Code (CBC), Chapter 7A. Chapter 7A applies to building materials, systems, and/or assemblies used in the exterior design and construction of new buildings located within a WUI Fire Area. This section of the CBC establishes minimum standards for features such as fire-retardant-treated wood and wood shingles, surface treatment protection, ignition-resistant construction, roof coverings and gutters, vents, exterior walls and coverings, exterior porch ceilings, underfloor protection, exterior windows, skylights, and doors, decking, and accessory structures.

Executive Order N-04-19. On January 9, 2019, Governor Newsom announced Executive Order (EO) N-04-19, which requires State agencies to identify innovative and sustainable solutions to address the State's wildfire crisis, such as upgraded fire detection technology.

Executive Order N-05-19. On January 9, 2019, Governor Newsom also announced EO N-05-19, which requires CAL FIRE and other State agencies to compile policy and regulatory recommendations concerning wildfire mitigation, emphasizing environmental sustainability and public health. EO N-05-19 requires the incorporation of socioeconomic analysis when conducting risk management of wildfires and mandates that agencies identify geographic areas with populations that are more vulnerable to the impacts of wildfires.

4.14.3.3 Regional Plans and Regulations

Solano County Local Multi-Hazard Mitigation Plan (2012). This plan is an effort undertaken by the County to mitigate the effects of natural hazards and plan for resiliency in the future that respects the character and needs of the people who live and work in Solano County. It should be noted that an updated Plan is currently under review by the County Board of Supervisors and adoption is expected in mid- to late 2022.

4.14.3.4 Local Plans and Regulations

***City of Fairfield General Plan*.** The Health and Safety Element of the *City of Fairfield General Plan* discusses wildfire hazard and urban fire hazard potential in the City and identifies policies that reduce human and structure risks due to such events. The following policies would be applicable to the proposed project:

> **Policy HS 4.1:** Prohibit residential development in areas of Extreme Wildfire Risk.
>
> **Policy HS 4.2:** Development projects in areas of High Wildfire Risk shall be reviewed by the Fire Chief to ensure that fire protection will not be excessively difficult or dangerous and that mitigation measures are included to minimize risk to acceptable levels.
>
> **Policy HS 4.3:** Require landowners to maintain fire breaks around existing residences. Require greater buffer widths in areas of High and Extreme Wildfire Risk. Maintain buffer areas along all major roadways and around structures in areas of High Grassfire Risk identified on the Fire Hazards Map, Exhibit HS-3.
>
> **Policy HS 4.4:** Maximum residential density for High Grassfire and High Wildfire Risk Areas shall be one dwelling unit per five acres unless appropriate mitigation measures are included to minimize risk to acceptable levels.
>
> **Policy HS 4.5:** Ensure the ability to provide fire protection within areas of new development.
>
> **Policy HS 4.6:** Require remote hillside developments to maintain sufficient water supplies on-site in the form of pools, ponds, or storage tanks for wildfire protection.
>
> **Policy HS 4.7:** Avoid siting structures on hilltops and upper slopes in areas of high fire potential due to danger and difficulty of providing adequate fire protection.

Policy HS 4.8: Require mitigation for development in high fire potential areas, including site planning to reduce dangers, fire-resistant building materials and plantings adjacent to structures, and insurance requirements in the event of property damage.

Policy HS 4.9: Hillside development shall take into consideration the recommendations developed by the California Department of Forestry and Fire Protection in order to minimize the risk of loss due to wildfires.

City of Fairfield Municipal Code. Chapter 8, Fire Protection of the *City of Fairfield Municipal Code* adopts the 2019 CFC in its entirety. This chapter of the municipal code provides standards for development within the City that reduce potential for fire commencement or spread (i.e., indoor sprinkler systems, fire resistant landscaping). Internal circulation design requirements for development in the City are also provided in this chapter to ensure that fire apparatus and other emergency vehicles can adequately access sites and provide fire extinguishment services in the event of on-site fires or spread of off-site fires on to a site.

City of Fairfield Conditions of Approval. The City of Fairfield has adopted standard Conditions of Approval (COA) for major development projects. The following COA related to wildfire would apply to the proposed project:

COA 1.3: Comply with the conditions of the City Fire Prevention Division pertaining to the project.

COA 5.2: Any security gates and/or fences shall require details which shall be submitted to the Police and Fire Departments and Community Development Department for approval prior to issuance of building permits.

COA 7.2: Detailed landscape and irrigation plans shall be submitted to the Community Development Department for review and approval. Such plans shall be prepared and stamped by a California licensed landscape architect or other equally educated and qualified experienced professional to the satisfaction of the Community Development Department and accompanied by a statement or stamp by a California licensed landscape architect or other equally educated and qualified experienced professional that the plans meet or exceed the City's Water Efficient Landscape Ordinance.

4.14.4 Significance Criteria

The significance criteria for wildfire impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines*. If located in or near State Responsibility Areas or lands classified as very high fire hazard severity zones, a significant impact related to wildfire would occur if the proposed project would:

- **Substantially impair an adopted emergency response plan or emergency evacuation plan.**
- **Exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.**

- **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.**

- **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.**

4.14.5 Methodology

This section addresses factors that could expose people or structures to fire or post-fire flooding or landslides, impair emergency response, or involve installation of infrastructure that could exacerbate fire risk. Past case law supports that CEQA should evaluate a proposed project's impact on the environment (e.g., potential of a housing development to degrade water quality), rather than the environment's impact on a project (e.g., potential for an earthquake to destroy a housing development). In *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, the CBIA challenged BAAQMD's adoption of CEQA air pollutant significance thresholds that required analysis of impacts on "new receptors" (residents and workers drawn to an area as a result of a proposed project). The California Supreme Court found that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents," except where a proposed project may exacerbate those environmental hazards or conditions that already exist. Therefore, the analysis below does not focus on the risk of wildfire to the project, rather it addresses whether the project could exacerbate the risk of a wildfire by bringing new development to vulnerable areas. The analysis is based on a review of FHSZ maps, local and regional Hazard Mitigation Plans, and project conformance with applicable fire codes and fire plans.

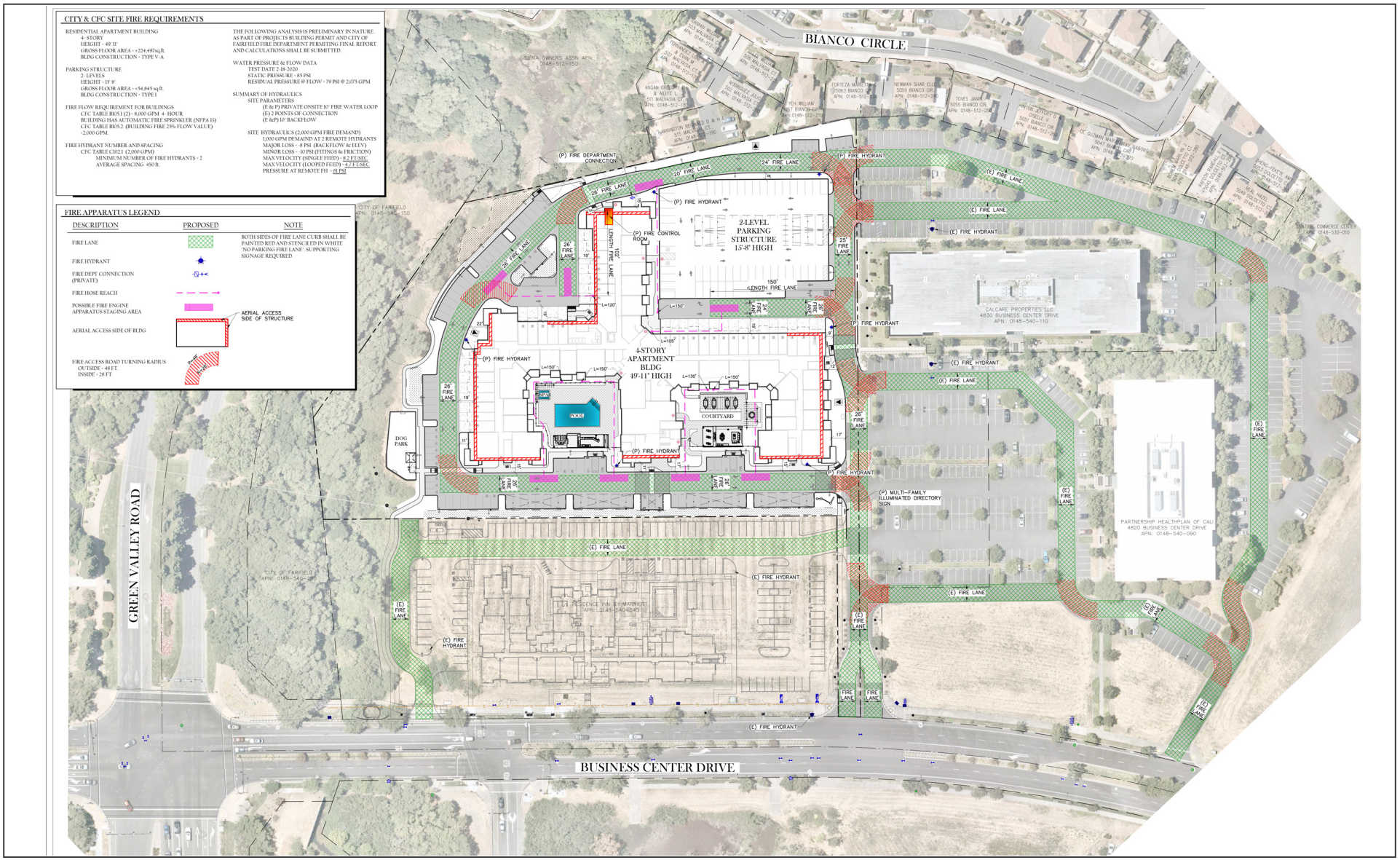
4.14.6 Project Impacts

4.14.6.1 Impair Emergency Response Plans

Impact WFR-1: The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan.

According to CAL FIRE, the project site is located in a Local Response Area (LRA) and is designated as Urban Unzoned (non-VHFHSZ). The nearest VHFHSZ is located approximately 6.5 miles northwest of the project site.

As discussed in **Section 4.11: Public Services and Recreation** of this EIR, the Fairfield Police Department and Fairfield Fire Department are the local agencies that would oversee emergency response and emergency evacuation at the project site along with the management of the apartment complex. The project applicant has prepared a Preliminary Fire Access Plan that identifies on-site fire hydrant locations, fire lanes, private fire department connections, hose reach diagrams, fire engine apparatus staging areas, and aerial access to the side of the proposed apartment building. The Preliminary Fire Access Plan, as shown in **Figure 4.14.1: Preliminary Fire Access Plan,** has been reviewed and approved by the Fairfield Fire Department and would be finalized prior to commencement of building construction on the project site.



LSA

FIGURE 4.14-1

N

0 20 40

FEET

SOURCE: TSD Engineering, Inc.

I:\BTI2101\G\Prelim_Fire_Access_Plan.ai(10/6/2022)

Green Valley 3 Apartments Project EIR

Preliminary Fire Access Plan

This page intentionally left blank

Solano County includes several emergency plans that would be applicable to the City of Fairfield and project site. These plans include: (1) Solano County Emergency Operations Plan (EOP), *Emergency Annex*; (2) Solano County Local Multi-Hazard Mitigation Plan; and (3) Solano County Multi-Jurisdictional Hazard Mitigation Plan (as of 2022, pending Board adoption).[8,9,10] These available plans do not provide details on specific evacuation routes, but note that the area freeways (I-80, I-680, or State Route 12 [SR-12]) would be used for evacuation. These plans also set forth procedures and protocols that the emergency response agencies would implement to safely evacuate the affected populations.

The project site is located near the northeast quadrant of the Green Valley Road/Business Center Drive intersection, just north of the I-80 corridor. Regional access to the site is provided along I-680, I-80, and SR-12. Local access to the site is provided by Green Valley Road, Neitzel Road, Suisun Valley Road, and Business Center Drive. Any evacuations involving the project site or the areas surrounding the project site would involve the use of these roadways. The following provides an assessment whether project construction or occupancy would result in road closures or increased traffic that could potentially interfere with the evacuation of the neighboring areas, and substantially impair the implementation of the County's emergency response/evacuation plans.

Construction. If the project is approved, project construction would commence in Summer 2023 and be completed in Spring 2025. During this time, all large construction vehicles entering and exiting the site would be guided by personnel using signs and flags to direct traffic, minimize delay of other vehicles, and ensure that public roadways remain open at all times. The proposed project may require temporary lane closures on the internal accessway to the site from Business Center Drive and on Business Center Drive; however, one travel lane would always be kept open for traffic, and temporary lane closures would be implemented consistent with the recommendations of the *California Temporary Traffic Control Handbook* (California Inter-Utility Coordinating Committee 2018). Among other things, the manual recommends early coordination with affected agencies to ensure that emergency vehicle access is maintained at all times. Due to the early coordination, officials can plan and respond appropriately to direct the public away from Business Center Drive, as appropriate, in the event of an emergency requiring evacuation. Therefore, in the event of an evacuation due to wildfire, project construction activities would not substantially impair the implementation of the County's emergency response/evacuation plans or any evacuation of the project area directed by the City.

Operation. The proposed project includes the development of a 185-unit apartment building, surface parking areas, and a two-story parking structure. The internal circulation system on the project site would be composed of a single 26-foot-wide accessway in the shape of a "C" that

---

8 Solano County Office of Emergency Services, Emergency Operation Plan (EOP), January 2017. Website: https://www.solanocounty.com/civicax/filebank/blobdload.aspx?BlobID=13271 (accessed April 2022).

9 Solano County Office of Emergency Services and Department of Resource Management, Solano County Local Multi-Hazard Mitigation Plan, March 2012. Website: https://www.solanocounty.com/documents/Depts/OES/SolanoCountyMHMP-March2012-FINAL.pdf (accessed April 2022).

10 Solano County Office of Emergency Services and Department of Resource Management, Solano County Multi-Jurisdictional Hazard Mitigation Plan, Public Draft, July 28, 2021. Website: https://www.solanocounty.com/civicax/filebank/blobdload.aspx?BlobID=36381 (accessed April 2022).

encompasses the apartment building and the parking structure. Three access points (northern access point, middle access point, southern access point) to the site via the drive aisle that connects to Business Center Drive are included in the site plan for the proposed project. In the event of an emergency requiring evacuation due to wildland fire, residents of the proposed project would leave the property and exit either northeast onto Business Center Drive toward Suisun Valley Road to access I-80 to exit the region or southwest onto Business Center Drive toward Green Valley Road to access the I-80/I-680/SR-12 interchange to exit the region.

An evaluation of the proposed project's potential effects on roadway capacity was completed to determine whether the addition of project traffic to area roadways could affect evacuation efforts in the event of an emergency (such as a wildfire). The analysis examined the project site and the surrounding residential areas of Green Valley to develop estimates of vehicular traffic and available roadway capacity on Green Valley Road, which would likely be the primary evacuation route that would be used by Green Valley residents to access I-80 in order to egress from the area of fire risk. Green Valley Road is a divided 4-lane arterial, south of Eastridge Drive. Based on the City of Fairfield Travel Model, there are approximately 2,930 existing homes in the Green Valley corridor, of which about 2,510 are not located in a fire hazard zone, about 410 homes are in the moderate hazard zone, and 10 are in the high hazard zone (no homes are in the very high fire hazard zone). The project site is not located in a fire hazard zone. Given that most homes in the Green Valley corridor are not in the high fire hazard zone, it is possible that evacuation of the entire corridor may not be required. However, the evacuation analysis below includes all the existing homes as well as the 185 apartments added to the corridor by the proposed project, for a total of 3,115 dwelling units. The analysis also assumes that all traffic from these homes would travel via Green Valley Road to I-80 during an evacuation, although as noted above, residents of the area can also access the freeway via Suisun Valley Road.

Traffic conditions would vary, depending on whether the evacuation is ordered during the work hours or after hours (at night). In the event of a night-time evacuation, there would be very limited traffic on Green Valley Road, and it would be reasonable to assume that at least one vehicle per dwelling unit would exit the area via Green Valley Road over a period of 30 minutes to one hour. Based on the 3,115 dwelling units (which include the units added by the project), about 3,115 vehicles would travel south bound on Green Valley Road to access the freeway.

Green Valley Road is a four-lane divided arterial, with two lanes in each direction. During peak hour conditions, up to 3,540 vehicles per hour can be served to maintain LOS D operations. Capacity increases to 3,740 vehicles per hour to maintain LOS E operations. Therefore, the roadway would have adequate capacity to accommodate approximately 1 vehicle per household in Green Valley by utilizing all four lanes (both directions) of travel.

In the event that the evacuation is ordered during work hours, additional traffic associated with the businesses located on Business Center Drive would be traversing the roadway; however, the number of residents that would evacuate would be fewer because many of the residents would already be away from their homes at that time. Based on daily traffic counts collected in 2022, approximately 1,330 vehicles were counted traversing southbound Green Valley Road during the morning peak hour. Assuming that about half of the 3,115 dwelling units would require evacuation and would generate a vehicle trip per dwelling unit (approximately 1,560 trips), all vehicles

evacuating Green Valley should be accommodated during the peak hour by utilizing all four lanes of travel. As with the Atlas fire, it is anticipated that evacuation of businesses in the Green Valley area will not be required. Furthermore, employees of businesses located on Business Center Drive would have the ability to access the freeway from the Suisun Valley Road/Pittman Road interchange and avoid the use of Green Valley Road.

A study of available roadway capacity on Green Valley Road during AM and PM peak hours was also conducted. The study estimated the AM and PM peak hour trips that are generated by the existing homes and also the new vehicle trips that would be generated by the proposed project. Based on the trip generation estimates, the study found that the existing Green Valley homes generate approximately 2,000 trips during the morning peak hour (520 inbound trips and 1,480 outbound trips) and approximately 2,700 trips during the evening peak hour (1,700 inbound trips and 1,000 outbound trips). The proposed project would add approximately 70 trips during the morning and evening peak hours, an increase of about 3 percent. The study compared the existing with proposed project peak hour trip generation by direction (inbound vs outbound) to existing counts. Approximately 1,330 vehicles were counted traveling southbound along Green Valley Road, south of Business Center Drive during the morning peak hour. The existing peak hour volume represents most of the nearly 1,500 outbound vehicle trips expected to be generated during the AM peak hour. Based on a LOS D threshold, the corridor can accommodate up to 3,540 vehicles or 1,770 vehicles in one direction; therefore, the corridor can accommodate an additional 440 vehicles in one direction. Therefore, the roadway has available capacity to accommodate the estimated proposed project traffic.

Based on the foregoing evaluation, the proposed project would not generate a substantial amount of new traffic and would not add a substantial amount of traffic to the area roadways during an emergency evacuation.

Furthermore, it is expected that traffic control measures would be deployed by the emergency response agencies to prohibit northbound movements along Green Valley Road. Side street traffic could also be restricted to facilitate getting the evacuees to I-80. Implementation of these strategies would further increase the southbound capacity of Green Valley Road. Additionally, the Solano County EOP indicates that the County Office of Emergency Services has plans to identify and manage evacuation routes including traffic control at key intersections. In the event of an emergency evacuation required for the proposed project and surrounding areas, traffic control officers would be deployed to key intersections and locations such as the Green Valley Road corridor, to manage evacuation traffic.

For these reasons, the proposed project would not substantially impair implementation of an adopted emergency response plan or emergency evacuation plan during a wildfire event that impacts the project area or the region. The impact would be less than significant.

Level of Significance prior to Mitigation: Less than Significant

Mitigation Measures: No mitigation measures are required.

Level of Significance after Mitigation: Not Applicable

4.14.6.2 Exacerbate Wildfire Spread

Impact WFR-2: The proposed project would not exacerbate wildfire risks due to slope, prevailing winds, or other factors, and thereby would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

Topography influences the movement of air, thereby directing a fire course. For example, if the percentage of uphill slope doubles, the rate of spread in wildland fire will likely double.[11] Wind events magnify the risks of wildfire and also have the potential to expose inhabitants of the City to elevated pollutant concentrations from a wildfire. Other factors that could exacerbate wildfire risks include fuel load, lack of fire breaks (clearance), and structure design.

The proposed project includes the development of a 185-unit apartment building, surface parking areas, and a two-story parking structure. As discussed in **Section 3.2: Project Operations**, of the project description, the project is conservatively anticipated to result in a population increase of approximately 509 residents and 5 employees. The project proposes a high-density infill residential development on a site surrounded by existing residential and business uses; the project site is not located within the wildland-urban interface and is not surrounded by open space. Adjacent and nearby roadways, including Business Center Drive, Green Valley Road, and the access roadway connecting the site to Business Center Drive would serve as fire breaks in the unlikely event of the uncontrolled spread of a wildfire.

Slope. The project site is in an area of Fairfield that is topographically level and void of any on-site slopes, or slopes surrounding the site. The *City of Fairfield General Plan EIR* shows that the project site is located in the Slope Stability Zone 1, which is comprised of slopes of 0 to 5 percent that are not underlain by known landslides and is generally limited to nearly level alluvial valleys.[12] The elevation of the project site ranges from 15 feet to 20 feet. The project site would be graded level and implementation of the proposed project would not include the formation of internal slopes. Based on the project site topography and absence of slopes that could direct fire and smoke, the proposed project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

Prevailing Winds. The City of Fairfield is located in an area on the eastern side of the Coastal Range that experiences wind events on a regular basis. Prevailing winds in the City of Fairfield blow from a north-northeast and northeast direction to the south-southwest and southwest direction with winds averaging up to 17 miles per hour daily.[13] In the event a wildfire were to commence to the northeast of the project site, prevailing wind could push the wildfire toward the project site; however, the likelihood of wildfire from the northeast reaching the project site would be reduced based on the

[11] County of Orange & Orange County Fire Authority (OCFA). 2015. *Local Hazard Mitigation Plan*. November. Website: http://cams.ocgov.com/Web_Publisher/Agenda07_12_2016_files/images/O00216-000668A.PDF, accessed April 27, 2022.

[12] *City of Fairfield General Plan Environmental Impact Report*, Health and Safety Section, Figure 7-3 Geologic Hazards, August 2001.

[13] Meteoblue. Simulated historical climate and weather data for Fairfield, Windrose. Website: https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/fairfield_united-states_5347335 (accessed May 9, 2022).

urban development and lack of open areas fueling a wildfire between the site and undeveloped areas in the Rockville Hills region of the City. If a wildfire were to commence to the west, northwest, or southwest of the City in the undeveloped areas of the Coastal Range, the prevailing winds would more than likely spread the wildfire away from the project site to the west. During wildfire and wind events, the Bay Area Air Quality Management District (BAAQMD) staff monitors and offers air quality alerts, advisories, forecasts, and an interactive online map to view current air quality conditions in the region. The BAAQMD's tools allow the general public to make informed decisions about air quality issues created by smoke from wildfires and helps the general public in deciding to leave the area for better air quality options during such events. Based on the average windspeed and direction, any smoke created by a wildfire in the vicinity of the site would more than likely dissipate quickly and therefore would not expose residents of the site to pollutant concentrations of wildfire smoke.

Other Factors. Wildfire spread can be exacerbated by fuel loads, lack of fire breaks, or poor fire-design of structures. During a wildfire, fuel loads such as plant materials, grasses, shrubs, trees, dead leaves, and fallen pine needles can act as fuel that exacerbates a wildfire. Once the proposed project is developed, the majority of the site would be hardscaped with some areas of landscaping. Fallen plant materials would be limited to landscaped areas and would be cleaned routinely by the maintenance staff of the apartment complex. A fuel break is a strip of land on which the vegetation and fuels have been reduced or modified to decrease the risk of a fire crossing the strip of land. The hardscape of an urban area or roadways, such as the driveways and drive aisles on the project site, would serve as a fuel break. The proposed project is in an urban part of Fairfield and is surrounded to the north, east, and south by hardscaped areas that act as fire breaks from undeveloped land. The proposed project would be developed consistent with the requirements in the California Building Code that focus on fire reduction design features. The proposed project would incorporate the use of fire-resistant building materials, construction of radiant heat walls as needed, installation of non-combustible plant species, and the establishment of setback areas, and areas on the site that would be irrigated. Furthermore, the proposed project would result in clearing, grading, paving, and revegetation according to Fairfield Fire Department requirements, resulting in the unavailability of vegetative/combustible materials in areas of the project site that would be particularly vulnerable to wildfire spread from the riparian area to the west of the project site.

As stated previously, the project site is not located in an SRA or LRA VHFHSZ. Despite the SRA VHFHSZ approximately 6.5 miles to the northwest of the project site, the uncontrolled spread of a wildfire in the vicinity of the project site is unlikely due to the existing non-combustible development and roadways, and the proposed project itself would develop vacant land, reducing the possibility of wildfire ignition originating on the project site. Therefore, based on the analysis provided above, the proposed project would not exacerbate existing wildfire risks due to slope, prevailing winds, location, or other conditions conducive to wildfire ignition and spread and, as such, would not expose project occupants or nearby residents to impacts associated with downwind pollutant concentrations from a wildfire or uncontrolled wildfire spread. This impact would be less than significant.

Level of Significance prior to Mitigation: Less than Significant

Mitigation Measures: No mitigation measures are required.

Level of Significance after Mitigation: Not Applicable

4.14.6.3 Design Features that would Exacerbate Fire Risk

Impact WFR-3: The proposed project would not involve 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.

Utility and infrastructure improvements included as part of the project are described in **Chapter 3.0: Project Description**. These improvements include connection of the proposed project to existing underground utilities on or in the immediate vicinity of the project site; no above-ground power lines are included in the project. Detention basins to capture stormwater flows would also be developed on site and would connect to offsite stormwater infrastructure. Adequate water supply would be available at the project site to fight fires. The internal driving aisles and surface parking would serve to create a fire break between the riparian area and the proposed residential building, which would minimize ignition risk in the riparian area.

Although the project would include internal driving aisles, the proposed project does not include any changes to public or private roadways that would exacerbate fire risk or that would result in impacts to the environment. Although utilities, including water facilities, sewer facilities, storm drain lines, and power lines would be connected to and extended throughout the project site, these improvements would not exacerbate fire risk. All utility lines, pipes, utility junction boxes, and transformers would be located underground. Project design and implementation of utility improvements would be reviewed and approved by the City's Public Works Department as part of the project approval process to ensure the proposed project is compliant with all applicable fire codes, design standards, and regulations.

The project site is not located in or near an SRA or LRA VHFHSZ. As discussed above, the closest SRA VHFHSZ is located approximately 6.5 miles northwest of the project site. The installation of project-related utilities and an on-site circulation network would not exacerbate fire risk due to the project site's location in an urban and built-out area outside of a designated fire hazard zone. Furthermore, the improved connectivity of water lines would aid in fire suppression compared to existing conditions on the project site in the unlikely event of a wildfire. Therefore, the proposed project would not include the installation or maintenance of associated infrastructure that would exacerbate fire risk or result in temporary or ongoing impacts to the environment. This impact would be less than significant.

Level of Significance prior to Mitigation: Less than Significant

Mitigation Measures: No mitigation measures are required.

Level of Significance after Mitigation: Not Applicable

4.14.6.4 Exposure to Secondary Wildfire Affects

Impact WFR-4: The proposed project would not 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.

Landslides. Landslides and other forms of mass wasting, including mud flows, debris flows, and soil slips, occur as soil moves downslope under the influence of gravity. Landslides are frequently triggered by intense rainfall or seismic shaking but can also occur as a result of erosion and downslope runoff caused by rain following a fire. The project site is located in a portion of Green Valley that is not susceptible to landslides or soil creep. The project site is not located within a landslide hazard zone as designated on a map prepared by the California Geological Survey (CGS). Further, as stated previously, the project site is not located in an SRA or LRA VHFHSZ. In the unlikely event that a wildfire should spread to the project site, it would not expose any on-site slopes to erosion and potential failure because the project site is generally level and does not contain any steep slopes that are prone to landslide. The proposed project would not expose people or structures to significant risks, including downslope landslides, as a result of runoff, post-fire slope instability, or drainage changes. There would be no impact to project occupants or nearby residents, or workers related to post-wildfire landslide risks, and this impact would be less than significant.

Flooding. According to the FEMA Flood Hazard Map Panel 06055C0650E (effective September 26, 2009), the project site is within Zone X, 0.2 percent annual chance flood hazard. Areas in Zone X, 0.2 percent annual chance flood hazard are not considered a special flood hazard area (SFHA) by FEMA.[14] A fire northwest of the project site could trigger increased downstream sediment movement, which could raise the elevation of potential flooding along Green Valley Creek in the vicinity of the project site. In the event that the upper Green Valley Creek watershed were to experience a major fire, it is expected that the County would implement emergency Best Management Practices (BMPs) (wattles, sandbags, etc.) to limit the amount of additional sedimentation that enters Green Valley Creek. Such measures would allow Green Valley Creek to hydraulically convey any minor increases in sediment loads without increasing the risk of flooding on the project site.

In the unlikely event that a wildfire should spread to the project site, it is not expected that the project would contribute any additional runoff or sedimentation to Green Valley Creek or other downstream drainages. This is due to the lack of steep slopes that are prone to landslide or erosion on the project site and the fact that the project's drainage improvements would remain intact after a major wildfire, allowing them to continue to reduce the potential for flooding conditions in downstream storm drain facilities. Therefore, downslope or downstream flooding as a result of runoff, post-fire slope instability, or drainage changes are unlikely to expose occupants or structures to significant risks. Impacts to project occupants or off-site occupants in the City related to post-wildfire flooding risks would be less than significant.

[14] Federal Emergency Management Agency (FEMA). FEMA Flood Map Service Center, Panel 06055C0650E (effective 9/26/2009). Website: https://msc.fema.gov/portal/home (accessed April 28, 2022).

Level of Significance prior to Mitigation: Less than Significant

Mitigation Measures: No mitigation measures are required.

Level of Significance after Mitigation: Not Applicable

4.14.6.5 Cumulative Impacts

Cumulative Impact C-WFR-1: The proposed project, in conjunction with other past, present, and reasonably foreseeable future development within a 1.5-mile radius of the proposed project, would not result in a significant cumulative impact pertaining to wildfires.

As defined in the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and reasonably foreseeable projects within the cumulative study area.

For the reasons outlined above in **Section 4.14.5: Project Impacts**, implementation of the proposed project would not result in a significant impact related to wildfire as the project would not impair the implementation of emergency response and evacuation plans, cause increased risk of wildfire, or create conditions that could cause post-fire landslides and flooding. With regard to other proposed or foreseeable development near the project site, each development application received by the City is required to undergo environmental review pursuant to CEQA. If there were any potential for significant impacts with regard to wildfire and related risks, appropriate mitigation measures would be required. Furthermore, the proposed project and all related projects are required to adhere to City, State, and federal regulations designed to reduce and/or avoid impacts related to wildfire. With compliance with these regulations, cumulative impacts related to wildfire would be less than significant.

Level of Significance prior to Mitigation: Less than Significant

Mitigation Measures: No mitigation measures are required.

Level of Significance after Mitigation: Not Applicable