

4.17 WILDFIRE

This section describes existing conditions pertaining to wildfire, identifies associated regulatory requirements, evaluates potential project and cumulative impacts, and identifies mitigation measures for any significant or potentially significant impacts related to implementation of the Sustainability Policy and Regulatory Update of the County of Santa Cruz (County) General Plan and Local Coastal Program (LCP) and County Code (Sustainability Update or project). The analysis is based on review of wildfire conditions throughout the county, including review of fire hazard severity zone maps and existing plans and studies. Emergency access is addressed in Section 4.15, Transportation.

4.17.1 Environmental Setting

4.17.1.1 Background

Wildfire has shaped California’s ecosystems for millennia, recurring at varying intervals in virtually all of the state’s vegetation types. Before Euro-American settlement, an estimated 4.5 to 12 million acres burned annually across the state. Natural fire regimes have changed dramatically due to land management practices and a century of effective fire suppression, which, in conjunction with climate change and expanding development, have led to increased wildfire impacts on ecosystems and people (California Department of Forestry and Fire Protection [CAL FIRE] 2018).

A wildfire is a nonstructural fire that occurs in vegetative fuels, excluding prescribed fire. Various factors contribute to the intensity and spread of wildfires: humidity, wind speed and direction, vegetation type, the amount of vegetation (i.e., fuel), and topography. Wildland fires are influenced by three factors: fuel, weather, and topography. Wildfire spread depends on the type of fuel involved (grass, brush, and trees). Weather influences wildland fire behavior with factors such as wind, relative humidity, temperature, fuel moisture, and possibly lightning. Several of these factors can modify the rate the fire will burn. What has been seen in the past several years is that wind events have been both the mechanism and significant driver of the severity of wildland fire events in California. Topography is a significant influence on fire severity as well. While historically normal weather conditions in the Santa Cruz Mountains could be categorized as cold and damp with extensive marine influence (fog), there is an increasing frequency and duration each year when conditions are created where fuel moisture levels have been measured below 5% with temperatures above 90 degrees Fahrenheit, and offshore winds greater than 45 miles per hour (County of Santa Cruz 2021).

While wildfires are a natural component of California’s fire-adapted ecosystems, they represent a hazard where development is adjacent to open space or within close proximity to wildland fuels or designated fire severity zones. 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.

The wildland-urban interface (WUI), defined as the areas where urban development is located in proximity to undeveloped open space or “wildland” areas, has expanded rapidly in recent decades, with extensive residential development occurring in the fringes of metropolitan areas and in rural areas with attractive

recreational and aesthetic amenities. This pattern of development has implications for wildfire management and impact, as fire risk and damage potential are elevated in the WUI due to the abundance of both fuel and ignition sources. The increased number of homes and proximity to flammable landscapes can be a potentially dangerous situation in the event of a fire; fires that occur in the WUI pose the greatest risk to life and property.

The impacts of wildfire on a community include loss of life, environmental and infrastructure damage, and loss of property. Secondary impacts arising from wildfires include air quality impacts and post-fire debris flows and water quality degradation. Air quality is also a major issue, which can force the closure of schools and businesses as well as limit human activity. Damage to infrastructure such as culverts, roads, and bridges can be difficult to locate and repair in a timely manner. During the rainy season, burned-over areas can be subject to mud slides and debris torrents, which can be exacerbated by infrastructure damage. Sedimentation due to winter rains can destroy fish habitats, which can have a catastrophic effect on the ecosystem (County of Santa Cruz 2021).

4.17.1.2 Wildfire Risk

The risk of significant wildfire exists in Santa Cruz County. Due to local topography, fuels (forest, chaparral, grasslands), and certain weather conditions, Santa Cruz County is prone to periodic large wildfire events. The county experiences annual cycles of elevated fire danger, with the wildfire season typically extending from roughly May into late October or early November. Widespread densely forested areas with high fuel loading, chaparral, and grasslands contribute to danger from wildfire. Effective fire suppression and a lack of vegetation management over the last century have led to uncharacteristically high fuel loads. Vegetation in the county is dominated by dense second-growth redwood and mixed conifer forests typically having forest floor accumulations of litter and downed woody material and coastal scrub communities consisting of low vegetation up to six feet in height, typically occurring on coastal bluffs, coastal hills, and wind-swept summits. Scrub vegetation is usually dense and difficult to penetrate. Flammable, environmentally sensitive northern maritime chaparral communities, 12 to 20 feet tall and impenetrable at maturity, adapted to and dependent upon periodic crown fires, can be found in isolated areas on southwest-facing slopes and at higher elevations. Coastal prairies, thought to have been established and maintained by pre-contact indigenous burning, occupy coastal valleys along the western slopes of the Santa Cruz Mountains and in the southern end of Santa Cruz County (much of this community has been converted to agriculture or urban development) (CAL FIRE CZU 2018).

The boundary between residential/commercial development and wildland in the county is not clearly demarcated, and development of rural residential dwellings has progressed at a moderate to rapid pace (CAL FIRE CZU 2018). Due to the county's unique and diverse geography and microclimates suitable for vegetation to flourish, plus urban areas adjacent to—or integrated into—this dense vegetation, the county has substantial area in the WUI, where wildfire risks are elevated, and in high or very high fire hazard zones (Santa Cruz County Grand Jury 2020). The county has the largest percentage of WUI of all the counties in the State of California. Over 50% of the county's population lives in the WUI, encompassing a total of 167,442 residents and 71,855 homes (Santa Cruz County Civil Grand Jury 2020).

4.17.1.3 Wildfire Incidents in Santa Cruz County

Each year, state, local, and volunteer departments throughout the region respond to numerous wildfires. The vast majority of these are held to less than one acre in size. The reasons for this include, but are not limited to: early identification and reporting, large fire suppression response (both local and state agencies), generally good access to fire areas, favorable fuels, favorable fire weather, and air support. However, when ignitions occur during unfavorable weather and/or in areas with poor access, fires can rapidly increase to an unmanageable size prior to fire resources arrival (CAL FIRE CZU 2011).

Prior to about 1950 information on wildfire in Santa Cruz County was limited to verbal history and newspaper accounts. After the Division of Forestry began gathering data in the 1950s, significant wildfires in Santa Cruz and adjacent counties were documented in the early 1960s and again in the 1980s (Lexington fire). The devastating wildfires that occurred in Santa Cruz County in 2008 (Summit, Martin, and Trabing fires) and 2009 (Lockheed and Loma fires) burned a combined area of nearly 14,000 acres and numerous homes and structures (County of Santa Cruz 2021). In 2017, the Bear Fire burned under 400 acres, destroyed seven structures, and threatened hundreds in communities adjacent to Castle Rock State Park (CAL FIRE CZU 2018). Most recently, the CZU Lightning Complex fires, which were ignited by lightning in August 2020 after the release of the Notice of Preparation (NOP) for this EIR, burned over 86,000 acres in Santa Cruz and San Mateo counties and destroyed 1,490 structures (CAL FIRE 2020), which included approximately 1,000 homes in Santa Cruz County.

4.17.1.4 Mapped Fire Hazard Areas

CAL FIRE has mapped areas of significant fire hazards in the state through its Fire and Resources Assessment Program (FRAP). These areas are referred to as Fire Hazard Severity Zones (FHSZs) and are identified for Federal Responsibility Areas (FRAs), where federal agencies have responsibility for wildfire protection, State Responsibility Areas (SRAs), where CAL FIRE has responsibility for wildfire protection, and Local Responsibility Areas (LRAs), where local fire protection agencies have responsibility for wildfire protection. Different FHSZs (moderate, high, and very high) are 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. The speed and intensity of potential fires within the area, ability of embers to spread and multiply, loading of fuel, topographic conditions, and local climate all culminate to form the fire hazard severity for an area. Very high FHSZs are areas lacking adequate wildland and structural fire protection. Figure 4.17-1 shows CAL FIRE's FHSZs.

In addition to CAL FIRE's FHSZ mapping, the County has also mapped critical and mitigatable wildfire hazard areas due to accumulations of wildfire prone vegetation, steep and dry slopes, and the presence of structures vulnerable to wildland fires. As shown on Figure 4.17-1, large areas of the county have been mapped and designated in the County's General Plan as Critical Wildfire Hazard Areas due to accumulations of wildfire prone vegetation, steep and dry slopes, and the presence of structures vulnerable to wildland fires. These areas are generally situated in the steeper higher elevations of the county. Most of these areas are along the border of Santa Clara County or in the Coastal ridges between Highway 9 and Highway 1. While areas designated Critical Fire Hazard Areas are areas of increased wildfire risk, it should

be noted that wildland fires may occur anywhere within the county (County of Santa Cruz 2021). CAL FIRE's FHSZ mapping includes all of the Critical Wildfire Hazard Areas designated by the County.

As shown on Figure 4.17-1, fire hazards are generally greatest in the North Coast and Mountain regions of the county, with more moderate fire hazard areas in the Urban and South County regions. According to CAL FIRE's FHSZ mapping (see Figure 4.17-1), most of the county is designated as moderate to high fire hazard severity, while a small area of Bonny Doon and areas along the eastern boundary of the county are designated as being very high FHSZs. Critical wildfire hazard areas identified by the County are primarily located along the border of Santa Clara County in the South County region and in the coastal ridges of the Mountain and North Coast regions.

As indicated in Section 3.5.5 of the Project Description, the proposed project includes General Plan/LCP Land Use Map and Zoning Map amendments on 23 parcels. The parcels include key opportunity sites and key parcels along transportation corridors, including opportunity sites along the Portola Drive corridor and the property located at the northeast corner of Thurber Lane and Soquel Drive. The proposed project also includes General Plan redesignation and/or rezoning of some parcels to eliminate inconsistencies between General Plan/LCP land use designations and zone districts associated with mapping errors in the 1994 General Plan (or before). Table 3-11 in Section 3.5.5 identifies specific properties and proposed changes that are further described below. One of the parcels, located in the Aptos Hills planning area, is identified as being partially located within a fire hazard zone.

4.17.1.5 Fire Protection

Fire protection in California is the responsibility of the federal, state, or local government. Fire protection in LRAs is provided by the County, a city, or a designated fire protection district. Within SRAs, fire protection is provided by CAL FIRE. In FRAs, fire protection is the responsibility of the federal government. Figure 4.17-1 shows the FRA, SRA, and LRA within Santa Cruz County. Most of the unincorporated area of the county is within the SRA, while the LRA includes the county's incorporated cities, as well as some unincorporated areas concentrated near the coast and surrounding the City of Watsonville. In the North Coast region, two areas are within the FRA, including Cotoni-Coast Dairies National Monument near Davenport (administered by the Bureau of Land Management) and an isolated area off of Empire Grade.

The San Mateo – Santa Cruz Unit of CAL FIRE includes the counties of Santa Cruz, San Mateo, and San Francisco. The Unit primarily operates in the State Responsibility Areas (SRA) of Santa Cruz County and San Mateo County, an area of approximately 894 square miles. CAL FIRE is the County Fire Department for both San Mateo County and Santa Cruz County (CAL FIRE CZU 2019).

The county is served by 13 local fire protection districts and agencies,¹ while the larger unincorporated areas of the county not covered by a special district are served by the Santa Cruz County Fire Department (SCCFD) in conjunction with CAL FIRE. In addition, two city fire departments (Santa Cruz and Watsonville)

¹ The protection districts/agencies include Aromas, Ben Lomond, Boulder Creek, Branciforte, Central, Felton, Pajaro Valley, Scotts Valley, and Zayante Fire Protection Districts, two County Service Areas (4, 48), and the cities of Santa Cruz and Watsonville fire departments.

and the University of California, Santa Cruz (UC Santa Cruz) Fire Department are located within the county's incorporated areas. See Section 4.14, Public Services and Recreation, for a detailed discussion of county fire protection agencies, services, resources, and jurisdictions.

Santa Cruz County Fire Marshal's Office provides the fire prevention services for areas outside of established fire districts within Santa Cruz County and for the Pajaro Valley Fire Protection District. Santa Cruz County has completed adoption of the 2019 California Fire and Building codes (Title 24 parts 2, 2.5 and 9) with local amendments. The local amendments detail the requirements for roads, driveways, water supply, and the local fire sprinkler requirement for all new construction (in place since 1989) (CAL FIRE CZU 2019).

Fire agencies have mutual aid agreements that enable them to help one another across jurisdictional boundaries when emergencies exceed local resources. Mutual aid is usually requested on an as-needed basis by the local incident commander. Mutual aid is typically voluntary, and may not occur if the requested agencies are responding to incidents of their own and/or do not have enough equipment or firefighters to share at the time (Santa Cruz County Grand Jury 2020).

In addition, the Santa Cruz County Office of Response, Recovery & Resilience (OR3) was created in December 2020 and serves as the emergency management office for responding to ongoing disasters. Evacuations are frequently a response to natural disasters in order to protect people from potential harm. The County uses a variety of methods to notify residents when an evacuation is necessary. These include reverse 911 calls, text or phone messages through Code Red (for those who have signed up) and/or door to door notifications. Evacuation areas are determined by the incident command team, who are in charge of responding to the disaster (Santa Cruz County Office of Response, Recovery & Resilience 2021).

4.17.2 Regulatory Framework

4.17.2.1 International Fire Code

The International Fire Code (IFC), created by the International Code Council, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International Building Code use a hazard classification system to determine what measures are required to protect against structural fires. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, IFC employs a permit system based on hazard classification. The IFC places an emphasis on prescriptive and performance-based approaches to fire prevention and fire protection systems. Updated every three years, the IFC uses a hazards classification system to determine the appropriate measures to be incorporated in order to protect life and property (often these measures include construction standards and specialized equipment).

4.17.2.2 Federal Regulations

Federal Wildland Fire Management Policy

The Federal Wildland Fire Management Policy was developed in 1995 and updated in 2001 by the National Wildfire Coordinating Group, a federal multi-agency group that establishes consistent and coordinated fire management policy across multiple federal jurisdictions. An important component of the Federal Wildland Fire Management Policy is the acknowledgment of the essential role of fire in maintaining natural ecosystems. The Federal Wildland Fire Management Policy and its implementation are founded on the following guiding principles (NIFC 2009):

- Firefighter and public safety is the first priority in every fire management activity.
- The role of wildfire as an essential ecological process and natural change agent will be incorporated into the planning process.
- Fire management plans, programs, and activities support land and resource management plans and their implementation.
- Sound risk management is a foundation for all fire management activities.
- Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
- Fire management plans and activities are based upon the best available science.
- Fire management plans and activities incorporate public health and environmental quality considerations.
- Federal, state, tribal, local, interagency, and international coordination and cooperation are essential.
- Standardization of policies and procedures among federal agencies is an ongoing objective.

National Fire Plan

The National Fire Plan was a Presidential directive in 2000 as a response to severe wildfires that had burned throughout the United States. The National Fire Plan focuses on reducing fire impacts on rural communities and assurance for sufficient firefighting capacity in the future. It is a long-term investment that will help protect natural resources in addition to communities, as well as a long-term commitment based on cooperation and communication among federal agencies, states, local governments, tribes, and interested members of the public. There are five key areas addressed under the National Fire Plan:

- Firefighting and Preparedness
- Rehabilitation and Restoration
- Hazardous Fuels Reduction
- Community Assistance
- Accountability

4.17.2.3 State Regulations

California Department of Forestry and Fire Protection

CAL FIRE protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. CAL FIRE's firefighters, fire engines, and aircraft respond to an average of nearly 6,000 wildland fires that burn over 260,000 acres each year (CAL FIRE 2019). CAL FIRE is responsible for the protection of approximately 31 million acres of private land within the state and, at the local level, is responsible for inspecting defensible space around private residences. CAL FIRE is also responsible for enforcing State of California fire safety codes included in the California Code of Regulations and California Public Resources Codes (discussed further below).

The Office of the State Fire Marshal supports CAL FIRE's mission by focusing on fire prevention. It provides support through a wide variety of fire safety responsibilities including by regulating buildings in which people live, congregate, or are confined; by controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; by providing statewide direction for fire prevention in wildland areas; by regulating hazardous liquid pipelines; by reviewing regulations and building standards; and by providing training and education in fire protection methods and responsibilities.

The Board of Forestry and Fire Protection (Board) is a government-appointed body within the CAL FIRE. It is responsible for developing the general forest policy of the state, determining the guidance policies of the CAL FIRE, and representing the state's interest in federal forestland in California. Together, the Board and the CAL FIRE work to carry out the California Legislature's mandate to protect and enhance the state's unique forest and wildland resources.

The Board is charged with protecting all wildland forest resources in California that are not under federal jurisdiction. These resources include major commercial and non-commercial stands of timber, areas reserved for parks and recreation, woodlands, brush-range watersheds, and all private and state lands that contribute to California's forest resource wealth.

CAL FIRE 2018 Strategic Fire Plan

Public Resources Code Sections 4114 and 4130 authorize the State Board of Forestry to establish a fire plan (The 2018 Strategic Fire Plan for California) that establishes the levels of statewide fire protection services. These levels of service recognize other fire protection resources at the federal and local level that collectively provide a regional and statewide emergency response capability. In addition, California's integrated mutual aid fire protection system provides fire protection services through automatic and mutual aid agreements for fire incidents across all ownerships. The California Fire Plan is the state's road map for reducing the risk of wildfire through planning and prevention to reduce firefighting costs and property losses, increase firefighter safety, and to contribute to ecosystem health.

The Board has adopted these Strategic Fire Plans for California since the 1930s and periodically updates them to reflect current and anticipated needs of California's wildland. The Strategic Fire Plan is the state's

road map for reducing the risk of wildfire through planning and prevention to reduce firefighting costs and property losses, increase firefighter safety, and contribute to ecosystem health. The Strategic Fire Plan is adopted to better respond to the changes of the environmental, social, and economic landscape of California’s wildlands and to provide CAL FIRE with appropriate guidance for adequate statewide fire protection of state responsibility areas. The latest Strategic Fire Plan is dated August 22, 2018.

CAL FIRE implements and enforces the Board’s policies and regulations. The 2018 Strategic Fire Plan 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.

CAL FIRE San Mateo – Santa Cruz Unit Strategic Fire Plan

CAL FIRE requires counties to develop fire protection management plans that address potential threats of wildland fires. The CAL FIRE San Mateo – Santa Cruz Unit (CZU), which is the County Fire Department for both San Mateo County and Santa Cruz County, adopted the 2019 Strategic Fire Plan for the San Mateo County and Santa Cruz County unit in May 2019. The plan is a planning and assessment tool that identifies and prioritizes pre-fire and post-fire management strategies and tactics meant to reduce the loss of values at risk within the Unit.

California Fire Code

The California Fire Code (CFC), contained in Title 24, Part 9 of the California Code of Regulations, was created by the California Building Standards Commission and incorporates by adoption the International Fire Code of the International Code Council, with California amendments. The CFC establishes regulations to safeguard against the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas. The CFC is updated every 3 years. The 2019 CFC was published July 1, 2019 and became effective January 1, 2020.

California Health and Safety Code - State Fire Regulations

Fire regulations for California are established in Sections 13000 et seq. of the California Health and Safety Code and include regulations for structural standards (similar to those identified in the California Building Code), fire protection and public notification systems, fire protection devices such as extinguishers and smoke alarms, standards for high-rise structures and childcare facilities, and fire suppression training. The

State Fire Marshal is responsible for enforcement of these established regulations and building standards for all state-owned buildings, state-occupied buildings, and state institutions within California.

Public Resources Code - Fire Hazard Mapping and Development Standards

Fire Hazard Severity Zone Mapping

Public Resources Code (PRC) Sections 4201 through 4204 and Government Code Sections 51175 through 51189 direct CAL FIRE to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These FHSZs define the application of various mitigation strategies to reduce risk associated with wildland fires. There are three levels of FHSZ mapped for SRAs (moderate, high, and very high), while only very high FHSZs are identified in LRAs (CAL FIRE 2007). As stated above, most of the county's unincorporated area is within the SRA with predominantly moderate to high FHSZs, while very high FHSZs are present within a small area of Bonny Doon and areas along the eastern boundary of the county.

Fire Safe Regulations and Defensible Space

PRC Section 4290, Hazardous Fire Areas, includes fire safety regulations, which establish minimum standards for roads for fire equipment access; standards for signs identifying streets, roads, and buildings; private water supply resources for emergency fire use; fuel breaks and greenbelts; basic emergency access; and wildland fuel modification. Section 4290 works in conjunction with current and new building construction development standards in SRAs, defined by the State Board of Forestry and Fire Protection as an area in which the State has primary financial responsibility for preventing and suppressing fires. SRA Fire Safe Regulations do not supersede local regulations that equal or exceed minimum State regulations.

Section 4291, Mountainous, Forest-, Brush- and Grass-Covered Lands, requires the creation of a 100-foot fire break or fire protection area around and adjacent to habitable buildings or structures. These requirements indicate that a person who 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, shall maintain defensible space of 100 feet from each side and from the front and rear of the structure. The amount of fuel modification necessary shall take into account the flammability of the structure as affected by building material, building standards, location, and type of vegetation. Fuels shall be maintained in a condition so that a wildfire burning under average weather conditions would be unlikely to ignite the structure. This paragraph does not apply to single specimens of trees or other vegetation that are well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to a structure or from a structure to other nearby vegetation. The intensity of fuels management may vary within the 100-foot perimeter of the structure, the most intense being within the first 30 feet around the structure. "Fuel" means any combustible material, including petroleum-based products and wildland fuels.

Senate Bill 1241

In 2012, Senate Bill 1241 added Section 66474.02 to Title 7 Division 2 of the California Government Code, commonly known as the Subdivision Map Act. The statute prohibits subdivision of parcels designated very

high fire hazard, or that are in a SRA, unless certain findings are made prior to approval of the tentative map. The statute requires that a city or county planning commission make three new findings regarding fire hazard safety before approving a subdivision proposal. The three findings are, in brief: (1) the design and location of the subdivision and its lots are consistent with defensible space regulations found in PRC Section 4290-91, (2) structural fire protection services will be available for the subdivision through a publicly funded entity, and (3) ingress and egress road standards for fire equipment are met per any applicable local ordinance and PRC Section 4290.

Wildland Urban Interface Building Codes and Standards

The California Building Code (CBC), Part 2 of 24 California Code of Regulations, identifies building design standards, including those for fire safety. The CBC is updated on a three-year cycle. It is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions under specific amendment rules prescribed by the State Building Standards Commission. Commercial and residential buildings are plan checked by local city and county building officials for compliance with the CBC and any applicable local edits. Typical fire safety requirements of the CBC include the installation of sprinklers in all high-rise buildings and other facilities; the establishment of fire-resistance standards for fire doors, building materials, and particular types of construction in high fire hazard severity zones; requirements for smoke-detection systems; exiting requirements; and the clearance of debris.

Chapter 7A of CBC and Chapter R337 of the California Residential Code (CRC) contain standards associated with the construction of buildings in wildfire-prone areas, including requirements that the exterior of the structure be ignition-resistant and be able to resist the entry of flying embers and fire radiation during a wildfire.

Emergency Response 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 the governor issues a proclamation of a state emergency. Once the act is activated, local government is eligible for certain types of assistance, depending on the specific declaration or proclamation issued.

4.17.2.4 Local Regulations

Santa Cruz – San Mateo Community Wildfire Protection Plan

Community Wildfire Protection Plans (CWPPs) are authorized and defined in Title 1 of the Healthy Forests Restoration Act (HRFA) of 2003. The Santa Cruz County San Mateo County Community Wildfire Protection Plan (CWPP) identifies the risks and hazards associated with wildland fires in the WUI areas of San Mateo and Santa Cruz counties. The plan also identifies recommendations aimed at preventing and reducing both infrastructure and ecosystem damage associated with wildland fires. The plan documents suggested actions intended to reduce the risk to people, property and the environment. Fuel reduction projects identified in an approved CWPP receive priority for federal funds.

The San Mateo – Santa Cruz Unit Strategic Fire Plan and the CWPP address areas with inadequate access and evacuation routes and identify risk to life and property from wildland fire and provide information on firefighter safety, community evacuation and recommended actions by first responders. The plans also address post-fire responsibilities for natural resource recovery, including watershed protection reforestation, and ecosystem restoration.

Operational Area Emergency Management Plan

The County Office of Emergency Services developed the Operational Area Emergency Management Plan (EMP) in October 2015. The EMP addresses the planned response to emergencies and incidents affecting the unincorporated areas of the county. The purpose of the EMP is to establish a comprehensive approach to emergency management and provide guidance to agencies within the operational area in the protection of public health and safety and preparing for or responding to incidents.

County of Santa Cruz Local Hazard Mitigation Plan

The County of Santa Cruz Local Hazard Mitigation Plan (LHMP) 2021-2026 was prepared in accordance with requirements of the Federal Emergency Management Agency (FEMA). FEMA reviews and approves LHMPs and requires an update on a five-year cycle. The County LHMP identifies potential hazards in the county, including wildfire hazards. The plan provides hazard mitigation to implement actions that reduce vulnerability and risk from hazards or reduce the severity of the effects of hazards on people and property. Mitigation actions include both short-term and long-term activities that reduce the impacts of hazards, reduce exposure to hazards, or reduce effects of hazards through various means, including preparedness, response and recovery measures. Effective mitigation actions also reduce the adverse impacts and cost of future disasters.

The County LHMP also designates critical hazard areas of the county as areas subject to greater threat from wildfire, and identifies these areas based on slope, vegetation, ability to respond to fire threats, and localized weather conditions in order to assist with preparation of County hazard mitigation and response planning. The plan was last updated in September 2021.

County of Santa Cruz General Plan / Local Coastal Program

California Government Code Section 65302(g) requires the development of Safety Elements. The County of Santa Cruz General Plan/LCP is a comprehensive, long-term planning document for the unincorporated areas of the county and includes the County's LCP, which was certified by the CCC in 1994. The County General Plan and LCP provides policies and programs to establish guidelines for future growth and all types of physical developments. The Public Safety Element of the County's General Plan, includes objectives and policies that address wildland fires and fire protection. This element was updated and adopted by the County Board of Supervisors in 2020 and is effect in unincorporated areas outside of the coastal zone. The updated element is pending review and approval by the California Coastal Commission. Relevant policies are reviewed in Section 4.17.3.3.

Santa Cruz County Code

Chapter 7.92, Santa Cruz County Fire Code

The Santa Cruz County Fire Code (Santa Cruz County Code [SCCC] Chapter 7.92), which adopts the CFC, regulates the safeguarding of life, property, and public welfare from the hazards of fire, including development in the WUI.

Chapter 12, County of Santa Cruz Building Code

Chapter 12 of the SCCC is the County of Santa Cruz Building Code, which incorporates the CBC (Chapter 12.10), as amended to reflect conditions in Santa Cruz County. The Building Code contains standards and regulations relating to construction materials, fire protection measures, exterior design standards, and access requirements for fire-fighting purposes. The Code addresses installation of fire protection equipment, building setbacks, fire retardant building materials, and the minimum standards to safeguard and protect life, buildings, and structures from fire hazards within the county.

4.17.3 Impacts and Mitigation Measures

4.17.3.1 Thresholds of Significance

The thresholds of significance used to evaluate the impacts of the proposed project related to wildfire are based on Appendix G of the CEQA Guidelines and, if applicable, other agency standards, as listed below. A significant impact would occur if the project would:

- WIL-1 Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.
- WIL-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.

- WIL-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.
- WIL-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.
- WIL-5 Substantially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

4.17.3.2 Analytical Methods

Growth Assumptions

Adoption and implementation of the proposed Sustainability Update would not directly result in impacts related to wildfire. However, the proposed General Plan/LCP amendments include policies that could indirectly lead to future development with potential resulting impacts related to wildfire. Amendments to the General Plan/LCP include policies that support new development, redevelopment, and potential intensified development, primarily within the Urban Services Line (USL). Amendments to the SCCC include changes to permitted/allowed uses in some zone districts. The Countywide Design Guidelines component of the proposed project does not include guidelines related to GHGs. Amendments to General Plan land use designations and/or zone districts are proposed for 23 specified parcels as summarized in Chapter 3, Project Description.

As described in the Section 4.0, Introduction to Analyses, this EIR estimates the potential to accommodate approximately 4,500 housing units over existing conditions as shown on Table 4.0-2, with approximately 75% projected to occur within urban areas. This EIR estimates the potential to accommodate approximately 6,210,000 square feet of non-residential uses as shown on Table 4.0-3, with approximately 60% expected to occur within urban areas. These forecasts provide an estimate of potential growth that could occur as a result of adoption and implementation of the proposed Sustainability Update for the purpose of evaluation in this EIR. This estimate of growth may or may not occur, and this estimate does not establish a limit to development. Annual limits for residential units are set annually by the County pursuant to Measure J and SCCC provisions as explained in Section 4.13 of this EIR, Population and Housing. Additionally, some of this projected development and growth would occur under the existing General Plan/LCP without the proposed project.

EIR Notice of Preparation Comments

Public and agency comments were received during the public scoping period in response to the Notice of Preparation (NOP), which is included in Appendix A. A summary of the comments received during the scoping period for this EIR, as well as written comments received, are included in Appendix B. Comments related to wildfire included the following:

- CEQA analysis should address fire impacts of allowing increased commercial uses in rural residential areas.

- The EIR should update the Fire Risk Assessment Maps on a granular level, relying on the most recent information available from CAL FIRE or other detailed data.
- The EIR should include addition of a long-range acoustic device (LRAD) early warning system in the rural areas of the county for better emergency notification and risk reduction.

To the extent that issues identified in public comments involve potentially significant effects on the environment according to CEQA and/or are raised by responsible agencies, they are identified and addressed within this EIR.

4.17.3.3 Project Impact Analysis

Impact WIL-1: Wildfire Hazards (Significance Thresholds WIL-1, WIL-2, WIL-3, and WIL-4). Adoption and implementation of the proposed Sustainability Update would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires, result in activities that would exacerbate risk of wildland fires, or result in secondary impacts related to flooding, slope instability or discharge of pollutants. (*Less than Significant*)

Exposure to Wildland Fire Hazards

The proposed project would not directly result in new development, but could indirectly lead to future development and redevelopment throughout the county, primarily within urban areas within the County's USL. While the majority of development resulting from the proposed project is expected to be located within urban, developed areas not subject to wildfire hazards, some future residential and non-residential projects, particularly single-family homes could potentially be located in rural areas within designated fire hazard zones. However, all potential future development resulting from implementation of the proposed Sustainability Update would be required to comply with state and local regulations regarding building and fire codes. These regulations include requirements for provision of adequate access and water supply, provision of fire sprinkler systems in new buildings, and provision of defensible exterior space.

Specifically, the regulations require fire apparatus access roads to be unobstructed (not less than 13 feet, 6 inches clearance) and not less than 20 feet in width, although locations serving two or less homes may be a minimum of 12- to 18-foot wide. Where it is environmentally inadvisable to meet these criteria (due to excessive grading, tree removal or other environmental impacts), a 12-foot wide all-weather surface access road with specified turnouts may be provided with the approval of the County Fire Marshal. The regulations also specify required minimum water flows for specified durations and require installation of automatic fire sprinkler system for most new buildings. These requirements for new construction and some remodels are reviewed by the Santa Cruz County Fire Marshal's Office during the plan review phase of building permitting. The County Building Department reviews plans for the fire resistive construction requirements found in the fire and building codes (CAL FIRE San Mateo-Santa Cruz Unit 2019).

Furthermore, the proposed Sustainability Update Parks, Recreation + Public Facilities (PPF) Element and the existing Public Safety Element (as well as the revised element currently under review at the Coastal

Commission), include policies that serve to avoid or minimize impacts related to exposure to wildfires as summarized in Table 4.17-1.

Table 4.17-1. Proposed and Retained General Plan/LCP Policies that Avoid/Minimize Impacts Related to Wildfire Hazards

Potential Impact	Policies
<p>Exposure to wildfire hazards or exacerbation of wildfire risks</p>	<ul style="list-style-type: none"> • Maintain defensible space around structures. (Public Safety Policy 6.7.1*) • Require fuel reduction activities to comply with federal, state ,and local laws. (Public Safety Policy 6.7-2*) • Require strucures of more than 500 square feet (with some exceptions) to provide adequate driveway or road for fire protectoin. (Public Safety Policy 6.5.1/6.7-4*) • Require development to maintain fire protection standards. (Public Safety Policy 6.5.3/6.7-6*) • Require land divisions outside USL to meet specified fire protection standards related to access, roads, response times, and vegetaton modification requirements. (Public Safety Policies 6.5.4/6.7-7* and 6.5.10/6.7.13*) • Prohibit dead-end roads that exceed specified distances. (Public Safety Policy - 6.5.5/6.7-8*) • Require County Service Areas to maintain private roads. (Public Safety Policy 6.5.6/6.7-9*) • Require certification from fire agency that adequate fire protection is available for land divisions, multi-unit residential, commerical, industrial, public facility, and critical utility developments. (Public Safety Policy 6.5.7/6.7-10*) • Discourage location of public facilities and critical utilities in critical fire hazard areas and very high fire hazard severity zones. (Public Safety Policy 6.5.8/6.7-11*) • Require development to be consistent with California Fire Code, California Building Code and County and local fire agency ordinances. (Public Safety Policies 6.5.9/6.7-12* and 6.5.11/6.7-14*) • Sets conditions for project approval, including adequate water availability, flammable vegetation clearance, smoke detection devices, fire retardant roofs, and adequate disposal of refuse. (Public Safety Policy 6.5.3/6.7.6*) • Requires review of new developments by the County Fire Marshal or local fire agency to ensure adequate protection. (PPF-3.4.1) • Allow development only if adequate water supply, access, and response time for fire protection is available and appropriate design and mitigation strategies are provided. (PPF-3.4.2) • Work with the Office of Emergency Services to be prepared for and participate in emergency responses to local hazards and natural disasters as outlined in the LHMP and Emergency Management Plan. (PPF-3.4.8)

Note: * In September 2020, the County Board of Supervisors adopted revisions to the General Plan Public Safety Element. The revisions (all except sections related to coastal bluffs and beaches) were approved by the California Coastal Commission in February 2022 subject to County acceptance of modifications.

While some future development could be located in fire hazard zones, compliance with state and local regulations, as well as implementation of the existing and proposed General Plan/LCP policies, future development would be designed to minimize risks resulting from exposure to wildland fire hazards. These regulations and policies presents requirements for provision of fire accessible roads, exterior defensible space surrounding structures, adequate water supplies, and specific fire protection standards related to building siting and materials for new development. While the proposed project includes some General Plan/LCP and zoning map re-designations for 23 parcels, none are located in a fire hazard area, except for one property that has existing development. The proposed project would not change General Plan designations, densities, or development requirements in non-urban areas that would be located in fire hazard zones.

The County's LHMP also recognizes that development on existing lots of record is required to avoid hazards and incorporate appropriate access, water supply for fire suppression, construction materials, and defensible space requirements to mitigate potential impacts from fire hazards. Development and building plans are reviewed by County staff and local fire agencies to ensure that new development generally does not occur in fire hazard zones and that development on existing lots of record avoid, minimize, and mitigate potential impacts from identified fire hazards. These policies and procedures also help implement the mitigation strategy described in the County LHMP. At the local level, the County is responsible for managing emergency preparedness, response, and evacuation through the LHMP, which includes mitigation strategies for reducing wildland fire risks, creating defensible space around structures, improving access, and inter-agency coordination of efforts (County of Santa Cruz 2021).

Therefore, with compliance with state and local regulations and implementation of the County's General Plan/LCP policies and LHMP mitigation strategies, and because no development is proposed and future development will generally be in urban areas, the project would not directly or indirectly expose people or structures to a significant risk of loss, injury or death involving wildland fires.

Exacerbation of Fire Hazards and Secondary Effects of Fire

In addition to lightning, various human infrastructure and activities in the wildland environment create a high risk of fire starts. Of the 20 most destructive fires in California, seven were from power lines or electrical sources with a number still under investigation (County of Santa Cruz 2021). Other human activities that can elevate risk include camping, "backyard" burning, illegal fireworks, arson, and structural fires. All of these factors have caused wildland fires of various magnitudes (County of Santa Cruz 2021). CEQA requires analysis of whether a project could exacerbate an existing hazard. For wildland fire hazards, this could occur where due to slope, prevailing winds, and other factors, wildfire risks would be exacerbated, exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Additional installation or maintenance of associated infrastructure, such as roads, power lines or other utilities, could exacerbate fire risk.

As indicated above, existing regulations and existing and proposed policies require development to be sited and designed to avoid or minimize exposure to wildfire hazards. As discussed in Section 4.7, Geology and Soils, County regulations and policies require geotechnical hazards assessment in areas of potential slope instability, do not permit steep slopes to be included in density calculations, and generally require buildings

to be located away from steep slopes. (See Table 4.7.3 for summary of relevant policies.) Furthermore, as indicated above, all building and development plans would be reviewed by the County and fire agencies to ensure designs minimize and do not exacerbate wildland fire hazards. Future development would mostly occur on existing lots of record in fire hazard zones, and would have no effect on prevailing winds.

The proposed Sustainability Update would not require installation or maintenance of infrastructure, such as roads, fuel breaks, emergency water sources, power lines or other utilities) that could exacerbate fire risk. The proposed project does not propose new roads or utilities in fire hazard zones. Maintenance, repair, and replacement of existing water, power, and other utility lines are the responsibility of agencies and companies that provide this service. Several proposed policies support upgrades of utility systems, but installation of large infrastructure projects are not anticipated as a result of the proposed project. Furthermore, future infrastructure projects subject to County review and approval would be required to comply with local and/or state regulations and policies.

Therefore, the project would not exacerbate wildfire risks or expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Furthermore, the Proposed Project does not involve grading or construction that would increase risks of downslope or downstream flooding or landslides that could lead to post-fire slope instability. Future development supported by the project would be subject to compliance with state and local regulations and policies regarding grading, erosion controls, and siting of development in geological hazard areas in order to avoid or minimize adverse effects of grading and stormwater drainage.

Conclusion

Adoption and implementation of the proposed Sustainability Update would not directly expose people or structures to a significant risk of loss, injury or death involving wildland fires as no development is proposed. Although some future development could be located in wildfire hazard areas (as is the case for development under the existing General Plan/LCP and County Code), such development would be in rural areas and largely on existing lots. Most of the additional growth envisioned as a result of the Sustainability Update would occur in urban areas outside of wildland fire areas. Future development in WUI areas would be required to comply with state and local regulations and local policies regarding siting and design of structures to avoid/minimize risks of exposure to fires. Requirements for adequate access, water supply, building design, and defensible space would also minimize conditions that would lead to exacerbation of a wildfire hazard or result in an adverse secondary effect as a result of development, such as grading of steep slopes or inadequate drainage. Additionally, locations where future development would be located in high risk wildfire areas are locations where rural development could occur under the existing General Plan/LCP. The proposed project does not forecast an increase in new residential units in rural planning areas over what could occur under the existing General Plan/LCP, although there could be some increased non-residential development in these areas. However, as reviewed in this section, all development would be required to be designed in accordance with fire and building codes requirements explained above. Therefore, the project would not directly or indirectly result in activities that would exacerbate the existing risk of wildland fires or result in secondary impacts related to flooding, slope instability, or discharge of pollutants. Thus, the impact related to wildfire hazards would be *less than significant*.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact WIL-2: Emergency Response/Evacuation Plans (Significance Threshold WIL-5). Adoption and implementation of the proposed Sustainability Update would not directly or indirectly substantially impair an adopted emergency response plan or emergency evacuation plan. (*Less than Significant*)

The proposed Sustainability Update would not impair implementation of or interfere with an emergency evacuation plan. The Santa Cruz County Office of Response, Recovery & Resilience (OR3) was created in December 2020 and serves as the emergency management office for responding to ongoing disasters. Evacuations are frequently a response to natural disasters in order to protect people from potential harm. People may be evacuated because they are in the direct path of a natural disaster or because emergency responders may lose the ability to rescue residents due to road closures. The County uses a variety of methods to notify residents when an evacuation is necessary. These include reverse 911 calls, text or phone messages through Code Red (for those who have signed up) and/or door to door notifications. Evacuation areas are determined by the incident command team, who are in charge of responding to the disaster (Santa Cruz County Office of Response, Recovery & Resilience 2021).

As discussed in Impact WIL-1 above, the proposed project would not directly result in new development but could indirectly lead to future development and redevelopment throughout the county, particularly in urban areas within the County's USL. Potential future development potentially resulting from implementation of the proposed Sustainability Update is expected to occur in existing urban areas outside of wildland fire areas. However, all future development, regardless of the location, is required to comply with adopted local, regional, and State plans and regulations addressing emergency access and in particular designs to minimize risks of exposure to wildfire hazards.

The proposed project consists of policy and regulatory updates to the County's General Plan/LCP and SCCC, and would not directly result in new development that would result in inadequate emergency access as discussed in Section 4.15, Transportation. Existing General Plan/LCP policies and state and local development codes provide regulations for new development that address adequate roads and emergency access. Additionally, the proposed Access + Mobility Element includes policies that would minimize the impacts related to provision of inadequate emergency access. Specifically, proposed Policy AM-6.1 calls for adequate roads for fire and emergency response access, which would be reviewed as part of future development project applications. In addition, County staff would work in conjunction with the fire departments, and other emergency access providers to continue to coordinate development review and review of new roads with Fire District and Sheriff's Department staff (AM-6-1a). Therefore, the proposed project would not directly or indirectly result in provision of inadequate emergency access or substantially impair implementation of an emergency response or evacuation plan, and the impact would be *less than significant*.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

4.17.3.4 Cumulative Impact Analysis

The geographic scope of the cumulative analysis for wildfire considers the area within Santa Cruz County, including the unincorporated area of the county that is covered in this EIR and the four incorporated cities within the county. Cumulative development includes specific projects and growth in cities within the county as outlined on Table 4.0-1 in Section 4.0, Introduction to Analyses. Generally, cumulative impacts include specific identified major projects, as well as continued growth and development pursuant to adopted General Plans, in the cities of Capitola, Santa Cruz, Scotts Valley, and Watsonville, and growth and development at the University of California, Santa Cruz. Potential impacts related to wildfire hazards are project- and site-specific, and can be avoided or minimized with required compliance with state and local regulations, implementation of LHMPs, and project-level review by fire agencies to ensure that development project provide adequate access, water supply, and building and site design to minimize risks of exposure to wildfire hazards as discussed in the preceding impact analyses. Cumulative development projects would be required to comply with applicable local and state regulations within the county, which would avoid the aggregation of individual effects into a significant cumulative impact. Thus, cumulative growth and development would not result in a significant cumulative impact related to wildfire hazards.

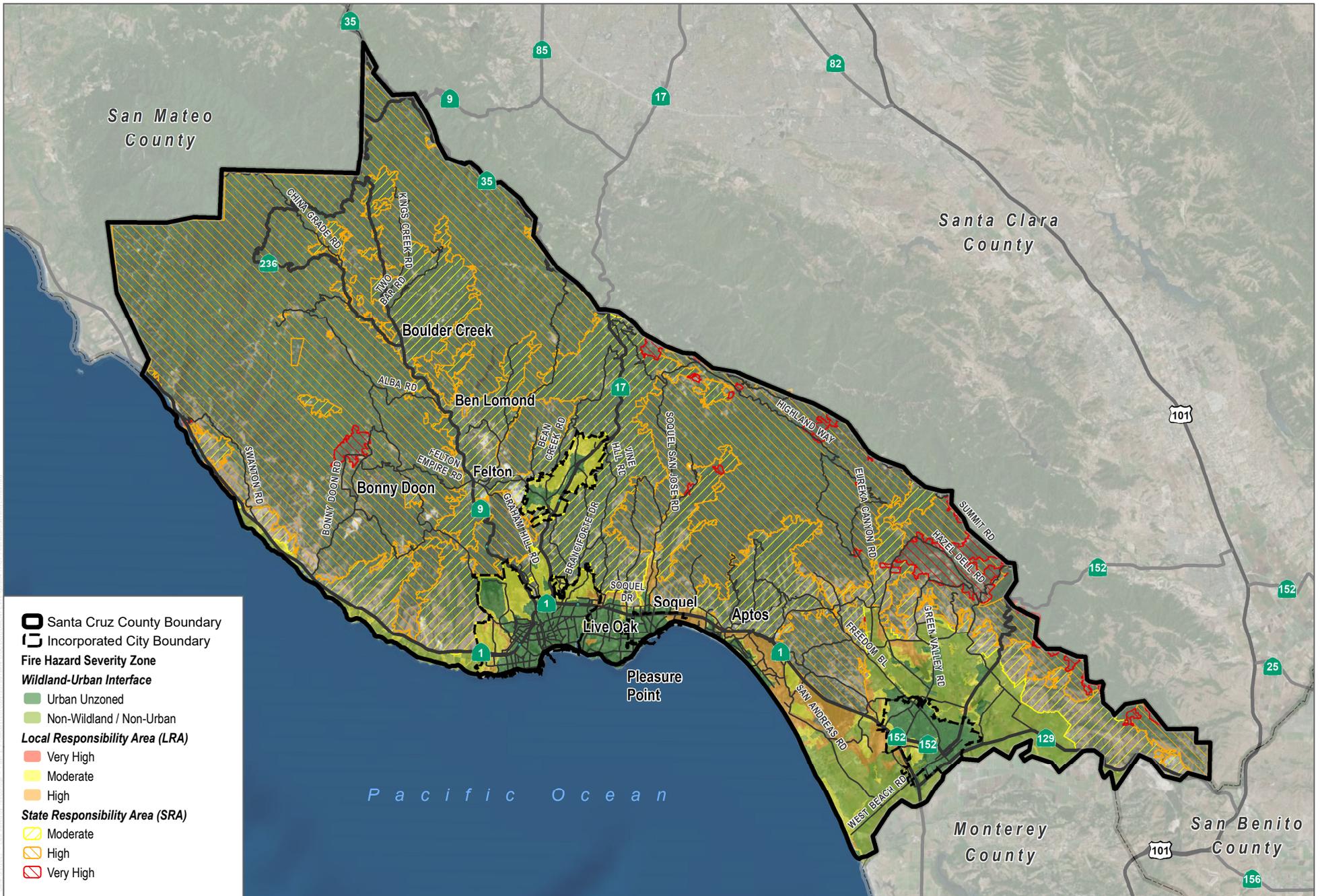
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4.17.5 Figures

Figure 4.17-1. Santa Cruz County Fire Hazard Severity Areas



SOURCE: Bing Maps 2020, CAL FIRE 2020, Santa Cruz County 2020



FIGURE 4.17-1

Fire Hazard Severity Zones

County of Santa Cruz Sustainability Policy and Regulatory Update

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