

## 3.16 Wildfire

This section of the Draft EIR evaluates potential impacts to wildfire associated with implementation of the proposed Golden State Natural Resources Forest Resiliency Demonstration Project (proposed project). This section describes the existing wildfire conditions at feedstock source locations (Sustainable Forest Management Projects), proposed wood pellet processing facility sites in Northern California (Lassen Facility) and the Central Sierra Nevada foothills (Tuolumne Facility), and the export terminal in Stockton, California, and evaluates the potential for project-related wildfire impacts, considering proposed project design features that could reduce or eliminate associated impacts. In response to the Notice of Preparation (NOP), comments were received regarding fire risk at the plant facilities, as well as the need to reduce wildfire events in California (see Appendix A). Note that fire risk related to wood pellet production and storage are addressed in the Hazards Section of this EIR, Section 3.8, while this section specifically addresses wildland fires.

### 3.16.1 Environmental Setting

The environmental setting discussion that follows considers the wildfire environment surrounding the project sites. This includes a discussion of fire hazard severity zones, fire history, climate and weather conditions, on- and off-site slopes, vegetation and other factors. Fire environments are dynamic systems and include many types of environmental factors and site characteristics. Fires can occur in any environment where conditions are conducive to ignition and fire movement. Areas of naturally vegetated open space are typically composed of conditions that may be favorable to wildfire spread. The three major components of the fire environment are topography, vegetation (fuels), and climate. The state of each of these components and their interactions with each other determines the potential wildfire characteristics and behavior.

#### Slopes/Topography

Topography influences fire risk by affecting fire spread rates. Typically, steep terrain results in faster fire spread up-slope and slower spread down-slope. Terrain that forms a funneling effect, such as chimneys, chutes, or saddles on the landscape can result in especially intense fire behavior, including faster spread and higher intensity. Conversely, flat terrain tends to have little effect on fire spread, resulting in fires that are driven by vegetation and wind. Local variations in topography can influence wind and fire behavior.

#### Vegetation Communities and Land Covers

Variations in vegetative cover type and species composition have a direct effect on fire behavior. Some plant communities and their associated plant species have increased flammability based on plant physiology (resin content), biological function (flowering, retention of dead plant material), physical structure (leaf size, branching patterns), and overall fuel loading.

A critical factor to consider is the dynamic nature of vegetation communities. Fire presence and absence at varying cycles or regimes affect plant community succession. Succession of plant communities, most notably the gradual conversion of shrublands to grasslands with high frequency fires and grasslands to shrublands with fire exclusion, is highly dependent on the fire regime. Further, biomass and associated fuel loading will increase over time if disturbance or fuel reduction effects are not diligently implemented.

The vegetation types and land covers in the project area were identified during field assessments conducted for the project site, as detailed in Section 3.3, Biological Resources.

### Climate, Weather, and Wind

The project area is influenced by prevailing wind patterns. Prevailing winds are winds that blow from a single direction over a specific area of the Earth. Local variations in topography can influence wind patterns as well, thereby influencing potential wildfire behavior. Local variations in climate, weather, and wind are discussed below.

### Fire Hazard Severity Zones

The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for mapping fire hazard areas throughout the state pursuant to Public Resources Code section 4201 et seq, and Government Code section 51175 et seq. These maps are provided by CAL FIRE through the Fire and Resource Assessment Program (FRAP) database. The FRAP database includes data that identify areas of significant fire hazards throughout the state in State Responsibility Areas and provides recommendations for Local responsibility Areas. Geographic areas of the state are designated as either Very High, High, or Moderate Fire Hazard Severity Zones (FHSZs), which are determined by a region's land cover, vegetation, terrain, climate, fire history, and several other factors that contribute to the fire environment. These areas are also classified as Local Responsibility Areas (LRAs), State Responsibility Areas (SRAs), and Federal Responsibility Areas (FRAs), which indicate areas where the local, state, or federal government assume financial responsibility for fire prevention and protection. This information is provided to the public and local agencies to incorporate the fire hazard mapping into local planning efforts. FHSZs in the project area are presented in Figures 3.16-1 through 3.16-3 and further discussed below.

### Fire History

Fire history data provide valuable information regarding fire spread, fire frequency, ignition sources, and vegetation/fuel mosaics across a given landscape. CAL FIRE's Fire and Resource Assessment Program (FRAP) database<sup>1</sup> summarizes fire perimeter data dating to the late 1800s, but it is incomplete because it does not include all fires under 10 acres in size and has incomplete perimeter data, especially for the first half of the twentieth century (Syphard and Keeley 2016). However, the data do provide a summary of recorded fires and can be used to show whether large fires have occurred in the project site, which is one of the indicators as to whether they may be possible in the future. Fire History in the project area is illustrated in Figures 3.16-4 through 3.16-6 and further discussed below.

#### 3.16.1.1 Sustainable Forest Management Projects

Feedstock destined to the Lassen and Tuolumne facilities for manufacturing of wood pellets will be wood byproducts sourced from Sustainable Forest Management Projects such as hazardous fuel reduction projects, construction of shaded fuel breaks, and salvage harvests (see Chapter 2, Project Description, for a full description). The feedstock would originate from private, state, tribal, and federal timberlands located within the Working Area (see Section 2.4.1).

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<sup>1</sup> Based on polygon geographic information system data from CAL FIRE's FRAP, which includes data from CAL FIRE, the U.S. Department of Agriculture's Forest Service Region 5, BLM, the National Park Service, contract counties and other agencies. The dataset is a comprehensive fire perimeter geographic information system layer for public and private lands throughout the state and covers fires 10 acres and greater between 1878 and 2018.

The wildfire environment throughout the feedstock acquisition area and site-specific details varies considerably within the above-described feedstock acquisition area. In general, Sustainable Forest Management Projects would likely take place within areas considered to be high or very high FHSZs, with slope, weather/climate, and vegetation conditions that may be conducive to wildfire spread.

Section 3.6, Geology, discusses the broader geological conditions within the feedstock area. Which generally consists of the Modoc Plateau, Basin and Range, Cascade Range, and Klamath Mountains provinces (Lassen feedstock area) and the Sierra Nevada, Great Valley, Coast Ranges, and Basin and Range provinces.

Table 3.3.3 in Section 3.3, Biological Resources, presents the vegetation communities and landcover types present in the feedstock areas. The CAL FIRE's FRAP vegetation layer was utilized to ascertain the habitat and vegetation categories present. Land cover within the feedstock area consists of a combination of terrestrial non-vegetative land covers, natural vegetation communities, and non-natural cover types. There are fifty (50) vegetation communities and land cover types present in the feedstock areas, broken down by five (5) categories: forest and woodland, shrubland, herbaceous, non-natural, and other. Sustainable Forest Management Projects within the feedstock area would occur within the forest and woodland cover category dominated by conifer (commercial timber) species, and would generally exclude shrubland, herbaceous, and non-natural land cover types. Woodland and forest cover types account for 70-73% of the feedstock area.

## Emergency Response

It is anticipated that USFS and CAL FIRE would be the primary fire protection services for feedstock acquisition areas of the project, within Federal and State Responsibility Areas, respectively. Local fire departments and fire protection districts would have primary responsibility for Local Responsibility Areas. Note that mutual aid agreements may affect which agency is the “first” responder, but do not change who has overall financial responsibility.

### 3.16.1.2 Northern California (Lassen Facility) Site

The proposed Lassen wood pellet processing site is located in Nubieber, California, an unincorporated community in Lassen County (see Figure 2-3, Project Location (Lassen)). The Lassen site was formerly a wood processing sawmill, and a portion of the site is currently used for timber loading. A chemical company is located adjacent to the site, and scattered rural residences are in proximity to the site. Buildings associated with the former wood processing operation are located to the north, and agricultural uses to the east, and south. Primary access to the site is from Babcock Road, which connects to State Route (SR) 299. The pellet processing facility would be located on the northern parcel, which is approximately 65 acres in size, whereas, the southern parcel would serve as a log decking, or storage area. The southern parcel is approximately 218 acres, although only the northern quarter of the site is proposed for log decking (see Figure 2-3).

## Site Description

The Lassen site is partially developed with existing humanmade structures and other features generally concentrated within the northern area of the site, as shown in Figure 2-4, Project Site (Lassen). This includes a railroad and track yard, silo, storage barns, and a warehouse. Main access to the site is from Babcock Road at the southwestern area of the site.

## Slopes/Topography

The project site is located on relatively flat to gently sloping topography.

## Vegetation and Land Cover

The majority of the undeveloped areas of the project site consist of non-native grassland with a mix of annual grasses and forbs. Mowed agricultural fields are present in the northern portion of the project site. Also included are five earthen ditches, one seasonal wetland swale, and one seasonal wetland. The seasonal wetlands as well as the earthen ditches exhibit changes in vegetation and slopes. The project site is surrounded by widely scattered rural development and open space, generally also composed of cropland, sagebrush scrub, and wet meadow.

## Climate, Weather, and Wind

The project area experiences hot, dry summers, and cool, wet winters. The summer season occurs from June to September with an average daily high temperature above 79°F. The cooler, wet season, including rain, precipitation, and snow fall, lasts from September to June. While drier conditions are experienced from June to October

The average hourly wind speed in the project area experiences mild seasonal variation over the course of the year. The windier part of the year occurs from late October to mid-June, with average wind speeds of more than 8.0 miles per hour. The windiest month of the year is March, with an average hourly wind speed of 9.4 miles per hour. The calmer time of year occurs from mid-June through October, with an average hourly wind speed of 6.7 miles per hour. The wind is most often from the west, from March to October, and from the south from October to March (Weather Spark 2023a).

## Fire Hazard Severity Zone

As shown in Figure 3.16-1, Fire Hazard Severity Zones – Lassen Facility, the portion of the Lassen Facility site north of Babcock Road is located in the Local Responsibility Area (LRA) and is not within a Very High Fire Hazard Severity Zone. The portion of the site south of Babcock Road, which will be dedicated to feedstock processing and storage activities, and the areas immediately adjacent to the west of the site, are within the State Responsibility Area and mapped as being in a High Fire Hazard Severity Zone (CAL FIRE 2008a, 2024a). Additionally, the project site is located approximately one mile to the east of land designated as a Very High Fire Hazard Severity Zone (CAL FIRE 2024a).

## Fire History

The FRAP database indicates that 10 fires that have occurred within a 5-mile radius of the Lassen Facility site. The Day Fire is the closest wildfire to have burned near the project site, which occurred in 2009, burned approximately 852 acres, and was located approximately 1.9 miles from the project site (see Figure 3.16-4, Project Area Fire History – Lassen Facility).

## Emergency Response

The majority of Lassen County is covered by state and federal jurisdiction, but some subsets of the County are covered by local fire agencies. Fire protection in the County is divided into 16 separate fire protection districts. The project site is served by the Big Valley Fire Protection District (BVFD). BVFD covers a service area of 105.3 miles

with one station in the town of Bieber. The station is located approximately 2.5 miles northeast of the project site. The department is staffed by ten active volunteer fire fighters. Services offered by the BVFD include response to both structural and wildland fires, as well as response to medical emergencies related to traffic or crowd control (BVFD 2022). BVFD is part of the Susanville Interagency Fire Center and the Lassen County Fire Chiefs Association. Mutual aid agreements additionally allow BVFD to provide assistance to the Adin Fire Departments and CAL FIRE. The BVFD fire protection equipment includes one engine, three water tender pumpers, one squad brush vehicle, and one extrication jaw. Additionally, the CAL FIRE station located in Bieber has two engines, one helicopter, and one bulldozer. If needed, the Intermountain Conservation Camp also has four 17-person fire crews that are available to provide assistance. Southern Cascades Emergency Medical Services provides ambulance services to the Big Valley district that respond from Adin. Additional first responder support is provided by the Adin Fire Protection District.

In the year of 2018 (most recent available data), the BVFD received a total of 24 calls for service. Twelve of these calls for service were to assist another agency within their mutual aid agreement. The BVFD received five calls regarding wildland fires, four calls for false alarms or 'other fires' (not structure fires), and three calls for traffic collisions (LAFCo 2020).

### 3.16.1.3 Central Sierra Nevada (Tuolumne Facility) Site

The proposed Tuolumne wood pellet processing site is located on in Tuolumne County, California, and in the western foothills of the Sierra Nevada Mountain Range (see Figure 2-7, Project Location (Tuolumne)). The Tuolumne site is located immediately southeast of the junction of State Route 108 and La Grange Road. Elevations on the Tuolumne site range from approximately 1,070 feet above mean sea level in the northwest corner of the site to 1,140 feet above mean sea level in the eastern portion of the site. The Tuolumne site occurs within the Upper Stanislaus River watershed.

The Tuolumne location is a previously developed site that was formerly a wood processing mill. A wood shaving plant owned by American Wood Fibers is located adjacent to the west side of the site, and two residences are located adjacent to the northwest corner of the site. Agricultural land is located to the north, east, and south.

#### Existing Conditions

The Tuolumne site is partially developed with existing humanmade structures and other features generally concentrated within the center of the site, as shown in Figure 2-8, Project Site (Tuolumne). This includes buildings, stockpiling and staging areas, paved and gravel roadways, gravel lots, and other features associated with the abandoned mill. Currently, 9.6 acres of the total 58.56 acres of the project site are paved. The site has two existing accessways: one for truck access at the southwest area of the site and one for employee access at the northwest area of the site, both from La Grange Road.

#### Slopes/Topography

The Tuolumne Facility project site is located on relatively flat to gently sloping topography.

#### Vegetation and Land Cover

The majority of the undeveloped areas of the project site consist of annual grassland with some young blue oak shrubs. Blue oak woodland is concentrated in the northwestern portion of the project site. There are two patches

of riparian woodland in the northern portion of the project site. The project site is surrounded by widely scattered rural development and open space, generally also composed of scattered oak woodland and annual grassland.

The project site also contains a variety of aquatic resources, including wetland and non-wetland waters, a vernal pool, and ephemeral and perennial drainages. Additionally, there are four humanmade detention basins constructed throughout the project site to collect and store run-off: one in the southern portion of the site, one in the northeastern portion of the site, and two located near the mid-west portion of the site.

### Climate, Weather, and Wind

Summers in the project area are hot, arid, and mostly clear and the winters are cold, wet, and partly cloudy. The summer season occurs from June to September, with an average daily high temperature above 83 °F. The hottest month of the year is July, with an average high of 91 °F. The cooler, wetter period of the year occurs from September to May. The average hourly wind speed does not vary significantly over the course of the year, remaining within 0.4 miles per hour of 5.3 miles per hour throughout. The wind is most often from the south from late February to late March. The wind is most often from the west from late March to mid-October. The wind is most often from the east from mid-October to late February (Weather Spark 2023b).

### Fire Hazard Severity Zones

As shown in Figure 3.16-2, Fire Hazard Severity Zones – Tuolumne Facility, the Tuolumne Facility site is located within the State Responsibility Area and mapped as being in a High Fire Hazard Severity Zone. There are scattered areas designated as Very High FHSZ located approximately 0.17-mile west and northwest of the Tuolumne Facility site (CAL FIRE 2024b).

### Fire History

The FRAP database indicates that 28 fires that have occurred within a 5-mile radius of the project site. Lighting #29 is the closest fire to have burned near the Tuolumne Facility site, which occurred in 1996, burned approximately 5,490 acres, and burned onto the northeastern corner of the project site (see Figure 3.16-5, Project Area Fire History – Lassen Facility).

#### 3.16.1.4 Port of Stockton

Finished pellets would be transported by rail from both the Lassen and Tuolumne facilities to the Port of Stockton. The Port of Stockton is a port located on the San Joaquin River (see Figure 2-10, Port Location). The Port area is located within low-lying floodplains east of the San Joaquin Delta. The surrounding topography is a low lying alluvial plain dissected by numerous river systems. Based on the biological field survey, there are three vegetation communities or land covers at the Port site: disturbed habitat, riparian woodland, and urban/developed. The port area does not have slopes, vegetation, or other conditions conducive to wildfire spread.

### Fire Hazard Severity Zones

The Port of Stockton site is located adjacent to the San Joaquin River surrounded by agricultural lands and other industrial land uses. According to CAL FIRE, the Port of Stockton site is located in a Local Responsibility Area (LRA) and is designated as “Unzoned” (i.e., not within a FHSZ). CAL FIRE has determined that all of San Joaquin County

has no Very High Fire Hazard Severity Zones (CAL FIRE 2007). The closest area of high fire risk is located approximately 16 miles southwest of the site (CAL FIRE 2024c).

## Fire History

There are no fires that have occurred within a 5-mile radius of the project (Figure 3.16-6, Project Area Fire History – Port of Stockton Facility).

## 3.16.2 Regulatory Setting

### 3.16.2.1 Federal

#### U.S. Forest Service

In 2019, the Golden State Finance Authority (GSFA) and the U.S. Forest Service signed a master Stewardship Agreement (MSA) for the general purpose of achieving resilient forests within U.S. Forest Service Region 5. Individual Sustainable Forest Management Projects to reduce fuel loads and increase resiliency within the above-described feedstock acquisition area will be implemented through Supplemental Project Agreements (SPAs). (While the MSA applies to the entirety of Region 5, only Sustainable Forest Management Projects within the Working Area described in Section 2.4 are contemplated under the proposed project.) The Forest Service’s strategic plan (USDA 2015) includes four outcome-oriented goals:

1. Sustain Our Nation’s Forests and Grasslands.
2. Deliver Benefits to the Public.
3. Apply Knowledge Globally.
4. Excel as a High-Performing Agency

The plan further identifies three strategic objectives for the first goal:

- Foster resilient, adaptive, ecosystems to mitigate climate change.
- Mitigate wildfire risk.
- Conserve open space

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

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

#### Federal Wildland Fire Management Policy

The Federal Wildland Fire Management Policy was developed in 1995, updated in 2001, and again in 2009 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, found in the Guidance for Implementation of Federal Wildland Fire Management Policy (National Wildfire Coordinating Group 2009):

- Firefighter and public safety is the first priority in every fire management activity.
- The role of wildland fire 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, officially titled *Managing the Impacts of Wildfire on Communities and the Environment: A Report to the President In Response to the Wildfires of 2000*, was a presidential directive in 2000 as a response to severe wildland fires that had burned throughout the United States. The National Fire Plan focuses on reducing fire impacts on rural communities and providing assurance for sufficient firefighting capacity in the future. The plan addresses five key points: firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability. The plan provides technical, financial, and resource guidance and support for wildland fire management across the United States. The USDA Forest Service and the Department of the Interior are working to successfully implement the key points outlined in the plan (DOI and USDA 2000).

#### International Fire Code

Created by the International Code Council, the International Fire Code (IFC) addresses a wide array of conditions hazardous to life and property, including fire, explosions, and hazardous materials handling or usage (although not a federal regulation, but rather the product of the International Code Council). The International Fire Code places an emphasis on prescriptive and performance-based approaches to fire prevention and fire protection systems. Updated every 3 years, the International Fire Code uses a hazards classification system to determine the appropriate measures to be incorporated to protect life and property (often times these measures include construction standards and specialized equipment). The International Fire Code uses a permit system (based on hazard classification) to ensure that required measures are instituted (International Code Council 2020). The IFC's provisions are not laws or codes unless adopted as such or referenced as such by the California Fire Code (CFC) or the local fire agency.



## National Forest Management Act of 1976

The National Forest Management Act amends the Forest and Rangeland Resources Planning Act of 1975 and recognizes that the management of the Nation's renewable resources is highly complex and the uses, demand for, and supply of the various resources are subject to change over time.

### 3.16.2.2 State

#### California Government Code

Public Resources Code sections 4201 et seq. and California Government Code Sections 51175 et seq. provide guidance for classifying lands in California as fire hazard areas and requirements for management of property within those lands. CAL FIRE is responsible for classifying FHSZs based on statewide criteria and makes the information available for public review. Further, local agencies must designate, by ordinance, Very High FHSZs within their Local Responsibility Areas based on the recommendations of CAL FIRE.

Section 51182 sets forth requirements for maintaining property within fire hazard areas, such as defensible space, vegetative fuels management, and building materials and standards. Defensible space around structures in fire hazard areas must consist of 100 feet of fuel modification on each side of a structure, but not beyond the property line unless findings conclude that the clearing is necessary to significantly reduce the risk of structure ignition in the event of a wildfire. Clearance on adjacent property shall only be conducted following written consent by the adjacent owner. Further, trees must be trimmed from within 10 feet of the outlet of a chimney or stovepipe, vegetation near buildings must be maintained, and roofs of structures must be cleared of vegetative materials. Exemptions may apply for buildings with an exterior constructed entirely of nonflammable materials.

#### California Public Resources Code

California Public Resources Code Section 4290 and the implementing regulations adopted by the California Board of Forestry and Fire Protection set forth minimum fire safety standards related to defensible space within state responsibility areas approved after January 1, 1991, and within lands classified and designated as very high fire hazard severity zones, as defined in subdivision (i) of Section 51177 of the Government Code after July 1, 2021. These regulations apply to the perimeters and access to all residential, commercial, and industrial building construction. The regulations include all of the following:

1. Road standards for fire equipment access.
2. Standards for signs identifying streets, roads, and buildings.
3. Minimum private water supply reserves for emergency fire use.
4. Fuel breaks and greenbelts.

California Public Resources Code Section 4291 requires 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, to maintain defensible space around the structure, but not beyond the property line.

California Public Resources Code, Section 4292, requires that any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or forest-covered land, brush-covered land, or grass-covered land shall maintain around and adjacent to any pole or tower which supports a

switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole, a minimum firebreak of 10 feet in all directions from the outer circumference of a pole or tower be established. All vegetation shall be cleared within the firebreak.

### California Fire Code

The CFC is Chapter 9 of Title 24 of the California Code of Regulations. It was created by the California Building Standards Commission and is based on the IFC. It 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 CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazards classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

### California Building Code

Chapter 7A of the California Building Code establishes minimum standards for buildings in any fire hazard severity zone within State Responsibility Areas or any wildland urban interface fire area to protect life and property by increasing the ability of a building to resist the intrusion of flames or burning embers.

### California Strategic Fire Plan

The 2019 Strategic Fire Plan for California reflects CAL FIRE's focus on fire prevention and suppression activities to protect lives, property, and ecosystem services, and natural resource management to maintain the state's forests as a resilient carbon sink to meet California's climate change goals and to serve as important habitat for adaptation and mitigation. The Strategic Fire Plan for California provides a vision for a natural environment that is more fire resilient, buildings and infrastructure that are more fire resistant, and a society that is more aware of and responsive to the benefits and threats of wildland fire, all achieved through local, state, federal, tribal, and private partnerships (CAL FIRE 2019). Plan goals include the following:

1. Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the collaborative development and sharing of all analyses and data collection across all ownerships for consistency in type and kind.
2. Promote and support local land use planning processes as they relate to: (a) protection of life, property, and natural resources from risks associated with wildland fire, and (b) individual landowner objectives and responsibilities.
3. Support and participate in the collaborative development and implementation of local, county and regional plans that address fire protection and landowner objectives.
4. Increase fire prevention awareness, knowledge and actions implemented by individuals and communities to reduce human loss, property damage and impacts to natural resources from wildland fires.
5. Integrate fire and fuels management practices with landowner/land manager priorities across jurisdictions.

## Executive Order B-52-18

On May 10, 2018, in response to the changing environmental conditions and the increased risk to California's citizens, California Governor Brown issued Executive Order (EO) B-52-18 to support the state's resilience to wildfire and other climate impacts, to address extensive tree mortality, increase forests' capacity for carbon capture, and to improve forest and forest fire management. The Executive Order requires the California Natural Resources Agency, in coordination with the Board, CAL FIRE, and other agencies, to increase the pace and scale of fire fuel treatments on state and private lands. EO B-52-18 commits \$96 million in additional state funds to for these efforts and calls for doubling the land actively managed through vegetation thinning, prescribed burning, and restoration from 250,000 to 500,000 acres per year to reduce wildfire risk.

## California Department of Forestry and Fire Protection

CAL FIRE is tasked with reducing wildfire-related impacts and enhancing California's resources. CAL FIRE responds to all types of emergencies, including wildland fires and residential/commercial structure fires. In addition, 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 responsible for enforcing State of California fire safety codes included in the California Code of Regulations and the California Public Resources Code. Section 1254 of the California Environmental Quality Act (CEQA) Guidelines identifies minimum clearance requirements required around utility poles.

CAL FIRE also inspects utility facilities and makes recommendations regarding improvements in facility design and infrastructure. Joint inspections of facilities by CAL FIRE and the utility owner are recommended by CAL FIRE so that each entity may assess the current state of the facility and successfully implement fire prevention techniques and policies. Violations of state fire codes discovered during inspections are required to be brought into compliance with the established codes (CAL FIRE 2023).

CAL FIRE maps FHSZs based on fuel loading, slope, fire history, weather, and other relevant factors as directed by California Public Resources Code, Sections 4201–4204, and California Government Code Sections 51175–51189. FHSZs are ranked from moderate to very high and are categorized for fire protection within a Federal Responsibility Area, State Responsibility Area, or Local Responsibility Area under the jurisdiction of a federal agency, CAL FIRE, or local agency, respectively.

## Mutual Aid Agreements

There are multiple regional, state, and local agreements and operating plans currently in use that provide for mutual aid between and among federal, state, and local fire agencies. The statewide mutual aid system exists to ensure that adequate resources, facilities, and other supports are provided to jurisdictions whenever resources prove to be inadequate for a given situation. Each jurisdiction controls its own personnel and facilities but can give and receive help whenever needed.

### 3.16.2.3 Local

#### Lassen County

##### Lassen County General Plan

The Lassen County General Plan Safety Element, updated in June 2023, addresses natural and human-caused hazards affecting Lassen County, including wildfire. The majority of developed areas in Nubieber are not within a wildfire severity zone. There are two small portions of southern Nubieber that fall within the moderate wildfire severity zone—one is along SR-299 and another is in agricultural and industrial land that has some development. All of Nubieber’s land uses are designated as intensive agriculture in the general plan. The area surrounding Nubieber, particularly the forested areas to the west, north, and south, are in moderate to high wildfire severity zones. Historically, wildfires have occurred in the forested land west of Nubieber (Lassen County 2023).

Goal 1. Minimize risks, such as loss of life, injury, property damage, and natural resource destruction, from natural hazards.

Policy 1.1. Protect Lives. Implement applicable federal and State regulations and local ordinances designed to protect life safety.

Policy 1.2. Protect Properties. Encourage property protection measures for all communities and structures located in hazard areas

##### Lassen County Code

##### Section 9.16.070 – Enforcement Authority [Fire Warden]

Section 9.16.070 of the Lassen County Municipal Code states that the County Fire Warden is empowered to enforce all provisions of Chapter 9.16 – Fire Hazards of the County Municipal Code (see below) as well as the State SRA/VHFHSZ Fire Safe Regulations (California Code of Regulations Title 14, section 1270 et seq.). The term “County Fire Warden includes any person duly deputized as such by said county fire warden. The County Board of Supervisors first established the position of County Fire Warden in 1983 and designated the CAL FIRE Ranger in Lassen County as the Lassen County Fire Warden (Board Resolution Number 83/84-47). The current fire warden for the County is Scott Packwood.

The Fire Warden enforces the County and State Fire Safe Regulations in close coordination with the Lassen County Department of Planning and Building Services, who is responsible for the issuance of building permits in the unincorporated areas of Lassen County (all areas outside the City of Susanville, excluding certain state and federally managed property). In many instances, Lassen County performs certain inspections required pursuant to these standards on behalf of the Fire Warden (as delegated by the Fire Warden). Said delegation is provided in an August 31, 2022, letter from the Fire Warden/CAL FIRE titled “Delegation of authority to enforce the Fire Safe Regulations in any SRA within Lassen County to the Lassen County Planning and Building Services Department.

##### Chapter 9.16, Fire Hazards

Chapter 9.16 of the Lassen County Code introduces the adoption of the Public Resources Code section 4290 and its associated regulations (the State Fire Safe Regulations) in both State Responsibility Areas (SRA) and Local

Responsibility Areas (LRA). These provisions constitute the basic wildfire protection standards promulgated by the California Board of Forestry. These fire safety standards shall apply to all new development in Lassen County. These regulations have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction and development in the state responsibility area (SRA) and local responsibility area (LRA). The future design and construction of structures, subdivisions and developments in the SRA and LRA shall provide for basic emergency access and perimeter wildfire protection measures. These measures shall provide for emergency access; signing and building numbering; private water supply reserves for emergency fire use; and vegetation modification.

### Lassen County CWPP

The Lassen County Community Wildfire Protection Plan (CWPP) is a planning tool to help the community, planning professionals, Fire Safe Councils, responsible Federal, State and local fire agencies, and other interested parties assess the threat level and to identify measures that may be taken to reduce the threat that wildland fire poses to the communities in Lassen County. The CWPP provides a general overview of wildland fire in the County, as well as detailed individual Community Fire Safe Plans for each of the inhabited communities of Lassen County.

### Tuolumne County

#### Tuolumne County General Plan

##### Managed Resources Element

Goal 7A. Promote the stability and productivity of the County's timberlands and timber related industries.

Policy 7.A.3. Encourage well planned timber related uses in commercial timberland areas.

##### Implementation Programs

- 7.A.h. Develop programs that encourage enhanced carbon storage in forests, use of durable wood products, and use of wood biomass for energy, while maintaining healthy forest ecosystems.

##### Fire Protection

Goal 9C. Protect and enhance the quality of life by continuing to provide the highest quality and cost-effective emergency services to the citizens of, and visitors to, Tuolumne County.

Policy 9.C.1. Provide participating first responder medical aid units with the equipment necessary to efficiently and safely provide emergency first aid, along with the training programs necessary for the safe and effective use of the equipment.

Policy 9.C.2. Provide ambulance service within the County which maintains a professional level of service to the public in a cost-efficient manner.

Goal 9E. Provide structural fire protection to persons and property within Tuolumne County consistent with the needs dictated by the level of development and in accordance with current Federal, State, and local fire protection agency regulations and policies.

Policy 9.E.2. Maintain adopted levels of fire service.

Policy 9.E.3 Require new development to be consistent with State and County regulations and policies regarding fire protection.

Goal 9G. Establish and maintain a codified fire protection risk management strategy which requires new development within Tuolumne County to incorporate or supply fire protection infrastructure and improvements necessary so that such development does not exceed the capabilities of the County's fire protection resources.

Policy 9.G.3. Determine the impact proposed development will have on the provision of fire protection services and maintain the established level of service as outlined in the current Tuolumne County Fire Department Service Level Stabilization Plan.

## Tuolumne County Code

### Chapter 15.20 Fire Safety Standards

Chapter 15.20 presents the fire safety standards required by the County. Section 15.20.110 of the Tuolumne County Municipal Code formally adopts the 2022 California Fire Code and the 2022 National Fire Code with local amendments.

### Chapter 8.14 Hazardous Vegetation Management.

Chapter 8.14 of the Tuolumne County Code introduces code requirements for Hazardous Vegetation Management. The purpose of the ordinance is to provide for the removal of hazardous vegetation situated in the unincorporated areas of the county so as to reduce the potential for fire and to promote the safety and welfare of the community. The code describes the responsible parties to remove and abate hazardous vegetation, and enforcement. The project would comply with the following sections.

- A. It shall be the duty of every owner and/or responsible person of any parcel which is located within the unincorporated areas of the County to remove, or abate, all hazardous vegetation which constitutes a fire hazard and which may endanger or damage neighboring property as defined in this ordinance. The following shall be maintained: Thirty (30) feet of Reduced Fuel Zone clearance along that portion of the property line that borders or is adjacent to a habitable or occupied dwelling or building if that dwelling or building is within 100' of the property line
- B. Fuel reduction shall not require the removal of crops, productive vineyards or orchards, or marketable timber; but it may impose mowing or livestock presence on grasslands, or fire-safe management of crops and forests.

## City of Stockton

### City of Stockton General Plan

There are no wildfire goals or policies in the City of Stockton General Plan that are applicable to the proposed project.

## City of Stockton Municipal Code

### Title 15-Chapter 15.12

Chapter 15.12 of Title 15 of the City of Stockton introduces the adoption of the 2022 California Fire Code.

### 3.16.3 Thresholds of Significance

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

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

- Substantially impair an adopted emergency response plan or emergency evacuation plan?
- 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?
- 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?

### 3.16.4 Impact Analysis

#### 3.16.4.1 Methodology

The proposed project would consist of three primary phases: feedstock acquisition, wood pellet production, and transport to market. The impact analyses below evaluate each of these primary phases as related to wildfire.

Wildfire hazards associated with the project are evaluated based on landscape characteristics and the project's ability to ignite or exacerbate wildfire risk. Potential existing hazards are based on review of the project location on CAL FIRE maps to determine its location within FHSZs. As illustrated in Figure 3.16-1 through Figure 3.16-3, the northern parcel of the Lassen Facility is not located in a high FHSZ in the LRA and the southern parcel is located within a high FHSZ within the SRA, the Tuolumne Facility is located within a high FHSZ in the SRA, and the Port of Stockton is located in an area that is Unzoned in the LRA, with little to no wildfire risk (CAL FIRE 2007, 2008a, 2008b, 2024a, 2024b).

#### 3.16.4.2 Project Impacts

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

## Feedstock Acquisition

### Sustainable Forest Management Projects

Feedstock for manufacturing of wood pellets will be wood byproducts sourced from Sustainable Forest Management Projects on California's private, state, tribal, and federal timberlands. GSNR will enter into purchase agreements with Licensed Timber Operators and other supply chain industry participants (Partner Operations) to procure feedstock from qualified Sustainable Forest Management Projects. Feedstock acquisition activities would temporarily add trucks to roads for hauling raw materials and equipment. Any temporary road closures or blockages would be coordinated with the authority having jurisdiction (County, Caltrans, etc.). Given that feedstock acquisition activities would be dispersed throughout the Working Area, which consists of rural, forested areas, and would be temporary, activities associated with feedstock acquisition are not anticipated to result in road closures or the addition of significant truck traffic such that emergency evacuation routes or emergency response capabilities would be affected. As such, feedstock acquisition would not significantly impair an adopted emergency response plan or emergency evacuation plan, and impacts would be **less than significant**. Refer also to the evaluation in Section 3.14, Transportation, regarding emergency access and evacuation.

## Wood Pellet Production

### Lassen Facility

The project would be located in a remote area of the county with agricultural fields, rural residences, and rail lines located in the vicinity. The County's General Plan Safety Element designates both directions of SR 299 as the main evacuation route out of the project area. Local roads feed into SR 299 including Babcock and Kramer Road (Lassen County 2023). SR 299 is located directly north of the Lassen Facility and provides access to the project site. The Lassen County Hazard Mitigation Plan addresses wildfire as one of the most common hazard incidents faced by the County (Lassen County 2019). In the event of a wildfire emergency requiring evacuation and emergency vehicle access, the responsible agency would establish evacuation routes and project occupants would comply with all evacuation orders. Construction of the project would require new access roads and would include a new railway spur to connect to the adjacent BNSF railway line. Construction of the project may involve temporary lane closures on Babcock Road that would be coordinated with the agency with jurisdiction, such that the project would not restrict the movements of emergency vehicles or evacuation. Refer to Section 3.14, Transportation, for a full analysis of traffic-related impacts during the project's construction.

During operation of the project, primary access to the project site would be provided from Adams Ave, Babcock Road and SR-299. Vehicular and truck traffic access into the site would be provided via these two existing roadways from SR-299. All roadwork resulting from project activities, whether located on or off site, would be undertaken in accordance with all applicable local, state, and federal roadway standards and practices. The project's design review will be coordinated with the County to ensure that the existing roads remain at all times compliant with applicable standards for the volume of traffic.

No permanent or temporary road closures that could restrict emergency vehicle movements are anticipated during operation of the Lassen Facility. The Facility would be monitored by staff at all times, and the project site would be equipped with a Knox-Box to allow emergency personnel to access the site in the event of an emergency. As such, access on Babcock and Kramer Road, SR 299, and to the project site would be unobstructed, and operation of the wood pellet processing facility would not impair any emergency access routes.



The Facility workforce would be 60 employees during a 24-hour period. The A shift (28 employees) and B shift (16 employees) would overlap for several hours, creating a peak on-site workforce of 44 employees. As discussed in Section 3.13, Population and Housing of this Environmental Impact Report (EIR), it was determined that the proposed project would not induce a significant permanent population growth in the surrounding areas of the project site as there is not a residential component to the project and employees would likely commute from around the region. As evaluated in Section 3.14, Transportation, project operations, plus existing and anticipated traffic conditions, is not anticipated to result in queueing or safety issues at nearby intersections.

All roadway, intersection, and project access work would be overseen by the applicable lead agency and their qualified traffic engineers. This approach will ensure compliance with all applicable roadway design requirements. In the event of an emergency, emergency vehicles would be able to access the site from SR-299 at Babcock Road, 4<sup>th</sup> Street, along with additional access points at Roosevelt Avenue, Adams Avenue, and Washington Avenue. All work within the street rights-of-way will be designed with adequate width, turning radius, and grade to facilitate access by County's firefighting apparatus, and to provide alternative emergency ingress and egress. The site plan would be subject to plan review by the acting CAL FIRE Ranger, who serves as the County's Fire Warden in accordance with Board Resolution Number 83/84-47, to ensure proper access for fire and emergency response is provided and required fire suppression features are included.

Thus, project operations and resulting truck and vehicle traffic are not anticipated to impair existing roads, emergency response capabilities, or evacuation routes. Further, evacuation of project occupants in the event of a wildfire would not substantially burden existing evacuation routes. Also given that project operations do not involve work that would impede public roadways, it is unlikely that the project would cause significant impacts to evacuation. Therefore, the project would not substantially impair an adopted emergency response plan or emergency evacuation plan, and the project's impacts would be **less than significant**.

### Tuolumne Facility

The project would be located in a remote area of the county with agricultural fields located in the vicinity. The County's General Plan Transportation Element designates both directions of SR 120 and SR 108 as rural arterial roads that could serve as main evacuation route out of the project area (County of Tuolumne 2018). SR 120 and SR 108 pass directly northwest of the project site. La Grange Road feeds into these highways. The Tuolumne County Emergency Operations Plan addresses wildfire as one of the most common hazard incidents faced by the County (County of Tuolumne 2023). In the event of a wildfire emergency requiring evacuation and emergency vehicle access, the Tuolumne County Sheriff would establish evacuation routes and project occupants would comply with all evacuation orders.

Construction of the project would require improvements to the existing on-site roadways for truck access and employee access. A new rail spur connecting to the adjacent Sierra Northern Railway line as well as additional rail siding tracks on site for the storage of full and empty railcars will be added for finished product loadout. During construction, temporary closure of the driveways along La Grange Road may be necessary. The project site has multiple access points to LaGrange, and access to adjoining properties would be maintained.. While work on the road shoulder may be necessary, closure of La Grange Road is not anticipated. Additionally, the project would be required to comply with the Tuolumne County Sheriff's Department guidance relating to emergency response, further reducing the prospect of substantive interruptions.

During project operations, primary vehicular and truck traffic access to the project site would be provided via two existing roadways from La Grange Road. No permanent or temporary road closures that could restrict emergency

vehicle movements are anticipated during operations of the Tuolumne Facility. The Facility would be monitored by staff at all times, and the project site would be equipped with a Knox-Box to allow emergency personnel to access the site in the event of an emergency. As evaluated in Section 3.14, Transportation, the project, plus existing and anticipated traffic conditions, is not expected to result in queuing and/or safety issues at nearby intersections.

The Facility workforce would be up to 51 employees during a 24-hour period. The A shift (25 employees) and B shift (13 employees), would overlap for several hours, creating a peak on-site workforce of 38 employees. As discussed in Section 3.12, Population and Housing of this Environmental Impact Report (EIR), it was determined that the proposed project would not induce a significant permanent population growth in the surrounding areas of the project site as there is not a residential component to the project and employees would likely commute from around the region.

As mentioned above, the project has two main access roadways into the site, and in the event of an emergency, all the driveways would enable vehicles to enter/exit the project site. All work within the street rights-of-way will be designed with adequate width, turning radius, and grade to facilitate access by County's firefighting apparatus, and to provide alternative emergency ingress and egress. The site plan would be subject to plan review by the County's Fire Department to ensure proper access for fire and emergency response is provided and required fire suppression features are included.

Therefore, evacuation of project occupants in the event of a wildfire would not be expected to substantially burden evacuation routes. Also given that project activities do not involve work that would impede public roadways, it is unlikely that the project would cause significant impacts to emergency response or evacuations. Therefore, access on La Grange Road, SR 120 and 108, and to the project site would be unobstructed, and construction and operation of the wood pellet production facility would not substantially impair an adopted emergency response plan or emergency evacuation plan, and the project's impacts would be **less than significant**.

## Transport to Market

### Port of Stockton

The Port of Stockton is not located in a SRA, Very High FHSZ, or a wildfire hazard area. Finished wood pellets would be transported to the Port of Stockton by rail, and would use existing rail lines, with the exception of new rail spur connections within the Port. The Port of Stockton is a fully operational port, and the addition of the GSNR facility would result in a negligible impact on day-to-day port operations, and would not significantly alter emergency access throughout the entirety of the port, the West Complex, and the proposed GSNR facility. The proposed facility would include adequate rail sidings so that additional railcars are kept on site. The addition of 2 to 4 train trips per week would not significantly affect the existing railway crossings at the Port. Therefore, activities associated with transport to market via rail lines to the Port of Stockton would not impact existing evacuation routes. As such, impacts related to transport to market would not interfere with an emergency response plan or evacuation plan in the event of a wildfire, and the project's impacts would be **less than significant**.

### Impact WIL-2

The project would potentially 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.

## Feedstock Acquisition

### Sustainable Forest Management Projects

As mentioned above, the feedstock acquisition of wood pellets will be wood byproducts sourced from Sustainable Forest Management Projects on California's private, state, tribal, and federal timberlands. The acquisition of the wood pellets will follow all land management agreements, follow best management practices, and follow the stewardship agreements between GSFA and USFS, and state and federal laws and regulations. The various activities and techniques used to acquire the wood are described in Section 2.4; all of which have specific criteria and protocols on what and how the wood byproducts would be acquired. Feedstock would generally be sourced from hazardous fuels reduction projects, construction of shaded fuel breaks, removal of forest residuals slated for open-burning, site preparation, fire, insect or disease salvage harvests, commercial timber harvest residuals, pre-commercial thinning harvests, and mill residuals. The intent of feedstock acquisition activities would be to reduce excess fuels within forested areas, reducing overall wildfire risk.

Vegetation treatment is a primary approach to wildfire management, as it reduces available fuels which can reduce the intensity and severity of wildfire, slow fire movement and create favorable conditions for firefighting (Carey and Schuman 2003; Prichard et al. 2010). Fuel reduction has proven successful where it is targeted at protecting specific resources in limited geographic areas, such as in areas of extreme fire danger or in the WUI (Loudermilk et al. 2014). Areas that are treated often exhibit different fire behavior characteristics and reduced fire severity compared to areas that are not treated (Lydersen et al. 2014; Johnson and Kennedy 2019). Reducing fuels through mechanical treatments and prescribed fire have been found to be effective at reducing fire frequency, fire severity, and annual area burned when applied at the landscape scale over an extended period of time (Martinson and Omi 2013; Prichard et al. 2020; Tubbesing et al. 2020). Another study found simulated fuel treatments in the Lake Tahoe basin returned the forest to more historic and fire resilient conditions, reduced wildfire risk and severity, controlled wildfire carbon emissions, and in the long run, resulted in a net carbon gain (Loudermilk et al. 2014).

It has also been found that fuel treatments are most effective when wildfires are driven by typical weather situations where prevailing seasonal conditions of temperature, soil/fuel, and moisture contents are present. In circumstances where extreme weather conditions exist, such as in cases of extremely low humidity and very high winds, fuel treatments are less effective (Brown et al. 2008), particularly when persistently high winds can blow hot embers over long distances. While evidence has not yet definitively concluded that forest fuel treatments lead to a reduction in the overall size of a fire (Davis et al. 2024; Schoennagel et al. 2017), such treatments can aid in protecting public safety and homes and other structures by reducing wildfire intensity and severity in treated areas under normal fire conditions and increasing firefighting effectiveness (Kalies and Yocom Kent 2016). Where treatments have occurred, the pattern of wildfire progression may be limited in some areas to low-intensity underbrush and surface burning, which can create safe conditions for firefighters to successfully suppress fires in areas near homes or other structures, or around areas of high resource value. Fuel treatments also promote faster forest recovery post-fire by resulting in less severe wildfires that cause less damage to soils and leave some live vegetation within burn areas (Davis et al. 2024), increasing seedling regeneration (Tubbesing et al. 2020), protecting resources such as soils, wildlife, riparian function, and wetlands (Kim et al. 2013), and reducing drought related tree mortality (Restaino et al. 2019).

One published literature review found that certain treatments, such as hand or mechanical thinning followed by prescribed fire, or prescribed fire alone, are very effective at reducing wildfire severity, and that related ecological impacts are often neutral to positive (Winford et al. 2015). Another published literature review indicates that fuel treatments reduce fire severity, crown and bole scorch, and tree mortality compared to untreated areas. This finding

is most applicable to the combination of thinning (manual and mechanical treatments) and prescribed burn treatments. Increased treatment size and intensity (e.g., number of trees removed) can increase the effectiveness of the treatments. Firefighting effectiveness was also reportedly increased by treatments, due to increased visibility in treated areas, decreased heat and smoke of wildfire, increased penetration of retardant to surface fuels, safe access to the fire, and the ability to quickly suppress spot fires in treated areas (Kalies and Yocom Kent 2016).

However, because operations would occur in wildfire hazard areas and activities could result in accidental ignitions within the feedstock area, impacts would be **potentially significant**. Best practices and standard requirements for fire risk reduction during feedstock acquisition projects would be implemented per **MM-WIL-1**, such as requiring all mechanical equipment and hand tools to have federal- or state-approved spark arrestors, avoiding or stopping work during red flag warnings, requiring tree cutting crews to carry one fire extinguisher per chainsaw and each vehicle to be equipped with one long-handled shovel and one axe or Pulaski (PRC Section 4428), and prohibiting smoking in vegetated areas and require that smoking is only permitted in designated smoking areas barren or cleared to mineral soil at least 3 feet in diameter (PRC Section 4423.4).

## Wood Pellet Production

### Lassen Facility

According to CAL FIRE's FHSZ mapping, the portion of the site south of Babcock Road, which will be dedicated to feedstock processing and storage activities, and the areas immediately adjacent to the west of the site, are within the State Responsibility Area and mapped as being in a High Fire Hazard Severity Zone (CAL FIRE 2008, 2024a). However, very high FHSZ is located within approximately one mile. The project site is in a remote, largely undeveloped area. The surrounding area includes mainly agricultural uses. Project occupants during operation would include up to 28 workers on site at a time. Construction crews would also be on site temporarily during project construction.

As described in Section 3.6 Geology and Soils, the project site is relatively flat with slopes of 0 – 2%. Given the project construction would not involve altering any slopes or creating any new wind patterns, the project would not exacerbate wildfire spread due to slopes. Land use in the project area primarily consists of agriculture and rural development. The project site is composed primarily of grasslands, seasonal wetlands, and agricultural fields. Fire history depicts that wildfires have occurred in the project vicinity (Figure 3.16-4), however they have occurred approximately 2 miles or more from the project site, within the surrounding steeper terrain and open space areas. Given the flat terrain and surrounding land uses, it is not anticipated that the project would exacerbate wildfire conditions in the event of a wildfire occurring offsite.

During construction, the project would introduce new potential sources of ignition to the project site, including the use of heavy machinery and the potential for sparks during welding activities or other hot work. However, best practices would be implemented to avoid accidental ignitions, and the project would be required to comply with local and state requirements for fire safety under the oversight of Big Valley Fire Protection District (BVFD) and CAL FIRE. However, the potential for a wildfire to ignite on site during construction activities would be **potentially significant**. As outlined in **MM WIL-2**, construction fire prevention practices would be implemented at the start of and throughout all phases of construction, and combustible materials would not be brought on site until site improvements (e.g., utilities, access roads, fire hydrants, vegetation management) have been implemented and approved by BVFD and CAL FIRE. The pre-construction requirements outlined in **MM WIL-2** would reduce the risk of wildfire ignition and spread on the project site during construction activities. Vegetation management would also reduce the risk of wildfire spreading from within the active construction areas to offsite fuel beds. Provided site

improvements and vegetation management requirements are appropriately implemented and approved by BVFD and CAL FIRE, construction activities are not anticipated to exacerbate wildfire risk such that project occupants would be exposed to the uncontrolled spread of a wildfire or pollutant concentrations from a wildfire.

During O&M, the project would introduce new potential ignition sources to the project site, including vehicles, on-site buildings, machinery and processing equipment, storage of raw materials, drying of raw materials, processing of dried materials, and storage of finished pellets for loadout.

Raw materials would be stored in a designated woodyard. Materials would go through an industrial dryer to reach desired moisture content, and then conveyed to the pellet mill for processing. Finished pellets would be stored in three 2,500-metric-ton silos for loadout.

As discussed in Section 3.8, Hazards and Hazardous Materials, improper handling or storage of raw materials or processed wood pellets could ignite and result in a fire that could spread to offsite fuel beds. Absent proper controls, the impact of a pellet fire would be **potentially significant**. As discussed in Chapter 2, Project Description, and Section 3.8, Hazards and Hazardous Materials, a Fire and Explosion Protection Plan has been prepared for the facility and comprehensive fire and explosion protection features have been incorporated into project design plans, including a fire suppression system and ancillary infrastructure to support the facilities' fire water demands. Regular preventative maintenance to reduce fire risk during processing and storage of materials would be implemented, including belt speed sensors, motor current sensors, multiple levels of automated fire sprinkler systems, spark detectors with chemical suppression, and housekeeping designed to mitigate fire risk. Additionally, all dry process equipment is outfitted with bearing temperature sensors. The pellet storage silos utilize temperature sensors throughout the storage volume that trigger aeration fans to cool any hotspots that may occur. Additionally, keeping storage time in silos as short as possible would further reduce the likelihood of hotspots occurring. Additionally, a back-up fire pump, rated at 150 horsepower (hp) and a fire water tank that can provide flow for at least 2 hours would be installed in case the site loses power in order to provide a timely response to a fire incident. Further information regarding fire safety and preventative measures is detailed in Section 3.8, Hazards and Hazardous Materials. To ensure implementation of fire safety and prevention measures, a Fire Prevention Plan shall be required as mitigation measure (**MM-HAZ-2**).

### Tuolumne Facility

As shown in Figure 3.16-2, the Tuolumne Facility is located in an area designated as a high FHSZ within the SRA and scattered areas designated as Very High FHSZ are located approximately 0.17-mile west and northwest of the Tuolumne Facility site. The project site is in a largely undeveloped area, with surrounding uses primarily consisting of agricultural uses. Project occupants during operation would include up to 45 workers on site at a time. As described in Section 3.6 Geology and Soils, the project site has relatively flat slopes throughout the site. Given the project construction would not involve altering any slopes or creating any new wind patterns, the project would not exacerbate wildfire spread or risk related to slopes.

Construction, the project would introduce new potential sources of ignition to the project site, similar to the Lassen Facility, as discussed above. However, best practices would be implemented to avoid accidental ignitions, and the project would be required to comply with local and state requirements for fire safety. Further, the project would be required to comply with local and state requirements for fire safety under the oversight of Tuolumne County Fire Department (TCFD) and CAL FIRE. However, the potential for a wildfire to ignite on site during construction activities would be **potentially significant**. As discussed above, **MM-WIL-2** establishes construction fire prevention practices would be implemented at the start of and throughout all phases of construction, and combustible materials would

not be brought on site until site improvements (e.g., utilities, access roads, fire hydrants, fuel modification zones) have been implemented and approved by TCFD and CAL FIRE. These pre-construction requirements would reduce the risk of wildfire ignition and spread on the project site during construction activities. With implementation of and **MM-WIL-2** and approval by TCFD and CAL FIRE, construction activities are not anticipated to exacerbate wildfire risk such that project occupants would be exposed to the uncontrolled spread of a wildfire or pollutant concentrations from a wildfire.

Also similar to the Lassen Facility, the project would introduce new potential ignition sources to the project site during O&M, including vehicles, on-site buildings, machinery and processing equipment, storage of raw materials to be processed, drying of raw materials, processing of dried materials, and storage of finished pellets for loadout.

Raw materials would be stored in a designated woodyard. Materials would be dried to approximately 10% moisture content in the drying area, and then conveyed to the pellet mill for processing. Finished pellets would be stored in two 2,500-metric-ton silos for loadout.

As previously mentioned, improper handling or storage of raw materials or processed wood pellets could ignite and result in a fire that could spread to offsite fuel beds. Absent proper controls, the impact of a pellet fire would be **potentially significant**. As discussed in Chapter 2, Project Description, and Section 3.8, Hazards and Hazardous Materials, a Fire and Explosion Protection Plan has been prepared for the facility. As with the Lassen Facility, comprehensive fire and explosion protection features have been incorporated into project design plans, including a fire suppression system and ancillary infrastructure to support the facilities' fire water demands. Preventative maintenance at the Tuolumne Facility would reduce fire risk during processing and storage of materials, including belt speed sensors, motor current sensors, and spark detectors with chemical suppression. Additionally, all dry process equipment is outfitted with bearing temperature sensors. The pellet storage silos utilize temperature sensors throughout the storage volume that trigger aeration fans to cool any hotspots that may occur. Additionally, keeping storage time in silos as short as possible would further reduce the likelihood of hotspots occurring. Additionally, a back-up fire pump, rated at 150 horsepower (hp) and a fire water tank that can provide flow for at least two hours would be installed in case the site loses power in order to provide a timely response to a fire incident. Further information regarding fire safety and preventative measures is detailed in Section 3.8, Hazards and Hazardous Materials. To ensure implementation of fire safety and prevention measures, a Fire Prevention Plan is required as mitigation measure (**MM-HAZ-2**).

## Transport to Market

### Port of Stockton

The project site is within an existing deep-water port, the Port of Stockton. The surrounding area includes mainly industrial uses. Finished pellets would be transported to the Port of Stockton via rail, and finished pellets would be conveyed to two storage domes. As previously discussed, the project site is relatively flat, with elevations ranging from mean sea level to approximately 15 feet above mean sea level. Further, the project is not located in a wildfire hazard area. The majority of the land surrounding the project site is urban, with patches of dense vegetation dominated by rural grassland species.

As previously discussed, storage of pellets could result in self-heating and the potential for combustion. However, as discussed in Section 3.8, Hazards and Hazardous Materials, the project would include multiple levels of fire suppression systems to minimize the potential for fire or combustion. The two storage domes will utilize temperature sensors, moisture sensors, and multi-gas detectors to monitor the pellet storage piles. Reducing the

time in storage lowers the risk of fire considerably. In the event any of the dome instrumentation triggers there will be a nitrogen deluge system installed that will flood the domes with nitrogen, displacing the oxygen supply. Further explanation of this system can be found in Section 2.7.

Given that the Port of Stockton is not located in a fire hazard area, and the project construction would not involve altering any slopes or creating any new wind patterns that would affect the wildfire environment, the project would not exacerbate wildfire risk or expose project occupants to pollutants from a wildfire. Additionally, with the implementation of proper practices to reduce fire risk, the project would not exacerbate fire risk and the project would result in **no impact**.

**Impact WIL-3**            The project would potentially 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.

## Feedstock Acquisition

### Sustainable Forest Management Projects

#### Utilities

Feedstock acquisition activities would not require the installation of permanent structures or utilities, nor connection to existing utility systems. Water would be provided by truck for dust suppression and fire safety during activities. As such, feedstock acquisition activities would not require the installation or maintenance of associated water sources, power lines or other utilities.

#### Roads

Feedstock acquisition would generally involve the use of existing roads, or previous roads left from previous forest management activities. However, certain feedstock acquisition activities may require road maintenance or up to one mile of low standard road construction per project. In addition, existing unpaved roads would be improved and maintained as part of feedstock acquisition. This would likely occur within or adjacent wildfire hazard areas. Construction or maintenance of roads would be required to comply with industry standard best practices to reduce fire risk. Nonetheless, the risk of accidental ignitions during road maintenance or construction is **potentially significant**. As discussed above, **MM-WIL-2** establishes construction fire prevention practices which would be implemented at the start of and throughout all phases of construction, including road maintenance or road construction.

#### Fuel Reduction Activities

As discussed in Section 2.4, feedstock acquisition would include hazardous fuels reduction projects, construction of shaded fuel breaks, removal of slash piles slated for open-burning, site preparation, fire, insect or disease salvage harvests, commercial timber harvest residuals, pre-commercial thinning harvests, Sites for these fuels reduction activities would be identified using the criteria and process described in Section 2.4 and in coordination with the appropriate land management agencies or land owners. Fuel breaks or hazardous fuels reduction projects would result in the removal of ladder fuels and creation of spacing between the trees and would help reduce the risk of fire as well as provide access for emergency personnel during a potential emergency. However, because

operations would occur in wildfire hazard areas and activities could result in accidental ignitions within the feedstock area, impacts would be **potentially significant**.

Per **MM-WIL-1**, best practices and standard requirements for fire risk reduction would be required during feedstock acquisition activities, such as requiring all mechanical equipment and hand tools to have federal- or state-approved spark arrestors, avoiding or stopping work during red flag warnings, requiring tree cutting crews to carry one fire extinguisher per chainsaw and each vehicle to be equipped with one long-handled shovel and one axe or Pulaski (PRC Section 4428), and prohibiting smoking in vegetated areas and require that smoking is only permitted in designated smoking areas barren or cleared to mineral soil at least 3 feet in diameter (PRC Section 4423.4).

## Wood Pellet Production

### Lassen Facility

The Lassen Facility would construct a new wood pellet processing facility, including a woodyard, green processing area, drying area, pellet mill, project storage, and loadout area as well as auxiliary structures and utility systems required for plant operations (e.g., fire suppression, water, compressed air).

### Utilities

As described in Section 3.15 Utilities and Service systems, the project would include the addition of utilities to support the project including wastewater, stormwater systems, a septic system, and upgrades to the existing electrical infrastructure to support operations of the project. Water would be provided by the existing groundwater well. The project may also require stringing of overhead electrical utility lines, which would occur along existing utility lines adjacent existing roads. The construction and maintenance of the updated utilities would be required to be constructed in conformance with the California Building and Fire Codes. Because activities associated with installation and maintenance of utilities could involve the use of heavy machinery, vehicles, trenching, hot work etc. these activities would introduce new potential ignition sources and impacts would be **potentially significant**. As outlined in **MM-WIL-2**, best practices and requirements for fire safety during construction would be implemented prior to and throughout construction activities.

### Roads

The facility would also build new internal roads, a separate accessway for haul trucks and employee access from Babcock Road, and a new railway spur, as well as off-site road improvements. Construction of access roads and rail spurs would be required to comply with the California Building and Fire Codes, including best practices for fire safety during construction activities to avoid accidental ignitions, and the project would be required to comply with local and state requirements for fire safety. Further, the project would be subject to additional requirements, as required by BVFD and outlined in **MM WIL-2**, such as limiting or ceasing construction work during high-wind weather events. Nonetheless, the risk of accidental ignitions during road maintenance or construction would be **potentially significant**. As outlined in **MM WIL-2**, construction fire prevention practices would be implemented at the start of and throughout all phases of construction, and combustible materials would not be brought on site until site improvements (e.g., utilities, access roads, fire hydrants, fuel modification zones) have been implemented and approved by BVFD and CAL FIRE.



## Tuolumne Facility

### Utilities

Similar to the Lassen Facility, the Tuolumne Facility would include the addition of utilities to support the project, including a stormwater system, upgrades to the septic system, and upgrades to the existing electrical infrastructure to support operations of the project (see Section 3.15 Utilities). These updated utilities and added facilities would be required to be constructed in conformance with the California Building and Fire Codes, including best practices for fire safety during construction activities to avoid accidental ignitions, and the project would be required to comply with local and state requirements for fire safety. However, activities associated with installation and maintenance of utilities would involve the use of heavy machinery, vehicles, trenching, hot work etc., and these activities would introduce new potential ignition sources and impacts would be **potentially significant**. As outlined in **MM-WIL-2** best practices and requirements for fire safety during construction would be implemented prior to and throughout construction activities.

### Roads

The facility would also build new internal roads, access roads including a new truck access from La Grange Road, a new railway spur, as well as offsite road improvements. Construction of access roads, road improvements, and rail spurs would be required to comply with the California Building and Fire Codes, including best practices for fire safety during construction activities to avoid accidental ignitions, and the project would be required to comply with local and state requirements for fire safety. Further, the project would be subject to additional requirements, as required by TCFD and CAL FIRE, such as limiting or ceasing construction work during high-wind weather events. Nonetheless, the risk of accidental ignitions during road maintenance or construction is **potentially significant**.

**MM-WIL-2** requires construction fire prevention practices to be implemented at the start of and throughout all phases of construction, and combustible materials would not be brought on site until site improvements (e.g., utilities, access roads, fire hydrants, fuel modification zones) have been implemented and approved by TCFD and CAL FIRE.

Temporary or ongoing impacts associated with installation and maintenance of such utilities have been analyzed and mitigated through this EIR, and no further temporary or ongoing impacts to the environment related to wildfire would occur.

## Transport to Market

### Port of Stockton

As described in 3.15 Utilities and Service systems, the project would include the addition of utilities to support the project including a stormwater system, sewer system, and electrical infrastructure. These updated utilities and added facilities would be required to be constructed in conformance with the California Building and Fire Codes. The Port of Stockton is not located in a fire hazard area, and as such, installation and maintenance of associated infrastructure would not exacerbate wildfire risk. The project would result in **no impact**.

### Impact WIL-4

The Project would potentially 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.

## Feedstock Acquisition

### Sustainable Forest Management Projects

Feedstock acquisition would involve Sustainable Forest Management Projects on California's private, state, tribal, and federal timberlands, including hazardous fuels reduction projects, construction of shaded fuel breaks, removal of slash piles slated for open-burning, site preparation, fire, insect or disease salvage harvests, commercial timber harvest residuals, pre-commercial thinning harvests, and mill residuals. Vegetation plays a vital role in maintaining existing drainage patterns and the stability of soils. Plant roots stabilize the soil, and leaves, stems, and branches intercept and slow water, allowing it to more effectively percolate into the soil. Removal of surface vegetation reduces the ability of the soil surface to absorb rainwater, and can allow for increased runoff that may include large amounts of debris and mud flows. If hydrophobic conditions exist post-fire, the rate of surface water runoff is increased since water percolation into the soil is reduced. The potential for surface runoff and debris flows therefore increases significantly for areas recently burned by wildfires (Moench and Fusaro 2012).

The feedstock area is topographically diverse, with slope gradients ranging from moderate to steep. Slope failures, mudflows, and landslides are common in areas where steep hillsides and embankments are present, and such conditions would be exacerbated where vegetative cover has been removed. Given the nature of the project, as discussed in Section 3.6 Geology and Soils and Section 3.9 Hydrology and Water Quality, feedstock acquisition activities, such as vegetation thinning, road construction/maintenance, vehicles, equipment and crews working in forested areas, could result in soil erosion, downslope or downstream flooding or landslides, changes to drainage patterns and slope stabilization. Caution must be used to avoid causing erosion, ground and slope instability, or water runoff in accordance with the Project Design Features described in Section 2.4 and all applicable federal and state regulations. As such, project feedstock acquisition would result in **potentially significant** erosion related impacts. Section 3.6 Geology and Soils and Section 3.9 Hydrology and Water Quality identify mitigation measures and project development features (PDFs) to reduce the likelihood for erosion, landslide, or downslope or downstream flooding related impacts (**MM-HYD-6, PDF-GEO-2, PDF-GEO-3, PDF-GEO-4**).

### Wood Pellet Production

#### Lassen Facility

The Lassen Facility is located on relatively flat terrain and no recent wildfires have burned adjacent to the site, reducing the likelihood for post-fire slope instability. Compliance with existing regulations would ensure that construction and O&M of the Lassen Facility would not result in substantial erosion, landslide, or downslope or downstream flooding related impacts as a result of runoff, post-fire slope instability, or drainage changes. As a result, the project impacts would be **less than significant**.

#### Tuolumne Facility

The Tuolumne Facility is located on relatively flat terrain and no recent wildfires have burned adjacent to the site, reducing the likelihood for post-fire slope instability. Erosion related impacts would be the same as that described above for the Lassen Facility. As a result, the project would not result in substantial erosion, landslide, or downslope or downstream flooding related impacts as a result of runoff, post-fire slope instability, or drainage changes. Impacts would be **less than significant**.

## Transport to Market

### Port of Stockton

The Port of Stockton is located on relatively flat terrain and no recent wildfires have burned adjacent to the site, nor is the site located in a wildfire hazard area, reducing the likelihood for post-fire slope instability. Erosion related impacts would be the same as that described above for the Lassen Facility. As a result, the project would not result in substantial erosion, landslide, or downslope or downstream flooding related impacts as a result of runoff, post-fire slope instability, or drainage changes. The project would result in **no impact**.

### 3.16.4.3 Cumulative Impacts

The project combined with other past, present, and reasonably foreseeable cumulative projects would not substantially impair an adopted emergency response plan or emergency evacuation plan.

## Feedstock Acquisition

### Sustainable Forest Management Projects

The feedstock acquisition areas would primarily be located in dispersed timberland locations that are generally not densely populated areas and the acquisition efforts would be relatively short-term efforts at any one location. As a result, feedstock acquisition is unlikely to impair or physically interfere with emergency response or evacuation. As a result, the feedstock acquisition activities would not combine with cumulative projects to become cumulatively considerable and the impact would be **less than significant**.

## Wood Pellet Production

### Lassen Facility

Lassen County updates and implements a Hazard Mitigation Plan in accordance with the Disaster Relief Act and provides the coordination, conjunction and collaboration with all County departments to maximize the County's potential to prevent, prepare for, respond to and recover from emergency response and evacuation situations. The Hazard Mitigation Plan provides specific courses of action that jurisdictions intend to follow to reduce vulnerability and exposure to future hazard events. Hazard mitigation strategies help to eliminate losses by limiting new exposures in identified hazard areas, diverting a hazard by reducing its impact, and developing an awareness of hazard area locations to plan responsibly for future development.

The project, in conjunction with other cumulative projects would be constructed to current design standards and building codes which include egress and ingress requirements and would not impair or interfere with the Hazard Mitigation Plan or the County's ability to prevent, prepare or respond to and recover from the identified hazards because existing codes are designed to minimize hazards and protect public health and safety. Therefore, the project would combine with cumulative projects and the impact would be **less than significant**.

### Tuolumne Facility

As above, Tuolumne County also implements a Hazard Mitigation Plan. As with the Lassen Facility, the Tuolumne facility as well as other cumulative projects would adhere to current building code requirements related to emergency ingress and egress and would not impair or interfere with the County's Hazard Mitigation Plan. As noted

above, the proposed project would not impair an emergency response or evacuation plan. The cumulative impact would be **less than significant**.

## Transport to Market

### Port of Stockton

The Port of Stockton site is already developed and located on an island adjacent to the San Joaquin River such that it is not part of any regional evacuation routes. There are two roads that all egress off the island and the proposed project would alter the existing road network. Therefore, the proposed project would not combine with other cumulative projects to become cumulatively considerable. The impact would **less than significant**.

The project combined with other past, present, and reasonably foreseeable cumulative projects would not 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.

### Feedstock Acquisition

## Feedstock Acquisition

### Sustainable Forest Management Projects

The geographic scope for the wildfire cumulative impact analysis associated with Sustainable Forest Management projects is the feedstock acquisition area and immediately adjacent areas because impacts related to wildfire (i.e., uncontrolled spread of wildfire or post-fire flooding or landslides) are location specific and only projects within or immediately adjacent to feedstock areas could combine to result in cumulative wildfire impacts. As discussed in Section 3.0, there are several similar past, present, and reasonably foreseeable projects that would reduce vegetation within forest and timberlands. These projects are likely to use combustion engines within wildlands, which have the potential to create sparks and subsequent fire ignitions. As such, cumulative activities could result in temporary risks associated with fire from prescribed burning, as well as from the use of vehicles and heavy machinery in wildfire hazard areas. However, best management practices to reduce wildfire-related risks would be implemented with the project (as set forth in **PDFs GEO-1, GEO-2, GEO-3, HAZ-1, HAZ-2, HAZ-3, and HAZ-4** in Section 2.4) and **MM-WIL-1**. Cumulative forest thinning or vegetation management projects would be subject to similar review and requirements per the applicable federal and state regulatory requirements. Further, vegetation reduction activities would consist of strategic removal of vegetation and the overall objective of the project and cumulative projects would be to reduce excess fuel loads in forests and timberland to promote forest resiliency and reduce vulnerability to catastrophic wildfire. Therefore, to the extent the cumulative activities reduce wildfire risk, implementation of the project, in combination with cumulative projects, would have a beneficial effect related to wildfire over the long-term and would not exacerbate fire risk and would not be cumulatively considerable.

## Wood Pellet Production

### Lassen Facility

A portion of the Lassen Facility is located in a high FHSZ, near Very High FHSZ areas. There are no cumulative projects identified relative to the proposed Lassen Facility. The project would implement fire prevention and safety protocols (**MM-WIL-2** and **PDF-HAZ-1** through **PDF-HAZ-4**) to reduce the risk of exacerbating wildfire risks. Further, any future projects would also be subject to applicable fire code requirements, including fire prevention and fire

protection such that fire risks are minimized. Therefore, considering the adherence to all fire protection and prevention requirements, the potential for the project to combine with cumulative projects to exacerbate wildfire risk would not be cumulatively considerable.

### Tuolumne Facility

The Tuolumne Facility is located in a High FHSZ in the SRA. The project would implement fire prevention and safety protocols (**MM-WIL-2** and **PDF-HAZ-1** through **PDF-HAZ-4**) to reduce the risk of exacerbating wildfire risks. The project and cumulative projects would be constructed in accordance with applicable fire protection and prevention measures. As a result, the potential impact would not be cumulatively considerable.

### Transport to Market

#### Port of Stockton

The Port of Stockton is not located in a wildfire hazard risk area and is in a developed industrial area. As such, it would not combine with other cumulative projects to exacerbate wildfire risk. Impacts would not be cumulatively considerable.

The project combined with other past, present, and reasonably foreseeable cumulative projects would not 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.

### Feedstock Acquisition

#### Sustainable Forest Management Projects

Cumulative activities could result in temporary risk of increased ignition sources associated with feedstock acquisition and other vegetation reduction activities in cumulative projects, including the construction or maintenance of fuel breaks, roads, or other associated infrastructure. However, fire prevention practices would be implemented in the project (**MM-WIL-1** and **MM-WIL-2**) and cumulative projects would be subject to similar requirements. Further, vegetation reduction activities would consist of strategic removal of vegetation and the overall objective of the project and cumulative projects would be to reduce excess fuel loads in forests and timberland to promote forest resiliency and reduce vulnerability to catastrophic wildfire. Therefore, to the extent the cumulative activities reduce wildfire risk, implementation of the project, in combination with cumulative projects, would have a beneficial effect related to wildfire over the long-term and would not exacerbate fire risk and would not be cumulatively considerable.

### Wood Pellet Production

#### Lassen Facility

As discussed above, there are no cumulative projects identified relative to the proposed Lassen Facility. The project would implement fire prevention and safety protocols (**MM-WIL-2**) to reduce the risk of exacerbating wildfire risks. With adherence to all fire protection and prevention requirements, the potential for the project to combine with cumulative projects to exacerbate wildfire risk would not be cumulatively considerable.

## Tuolumne Facility

As discussed above, the project would implement fire prevention and safety protocols (**MM-WIL-2**) during the installation and maintenance of associated infrastructure to reduce the risk of exacerbating wildfire risks. Cumulative projects would be subject to similar requirements. The project and cumulative projects would be constructed in accordance with applicable fire protection and prevention measures. As a result, the potential impact would not be cumulatively considerable.

## Transport to Market

### Port of Stockton

The Port of Stockton is not located in a wildfire hazard risk area and is in a developed industrial area. As such, it would not combine with other cumulative projects to exacerbate wildfire risk. Impacts would not be cumulatively considerable.

The project combined with other past, present, and reasonably foreseeable cumulative projects 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.

## Feedstock Acquisition

### Sustainable Forest Management Projects

The project would implement PDFs to reduce the likelihood for erosion, landslide, or downslope or downstream flooding related impacts (**PDF-GEO-2, PDF-GEO-3, PDF-GEO-4**) during feedstock acquisition activities. Cumulative projects would be subject to similar erosion prevention requirements. Therefore, with implementation of best practices to minimize soil erosion and runoff, impacts to slope instability would not be cumulatively considerable.

## Wood Pellet Production

### Lassen Facility

As discussed above, there are no cumulative projects identified relative to the proposed Lassen Facility. The Lassen Facility is located on relatively flat terrain, and compliance with existing regulations would ensure that the project would not result in substantial erosion, landslide, or downslope or downstream flooding related impacts as a result of runoff, post-fire slope instability, or drainage changes. As a result, the project impacts would not be cumulatively considerable.

### Tuolumne Facility

The Tuolumne Facility is located on relatively flat terrain and no recent wildfires have burned adjacent to the site, reducing the likelihood for post-fire slope instability. Erosion related impacts would be the same as that described above for the Lassen Facility, and cumulative projects would be subject to erosion control measures. As a result, the project would not result in cumulatively considerable impacts related to erosion, landslide, or downslope or downstream flooding as a result of runoff, post-fire slope instability, or drainage changes.

## Transport to Market

### Port of Stockton

The Port of Stockton is not located in a wildfire hazard risk area and is in a developed industrial area. As such, it would not combine with other cumulative projects to exacerbate wildfire risk or slope instability issues. Impacts would not be cumulatively considerable.

## 3.16.4.4 Mitigation Measures

### Feedstock Acquisition

#### Sustainable Forest Management Projects

MM-WIL-1 Feedstock Acquisition Fire Prevention Plan. Best practices and standard requirements for fire risk reduction shall be required during feedstock acquisition activities. Prior to the start of feedstock acquisition activities (e.g., prior to the use of vehicles or mechanical equipment on site), a Fire Prevention Plan shall be prepared in consultation with and for review and approval by the U.S. Forest Service, California Department of Forestry and Fire Protection (CAL FIRE), or the fire agency having jurisdiction (FAHJ). The Fire Prevention Plan shall include, but would not be limited to, the following specific measures to be implemented during feedstock acquisition activities:

- Responsibilities of the project applicant, its contractor(s), and fire agencies with respect to fire prevention and inspection of work areas;
- Designation of a Site Safety Officer responsible for overseeing the Fire Prevention Plan implementation;
- Basic fire prevention training of employees/contractors upon employment and prior to beginning work, and documentation of the training. Basic fire prevention training shall include, but would not be limited to: fire prevention, proper response and notification, initial attack firefighting (e.g., the use of fire extinguishers and hand tools), and fire reporting;
- Emergency communication, response, and reporting procedures. All fires shall be reported to the FAHJ;
- Procedures for minimizing potential ignition, including, but not limited to: vegetation clearing, parking requirements/restrictions, idling restrictions, smoking restrictions, storage of combustible or flammable materials restrictions, proper use of gas-powered equipment, use of spark arresters;
- Identification of fire suppression equipment to be maintained in work areas and staging areas (e.g., portable fire extinguishers, water tender, shovels, Pulaski). The fire suppression equipment appropriate for the project shall be determined based on the project characteristics, but at minimum would include: one fire extinguisher per chainsaw and each vehicle shall be equipped with one long-handled shovel and one axe or Pulaski (PRC Section 4428);
- Identification of evacuation routes and procedures;
- Provisions for fire/emergency services access if roadway blockage or temporary closures occur;

- Designated worker parking and staging areas cleared of flammable vegetation; no parking or feedstock activities in non-designated areas;
- Prohibition of smoking and open fires at the project site. Prohibit smoking in vegetated areas and require that smoking is only permitted in designated smoking areas barren or cleared to mineral soil at least 3 feet in diameter (PRC Section 4423.4);
- Assurances that all internal-combustion equipment are equipped with appropriate spark arresters and that fire extinguishers are immediately available and maintained in readiness for use at all times;
- Presence of a designated fire watch personnel with appropriate firefighting equipment available at the project site at all times;
- Curtailment of all feedstock acquisition activities in the event of a fire or when fuel and weather conditions get into the “very high” and “extreme” ranges (Red Flag Warning), as determined by the National Weather Service, with specific project-related activities to be allowed during very high or extreme weather conditions at the discretion of the FAHJ;
- Information contained in the Fire Prevention Plan and location of fire-suppression materials and equipment to be included as part of the employee environmental training.

## Wood Pellet Production

### Lassen Facility

MM-WIL-2 Construction Fire Prevention Plan. GSNR shall develop a Construction Fire Prevention Plan for review and approval by the U.S. Forest Service, California Department of Forestry and Fire Protection (CAL FIRE), or the fire agency having jurisdiction (FAHJ) prior to commencement of construction activities (prior to vehicles or equipment being brought on site). At minimum, the plan will require all of the following:

- Procedures for minimizing potential ignition, including but not limited to:
  - Vegetation clearing
  - Parking requirements
  - Smoking restrictions
  - Hot work restrictions;
- **Red Flag Warning restrictions.** During Red Flag Warning events, as issued daily by the National Weather Service in State Responsibility Areas (SRAs) and Local Responsibility Areas (LRAs), and when the Forest Service Project Activity Level (PAL) is “E” on National Forest lands (as appropriate), all non-essential, non-emergency construction and maintenance activities shall cease or be required to operate under a Hot Work Procedure. The Hot Work Procedure will be in compliance with the applicable sections in NFPA 51-B “Fire prevention during welding, cutting, or other hot work” and CFC Chapter 26 “Welding and Other Hot Work”;
- Fire coordinator role and responsibility;
- Fire suppression equipment on site at all times work is occurring;
- Emergency response and reporting procedures;
- Emergency contact information;



- Worker education materials; kick-off and tailgate meeting schedules;
- Other information as provided by the FAHJ (as appropriate for each project).

MM-HAZ-2 Fire Prevention Plan. GSNR shall prepare a Site Specific Fire Prevention Plan for each production and storage facility Plan (Lassen Facility, Tuolumne Facility, and Port of Stockton). Development of each Site Specific Fire Prevention Plan shall be consistent with Brown, et al., 2022, *Application of Process Hazard Analysis and Inherently Safer Design in Wood Pellet Production*, American Chemical Society ACS Omega 2022, 7, 47720–47733, and each Plan shall incorporate the following Inherently Safer Design features where applicable, at a minimum:

- Maintenance and housekeeping measures to reduce the risk of “hot spots” and potential fire risk during the production and movement of pellets.
- Identification of early detection measures, including belt speed and motor sensors, spark detectors, temperature sensors.
- Protocols to minimize the residence time of finished pellets in storage silos.
- On-site fire suppression facilities, including water storage and pumping.
- Require that pellet storage silos will be equipped with temperature monitoring systems to detect hot spots.
- Require that each pellet storage silo will also be equipped with an aeration system that will activate when elevated temperatures are detected and blow ambient air through the silo for cooling.
- Require use of an enclosed motors instead of a non-enclosed motors to ensure dust is kept out to prevent fire spots.
- Require multiple dust collectors with explosion panels will be installed throughout the process in order to reduce fire and explosion hazard associated with dry fiber handling generating dust.
- Ensure that all ductwork is designed to have a minimal number of bends to the extent feasible.

The pellet production facilities shall include the following additional measures:

- Require that magnets are located throughout the process to remove ferrous objects from the feedstock and product streams to the extent feasible.
- Ensure quick material turnaround to minimize the risk of a deep-seated fire caused by organic material decomposition.
- Ensure separation of finished product silo storage and railcar from rest of the plant.
- Require all of the following equipment protection systems/sprinkler systems:
  - The Fire Pump Building will be protected with a wet sprinkler system.
  - The Bark Hog Tower will be protected with a dry pipe sprinkler system.
  - The Green Hammer Mill Tower will be protected with a dry pipe sprinkler system.
  - The Dry Hammer Mill Structure will be protected with a dry pipe sprinkler system.
  - The Pelletizer Building will be protected with a wet sprinkler system.
- Require that each baghouse at rail loadout will be provided with fire water connections and spray nozzles.

- Require the inclusion of a Rail Loadout Dust Control System
- Require a Central Dust Control system in the balance of the production facilities.
- Require that well water be treated as necessary to minimize dissolved material in water to reduce scaling and clogging of water deluge systems/plugged nozzle or lines with water scale/hardness.

Each plan shall be reviewed and approved by the Fire Marshall with authority over each site (Lassen County, Tuolumne County, and the Port of Stockton) and comply with all applicable current standards and codes set by the National Fire Protection Agency and the International Building Code as well as any additional requirements deemed necessary by the applicable local fire authority.

PDF-HAZ-1 through PDF-HAZ-4 shall also be implemented to reduce potentially significant impacts to less than significant levels.

#### Tuolumne Facility

Mitigation Measures **MM-WIL-2** and **MM-HAZ-2**, and **PDF-HAZ-1** through **PDF-HAZ-4** shall be implemented to reduce potentially significant impacts to less than significant levels.

#### Transport to Market

##### Port of Stockton

No mitigation measures are required as impacts would be less than significant.

### 3.16.4.5 Significance After Mitigation

With implementation of **MM-WIL-1**, **MM-WIL-2**, and **MM-HAZ-2**, Impact WIL-2 would be reduced to **less than significant**. Given that the project would involve removing fuels that could aid in wildfire spread, and feedstock acquisition activities would follow the best practices to avoid the risk of fire ignitions, as incorporated into **MM-WIL-1**, the impacts of the feedstock acquisition related to exposing project occupants to pollutants from a wildfire or the uncontrolled spread of a wildfire would be less than significant with mitigation incorporated. **MM-WIL-2** and **MM-HAZ-2** would require fire risk reduction measures at the pellet facilities that would risk of project-related wildfire hazards to less than significant.

**PDF-GEO-2**, **PDF-GEO-3**, and **PDF-GEO-4** would reduce slope instability during feedstock acquisition to **less than significant**.

### 3.16.5 References

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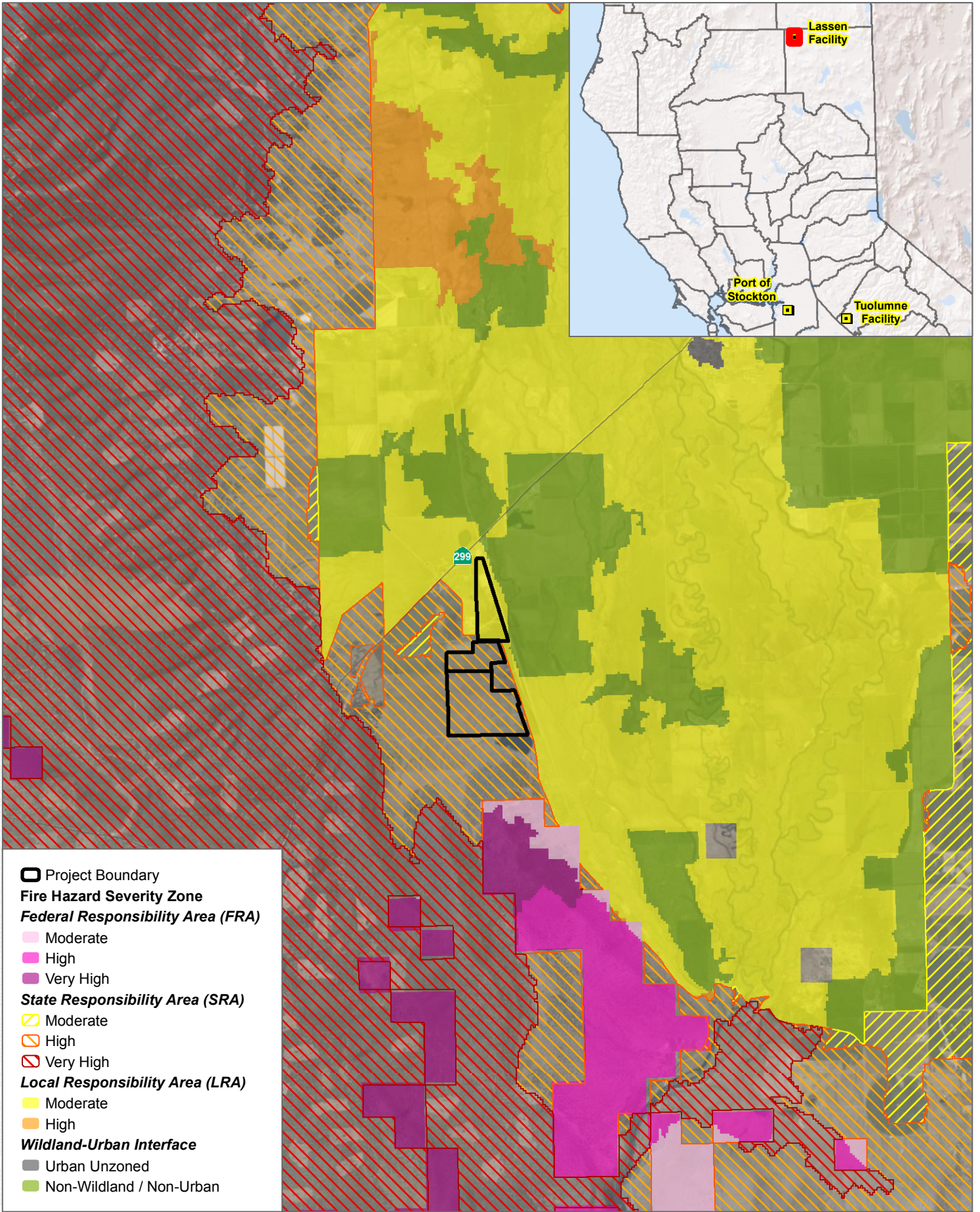
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SOURCE: Bing Maps 2022, CALFIRE 2024

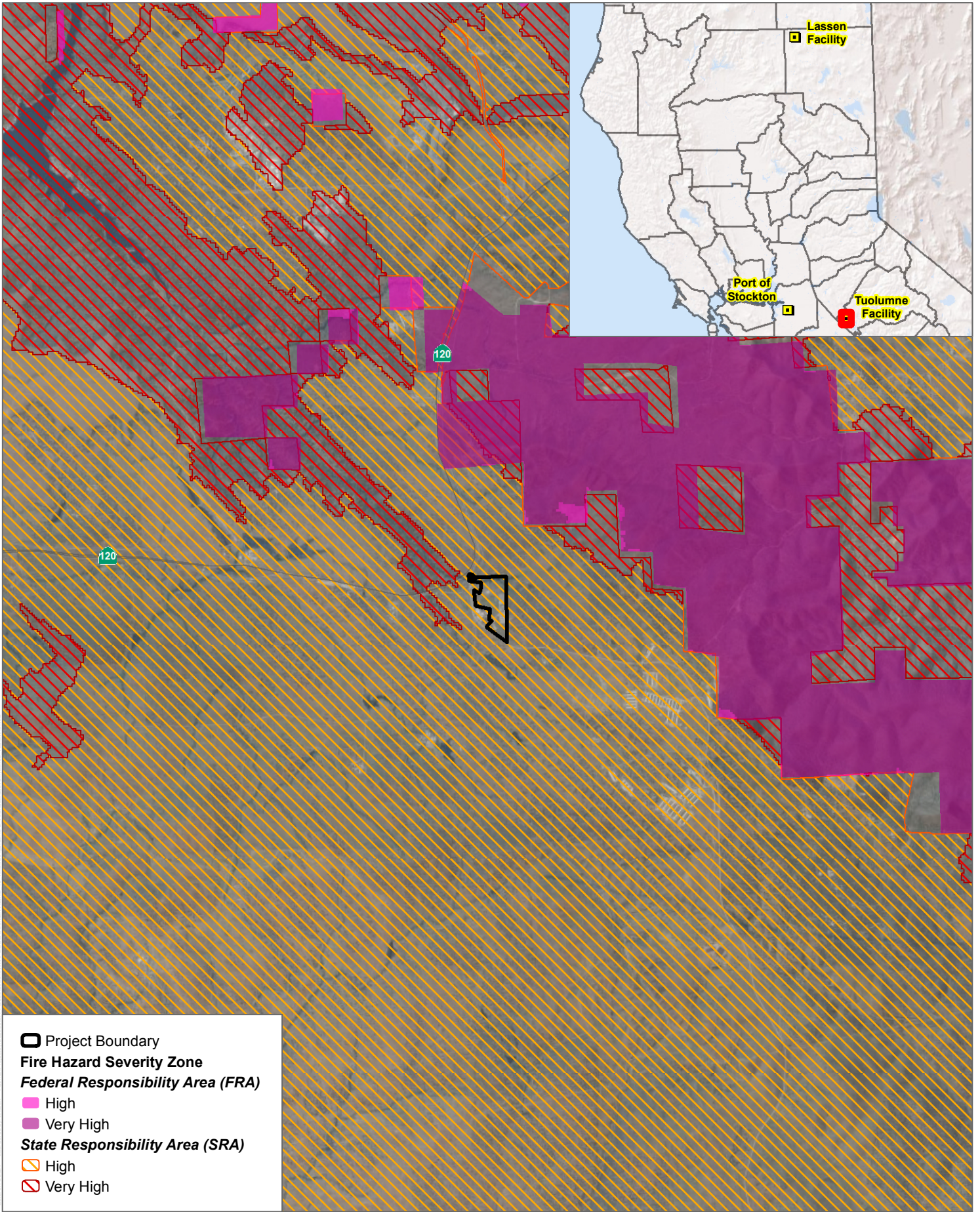
FIGURE 3.16-1

Fire Hazard Severity Zones - Lassen Facility

Golden State Natural Resources Forest Resiliency Demonstration Project

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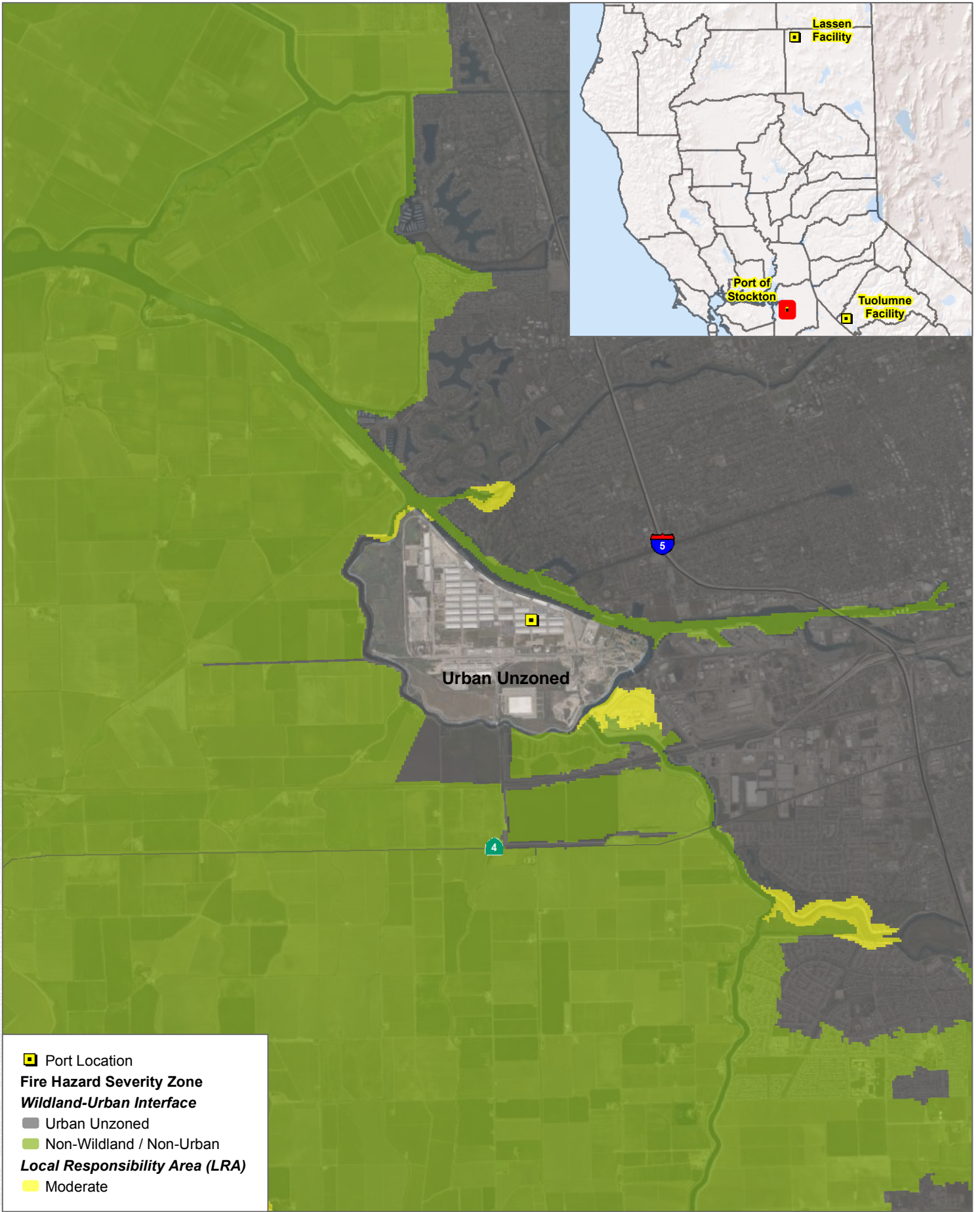


  Project Boundary  
**Fire Hazard Severity Zone**  
**Federal Responsibility Area (FRA)**  
 High  
 Very High  
**State Responsibility Area (SRA)**  
 High  
 Very High

SOURCE: Bing Maps 2022, CALFIRE 2024

**FIGURE 3.16-2**

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■ Port Location  
**Fire Hazard Severity Zone**  
*Wildland-Urban Interface*  
 Urban Unzoned  
 Non-Wildland / Non-Urban  
**Local Responsibility Area (LRA)**  
 Moderate

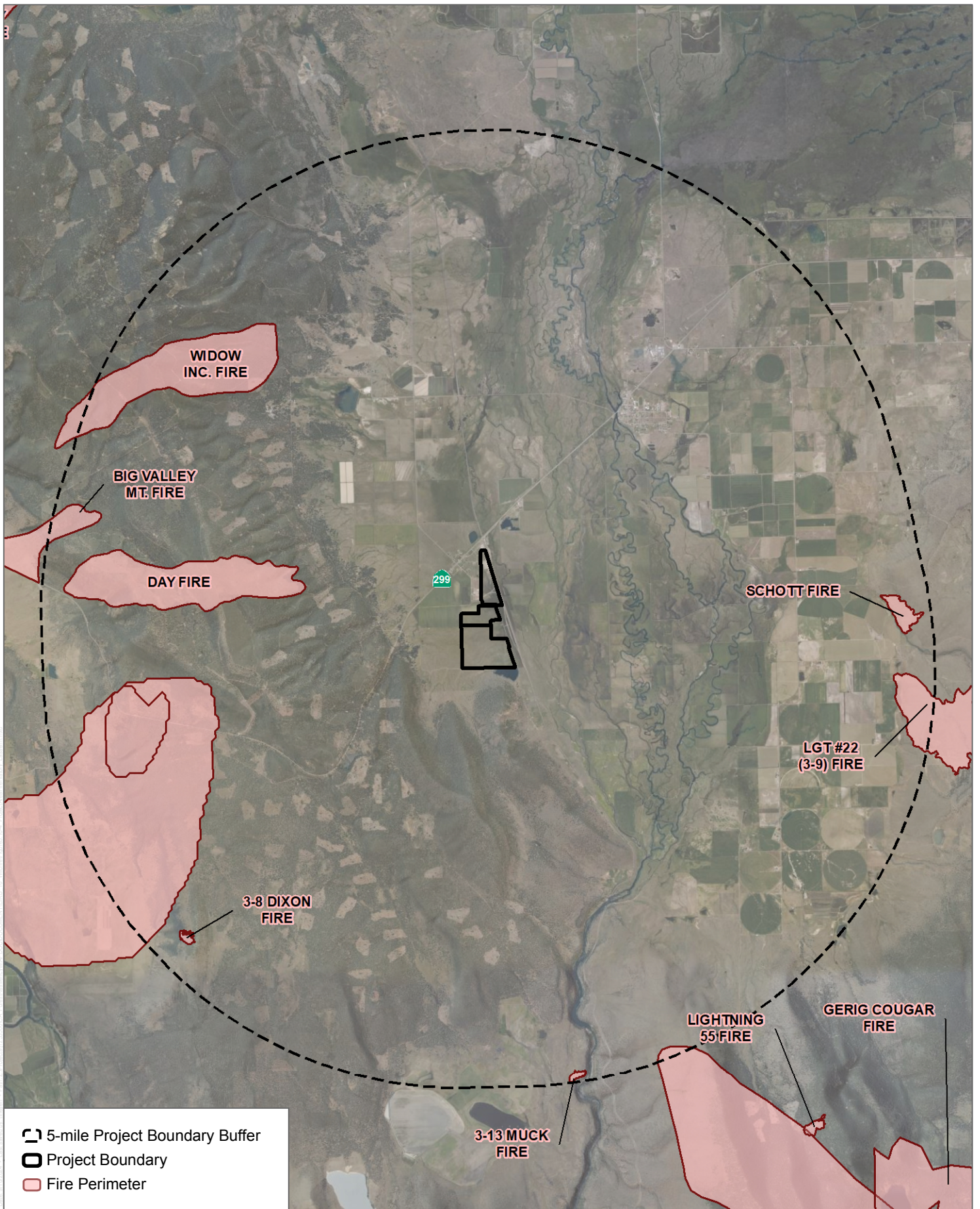
SOURCE: Bing Maps 2022, CALFIRE 2024

**FIGURE 3.16-3**

**Fire Hazard Severity Zones - Port of Stockton Facility**

Golden State Natural Resources Forest Resiliency Demonstration Project

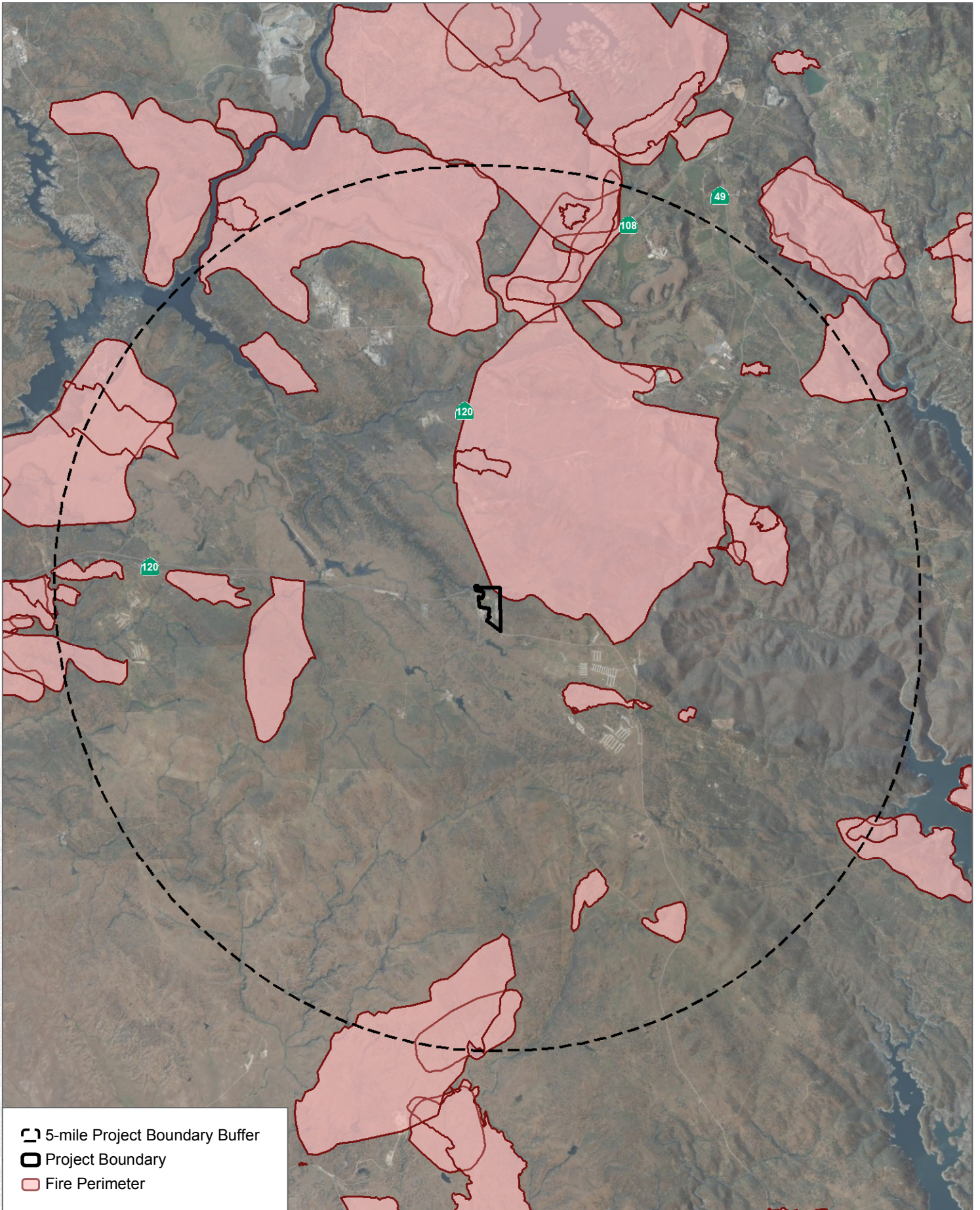
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SOURCE: Bing Maps 2022, CALFIRE 2022

FIGURE 3.16-4

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 5-mile Project Boundary Buffer  
 Project Boundary  
 Fire Perimeter

SOURCE: Bing Maps 2022, CALFIRE 2022

**FIGURE 3.16-5**

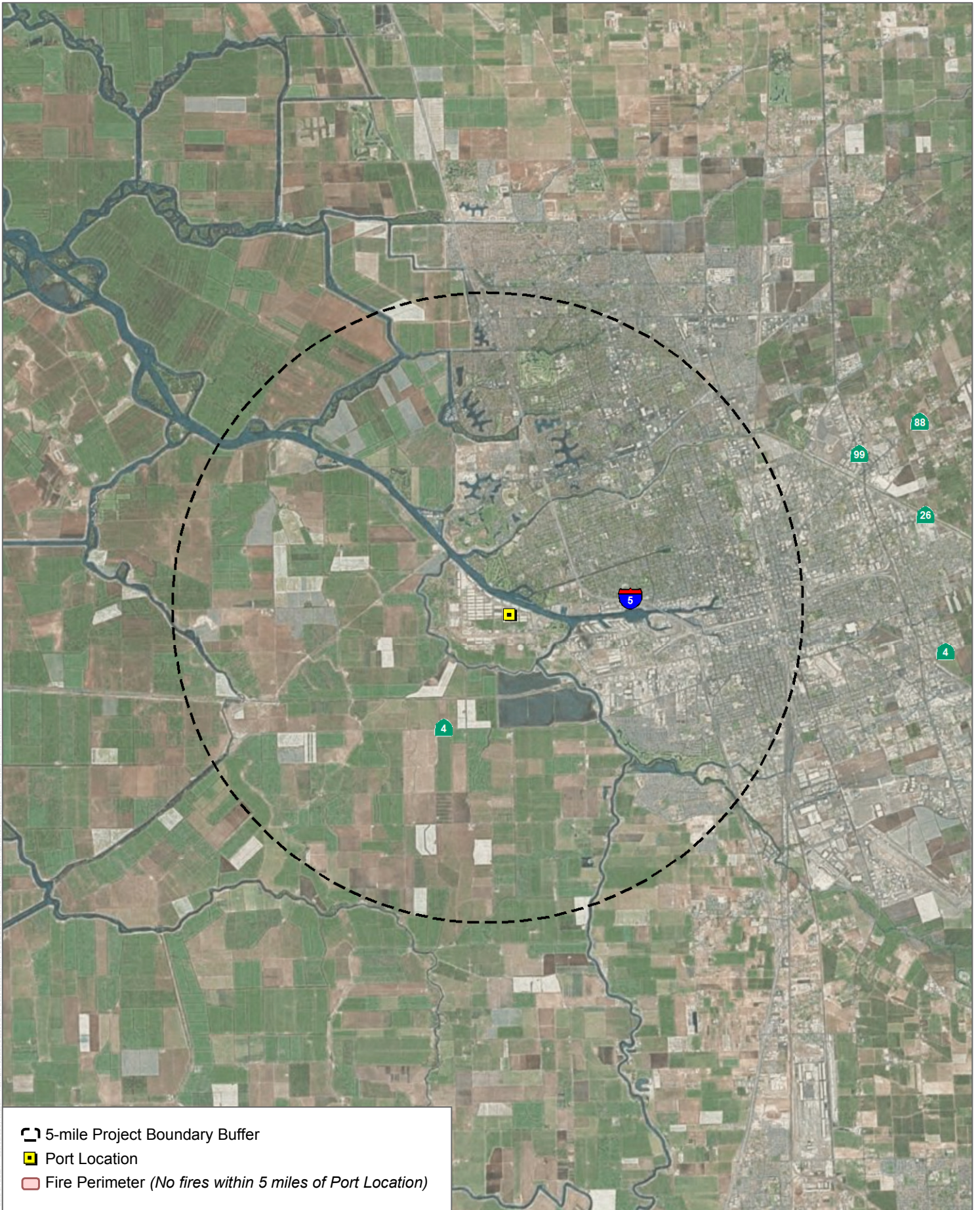
**Project Area Fire History - Tuolumne Processing Facility**

Golden State Natural Resources Forest Resiliency Demonstration Project



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**FIGURE 3.16-6**

**Project Area Fire History - Port of Stockton Facility**

Golden State Natural Resources Forest Resiliency Demonstration Project

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