

3.8 Hazards and Hazardous Materials

Environmental Setting

PHYSICAL SETTING

Definitions

Hazardous Materials

Hazardous materials are substances with certain physical or chemical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. Title 22 of the California Code of Regulations, Division 4.5, Chapter 11, Article 3 groups hazardous materials into the following four categories based on their properties: toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), and reactive (causes explosions or generates toxic gases). Hazardous materials are commonly used in commercial, agricultural and industrial applications, as well as in residential areas to a limited extent.

Hazardous Waste

A hazardous waste is any waste that may (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness, or (2) pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bio-accumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed (California Health and Safety Code, Section 25141). Hazardous materials and wastes can result in public health hazards if improperly handled, released into the soil or groundwater, or released into the air through vapors, fumes, or dust.

Commonly Encountered Hazardous Materials

The following subsections detail commonly encountered hazardous materials and conditions that may be present in the Planning Area.

Aerially-Deposited Lead

Aerially-deposited lead (ADL) is typically associated with exposed soil near freeway rights-of-way as a result of emissions from vehicular exhaust prior to the elimination of lead from fuels in the mid-1980s. Based on the presence of roads within and adjacent to the Planning Area, it is possible that ADL is present.

Treated Wood

Wooden infrastructure (e.g., guardrails, telephone poles, fencing) may be treated with chemical preservatives to prevent rotting due to mold, mildew, and insects, which may leach from the wood into surrounding soil. Wood preservatives may include creosote, chromated copper arsenate, alkaline copper quaternary, copper azole, bis-(n-cyclohexyldiazoniumdioxy)-copper (copper-HDO), acid copper chromate, and chlorinated phenols. Sampling and analysis of wood would be needed to confirm whether it has been treated.

Asbestos-Containing Materials

Asbestos is a naturally occurring fibrous material once commonly used as a fireproofing and insulating agent in building construction before such uses were banned by the EPA in the 1970s. Asbestos can also be atmospherically deposited from vehicle brake shoes. Asbestos-containing building materials may be associated with structures (i.e., residential, commercial, industrial buildings) or infrastructure (i.e., pipeline insulation, cementitious water lines, bridges) within the Planning Area.

Lead-Based Paint

Painted surfaces within the project area may contain lead-based paint. The Consumer Product Safety Commission has banned the use of paint containing lead above certain thresholds for residential uses. However, lead-based paint may be used in industrial settings or may be present on older structures (i.e., pre-1980) within the Planning Area.

Polycyclic Aromatic Hydrocarbons (PAHs)

Polycyclic Aromatic Hydrocarbons (PAHs) are a group of organic chemicals found in a wide variety of materials, including crude oil, asphalt, and creosote. Most refined petroleum products also contain PAHs, either retained from the original crude or produced during the refining process. PAHs are also produced as combustion products and therefore occur in many burned or charred materials. Chemically, PAHs have high to very high molecular weights and low solubility in water, and tend to adhere to soil particles. These factors result in generally high mobility of PAHs in the environment. Elevated concentrations of PAHs may occur in soils where there has been historic fill or a variety of previous uses. The U.S. EPA has classified seven PAH compounds as probable human carcinogens.

Miscellaneous Hazardous Materials

Materials falling under the Universal Waste Rule (UWR) requirements may be present in buildings within the project area including, but not limited to: potentially mercury-containing fluorescent light tubes and/or vapor lights, and potentially PCB-containing light ballasts.

Hazardous Materials Sites

A search of federal, State, and local environmental regulatory agency databases was conducted in order to identify sites within the Planning Area which may have been historically impacted by hazardous materials or wastes. The search identified three documented release cases, all of which have been closed: Chabot College, Silver Metal Products, and Bernard's Mini Mart. Properties with closed release cases represent a low to moderate risk of encountering impact during potential future

redevelopment. However, the Chabot College and Silver Metal Products cases, which were closed in the 1990s, were closed under the presumption of continued industrial usage and may not meet current standards. Therefore, additional investigation and/or remediation prior to redevelopment may be required. The hazardous material sites in the Planning Area are depicted in Figure 3.8-1.

According to CalRecycle's Waste Tire Management System database, no waste tire sites or Waste Tire Permitted Facilities are documented within the Planning Area (CalRecycle, 2017).

Fire Hazards

Wildfire Hazards

Determining the threat from wildfire hazards is based on a number of combining factors including fuel loading, or vegetated areas, topography, and climatic conditions, such as wind, humidity, and temperature, as well as the proximity of structures and urban development to fire hazards. Wildland fire hazards are most pronounced in rural-urban interface areas, or where urban development is located close vegetated areas. Generally, the periods of greatest risk for wildland fire are the late summer and early fall, when vegetation is at its driest. Human activity, including residential and agricultural burning, careless disposal of cigarettes, campfires, and use of fireworks can all trigger fires. Natural causes such as lightning strikes may also start fires.

The City of Livermore is participating in the preparation of the Tri-Valley Hazard Mitigation Plan, which has mapped wildfire severity throughout the city, including the Planning Area. As shown in Figure 3.8-2, while no areas within the Planning Area are identified as very high wildfire severity zones, some areas in the northern part of the Planning Area are classified as high wildfire severity zones.

**Figure 3.8-1:
Hazardous Materials Sites in the
Planning Area**

- ⊗ Closed Leaking Underground Tank (LUST) Cleanup Sites
- Permitted Underground Storage Tank
- Interstate/Highway
- Ramps
- Waterways
- Study Area Parcels
- ⬡ Planning Area
- ⬡ Half Mile BART Station Buffer
- ⬡ Livermore City Limits

Note: Locations are approximate.
Source: Geotracker, State Water Resources Control Board, 2015; City of Livermore GIS, 2015; Alameda County GIS, 2015; Dyett & Bhatia, 2015.

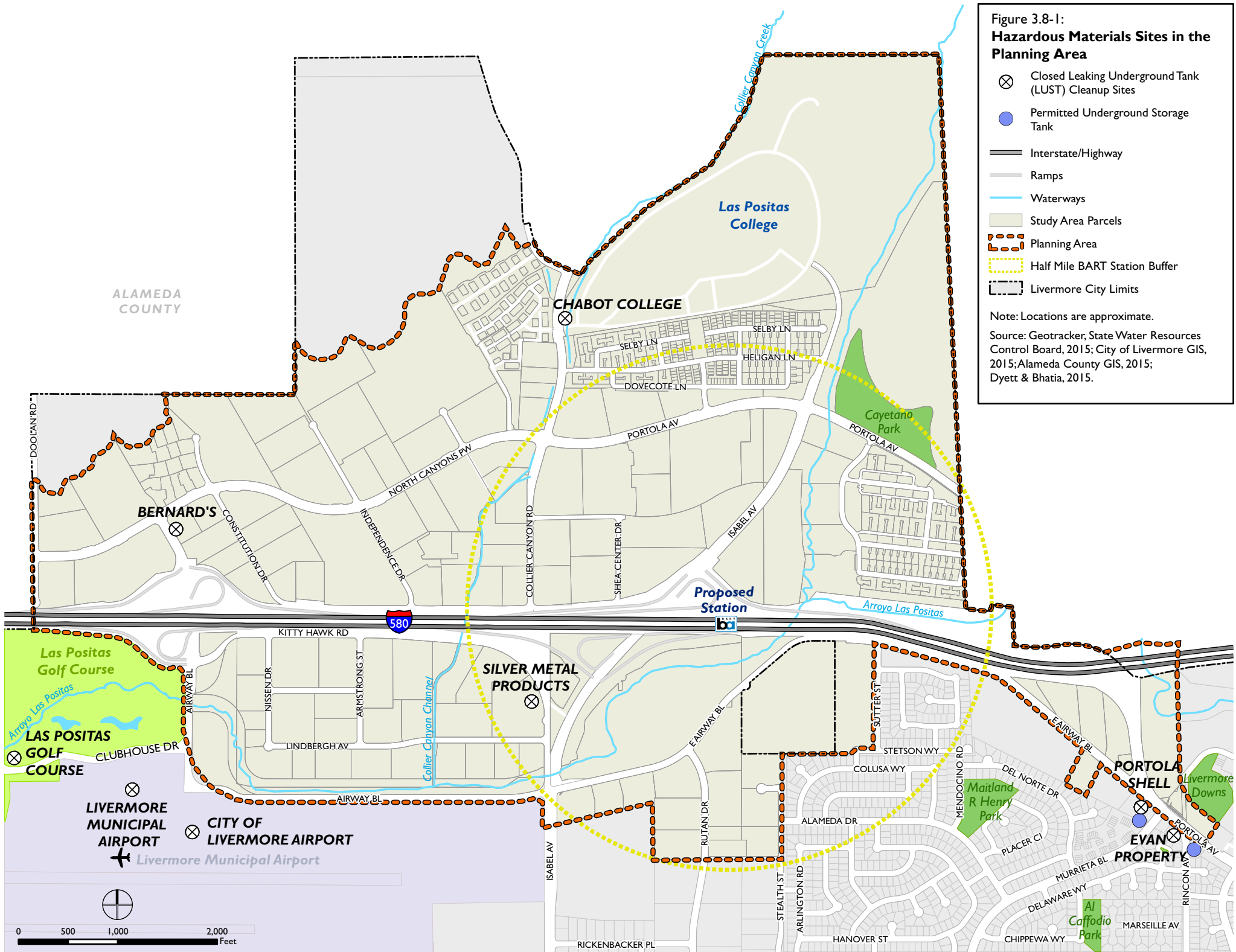
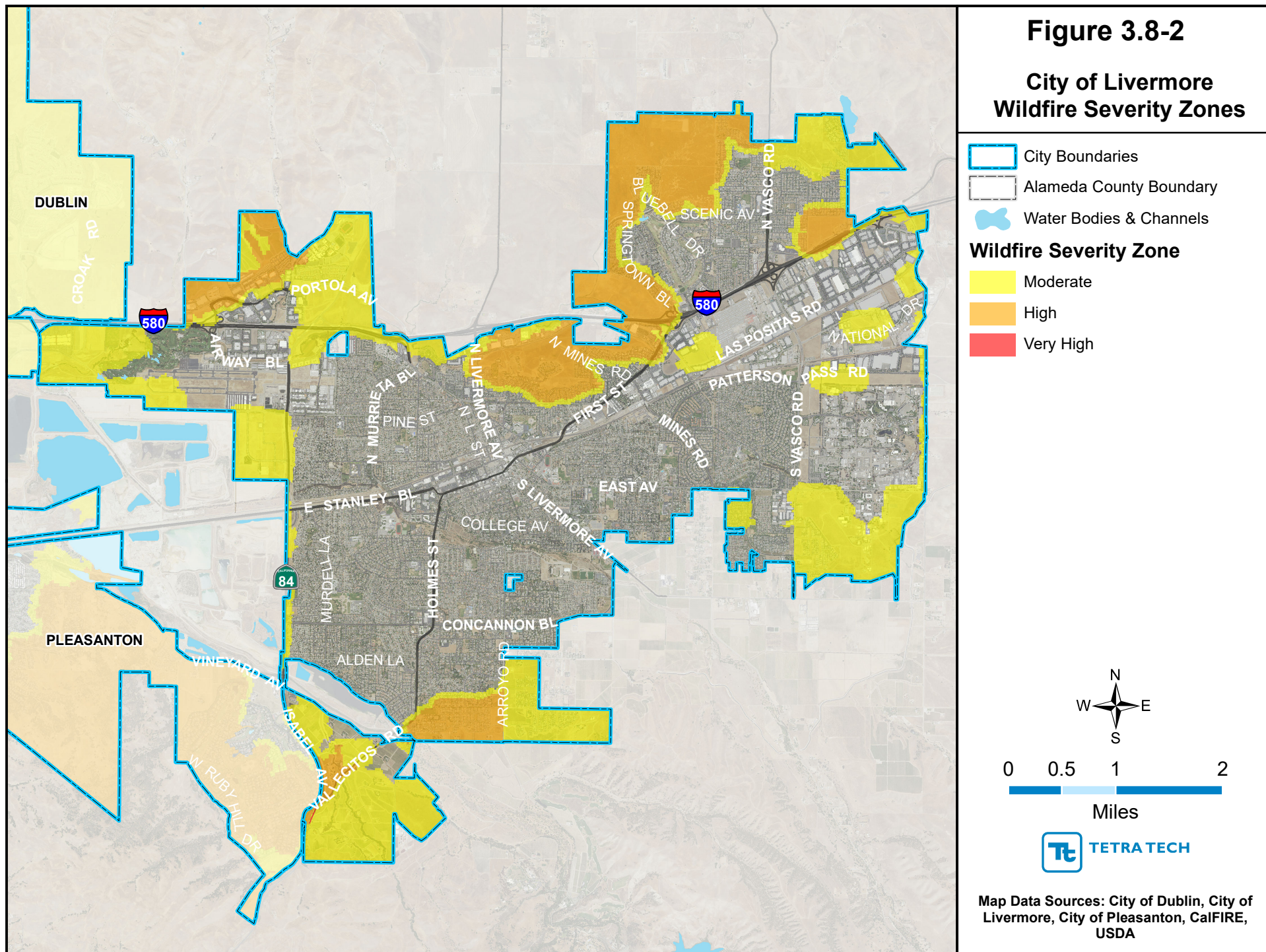


Figure 3.8-2

**City of Livermore
Wildfire Severity Zones**



REGULATORY SETTING

Hazardous materials and hazardous wastes are extensively regulated by federal, State, regional and local regulations, with the major objective of protecting public health and the environment. In general, these regulations provide definitions of hazardous substances; identify responsible parties; establish reporting requirements; set guidelines for handling, storage, transport, remediation, and disposal of hazardous materials and wastes; and require health and safety provisions for both workers and the public, such as emergency response and worker training programs. Sites which are subject to these regulations are identified on periodically-updated published lists at the federal, state, and local levels; the regulated sites include underground storage tank (UST) locations. The major regulations relevant to the proposed Plan are summarized in the following subsections.

Federal Programs and Regulations

Environmental Protection Agency

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the U.S. EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle to grave” system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the HSWA.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for clean up when no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List, which is a list of contaminated sites warranting further investigation by the U.S. EPA. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

United States Department of Transportation

The U.S. Department of Transportation (DOT) regulates the interstate transport of hazardous materials and waste through implementation of the Hazardous Materials Transportation Act. This act specifies driver-training requirements, load labeling procedures, and container design and safety specifications. Transporters of hazardous wastes must also meet the requirements of additional statutes such as RCRA, discussed previously.

Federal Emergency Management Agency

The primary mission of the Federal Emergency Management Agency is to reduce the loss of life and property and to protect the nation from all hazards, including natural disasters, acts of

terrorism, and other man-made disasters, by leading and supporting a risk-based, comprehensive emergency management system of preparedness, protection, response, recovery, and mitigation.

Disaster Mitigation Act

The Disaster Mitigation Act of 2000 requires a state mitigation plan as a condition of disaster assistance, adding incentives for increased coordination and integration of mitigation activities at the state level through the establishment of requirements for two different levels of state plans: “Standard” and “Enhanced.” States that develop an approved Enhanced State Plan can increase the amount of funding available through the Hazard Mitigation Grant Program. In addition, the Disaster Mitigation Act also established a requirement for local mitigation plans.

Emergency Planning and Community Right-To-Know Act

The Emergency Planning Community Right-to-Know Act (EPCRA) of 1986 was included under the Superfund Amendments and Reauthorization Act (SARA) law and is commonly referred to as SARA Title III. EPCRA was passed in response to concerns regarding the environmental and safety hazards proposed by the storage and handling of toxic chemicals. EPCRA establishes requirements for federal, state, and local governments, Indian Tribes, and industry regarding emergency planning and Community Right-to-know reporting on hazardous and toxic chemicals. SARA Title III requires states and local emergency planning groups to develop community emergency response plans for protection from a list of Extremely Hazardous Substances contained in the Code of Federal Regulations, Title 40 (40 CFR) Appendix B. The Community Right-to-Know provisions help increase the public’s knowledge of and access to information on chemicals at individual facilities, their uses, and their release into the environment.

Pipeline and Hazardous Materials Safety Administration

The Pipeline and Hazardous Materials Safety Administration (PHMSA) was created under the Norman Y. Mineta Research and Special Programs Improvement Act (P.L. 108-426) of 2004. The purpose of the Act is to provide a more focused research organization and establish a separate operating administration for pipeline safety and hazardous materials transportation safety operations. PHMSA is the federal agency charged with the safe and secure movement of hazardous materials by all modes of transportation. The agency also oversees the nation’s pipeline infrastructure.

Occupational Health and Safety Administration

The Occupational Health and Safety Administration (OSHA) published standard 1910.120, addressing dangers that hazardous materials pose in the workplace. The standard requires that employers evaluate the potential health hazard that hazardous materials pose in the workplace and communicate information concerning hazards and appropriate protective measures to employees.

Federal Aviation Regulations Part 77

22 CFR, Part 77 establishes:

- The requirements to provide notice to the Federal Aviation Administration (FAA) of certain proposed construction, or the alteration of existing structures;
- The standards used to determine obstructions to air navigation, and navigational and communication facilities;
- The process for aeronautical studies of obstructions to air navigation or navigational facilities to determine the effect on the safe and efficient use of navigable airspace, air navigation facilities, or equipment; and
- The process to petition the FAA for discretionary review of determinations, revisions, and extensions of determinations.

State Regulations

California Code of Regulations Title 22

The California Code of Regulations (CCR) Title 22 provides the following definition of hazardous materials:

A hazardous material is a substance or combination of substances which, because of its quantity, concentration or physical, chemical, or infectious characteristics, may either (1) cause or significantly contribute to an increase in mortality or an increase in serious, irreversible or incapacitating irreversible illness; or (2) pose a substantial present or potential hazard to human health and safety, or the environment when improperly treated, stored, transported or disposed of. Hazardous materials include waste that has been abandoned, discarded, or recycled on the property and as a result represents a continuing hazard as the development is proposed. Hazardous materials also include any contaminated soil or groundwater.

Title 22 also provides standards applicable to generators and transporters of hazardous wastes, as well as standards for operators of hazardous waste transfer facilities, among other regulations.

California Environmental Protection Agency

The California Environmental Protection Agency (CalEPA) manages hazardous materials and waste within California. CalEPA, was created by the State of California to establish a cabinet-level voice for the protection of human health and the environment and to assure the coordinated deployment of state resources.

California Health and Safety Code, Hazardous Materials Release Response Plans and Inventory

Two programs in the California Health and Safety Code (H&SC) Chapter 6.95 are directly applicable to the CEQA issue of risk due to hazardous substance release. In Alameda County, these two programs are referred to as the Hazardous Materials Business Plan (HMBP) program and the California Accidental Release Program (CalARP). The Alameda County Department of Environmental Health (DEH) is responsible for the implementation of the HMBP program and the

CalARP program in Alameda County. The HMBP and CalARP programs provide threshold quantities for regulated hazardous substances. When the indicated quantities are exceeded, an HMBP or Risk Management Plan is required pursuant to the regulations. Congress requires EPA Region 9 to make RMP information available to the public through the EPA's Envirofacts Data Warehouse. The Envirofacts Data Warehouse is considered the single point of access to select EPA environmental data. California H&SC Section 25270, Aboveground Petroleum Storage Act, requires registration and spill prevention programs for above ground storage tanks that store petroleum. In some cases, Aboveground Storage Tanks (ASTs) for petroleum may be subject to groundwater monitoring programs that are implemented by the Regional Water Quality Control Boards (RWQCBs) and the State of California Water Resources Control Board (SWRCB).

Emergency Response to Hazardous Materials Incidents

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local governments and private agencies. Response to hazardous material incidents is one part of this plan. The plan is managed by the California Emergency Management Agency, which coordinates the responses of other agencies, including CalEPA, the California Highway Patrol, CDFW, and RWQCB.

Office of Environmental Health Hazard Assessment

The State of California Office of Environmental Health Hazard Assessment oversees implementation of many public health-related environmental regulatory programs within CalEPA, including implementing the provisions of the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Proposition 65 requires the governor to publish, at least annually, a list of chemicals known to the state to cause cancer or reproductive toxicity. The proposition was intended to protect California citizens and the state's drinking water sources from chemicals known to cause cancer, birth defects, or other reproductive harm and to inform citizens about exposures to such chemicals.

California Department of Toxic Substances Control

Within CalEPA, the California Department of Toxic Substances Control (DTSC) has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the state agency, for the management of hazardous materials and the generation, transport and disposal of hazardous waste under the authority of the Hazardous Waste Control Law. Since August 1, 1992, the DTSC has been authorized to implement the state's hazardous waste management program for the CalEPA.

The DTSC is responsible for compiling a list of hazardous materials site pursuant to Government Code Section 65962.5, which includes five categories:

1. Hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the health and safety code;
2. Land designated as "hazardous waste property" or "border zone property;"
3. Properties with hazardous waste disposals on public land;
4. Hazardous substance release sites selected for (and subject to) a response action; and

5. Sites included in the Abandoned Site Assessment Program.

California Department of Transportation

The California Department of Transportation (Caltrans) manages more than 50,000 miles of California's highway and freeway lanes, provides inter-city rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans is also the first responder for hazardous material spills and releases that occur on highway and freeway lanes and inter-city rail services.

State Water Resources Control Board

The SWRCB also regulates the handling, storage, and disposal of hazardous substances in construction projects. Permits and/or other action by the SWRCB may be required if contamination of water or soils occurs during the construction of the proposed project.

Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 (DMA2K) (Public Law 106-390) amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 to establish a Pre-Disaster Mitigation (PDM) program and new requirements for the federal post-disaster Hazard Mitigation Grant Program (HMGP). DMA2K encourages and rewards local and state pre-disaster planning. It promotes sustainability and seeks to integrate state and local planning with an overall goal of strengthening statewide hazard mitigation. This enhanced planning approach enables local, tribal, and state governments to identify specific strategies for reducing probable impacts of natural hazards such as floods, fire, and earthquakes. In order to be eligible for hazard mitigation funding after November 1, 2004, local governments are required to develop a Hazard Mitigation Plan that incorporates specific program elements of the DMA2K law. In the Bay Area, the Association of Bay Area Governments (ABAG) has adopted a multi-jurisdictional FEMA-approved 2010 Local Hazard Mitigation Plan Update, which cities and counties can adopt and use, in full or in part, in lieu of preparing all or part of a Local Hazard Mitigation Plan themselves (ABAG, 2010).

State Multi-Hazard Mitigation Plan, 2013

The State Hazard Mitigation Plan (SHMP) is a federally required official statement of the state's hazard identification, vulnerability analysis, and hazard mitigation strategy (44 Code of Federal Regulations, Subpart M, Section 206.401) under the Disaster Mitigation Act of 2000 for the State of California to receive federal funds for disaster assistance grant programs. The goal of the SHMP, prepared by the California Office of Emergency Services (OES), is to guide implementation activities to achieve the greatest reduction of vulnerability, which results in saved lives, reduced injuries, reduced property damage, and protection for the environment.

State of California Emergency Plan, 2009

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Response to hazardous material incidents is one part of this plan. The plan is managed by the California Emergency Management Agency, which coordinates the responses of other agencies, including CalEPA, the California Highway Patrol, the California Department of Fish and Wildlife, and RWQCBs.

State Underground Storage Tank Program

State laws also regulate Underground Storage Tanks (USTs) and ASTs containing hazardous substances. These laws are primarily found in the Health and Safety Code, and, combined with CCR Title 23, comprise the requirements of the State UST program. The laws contain requirements for UST permitting, construction, installation, leak detection monitoring, repairs and corrective actions and closures.

Carpenter-Presley-Tanner Hazardous Substance Account Act

The Carpenter-Presley-Tanner Hazardous Substance Account Act (HSAA), which is modeled after CERCLA, imposes liability for hazardous substance removal or remedial actions and requires the DTSC to adopt, by regulation, criteria for the selection and for the priority ranking of hazardous substance release sites for removal or remedial action under the act.

Public Resources Code 21151.4

Public Resources Code 21151.4 regulates hazardous materials near schools. Public Resources Code Section 21151.4 prohibits the certification of an EIR for a project involving the construction or alteration of a facility that might reasonably be anticipated to emit hazardous air emissions or handle extremely hazardous air emissions in a quantity greater than a certain threshold, within one-quarter mile of a school.

SB 1889, Accidental Release Prevention Law/Chemical Accident Release Prevention Program

SB 1889 required California to implement a federally mandated program governing the accidental airborne release of chemicals listed under Section 112 of the Clean Air Act. Effective January 1, 1997, CalARP replaced the previous California Risk Management and Prevention Program (RMPP) and incorporated the mandatory federal requirements. CalARP addresses facilities containing specified hazardous materials that, if involved in an accidental release, could result in adverse off-site consequences. CalARP defines regulated substances as chemicals that pose a threat to public health and safety or the environment because they are highly toxic, flammable, or explosive.

Hazardous Materials Worker Safety Requirements

The Federal Occupational Safety and Health Administration (Fed/OSHA) and the California Occupational Safety and Health Administration (Cal/OSHA) are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. The federal regulations pertaining to worker safety are contained in the 29 CFR as authorized in the Occupational Safety and Health Act of 1970. They provide standards for safe workplaces and work practices, including standards relating to hazardous materials handling. In California, Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations; Cal/OSHA standards are generally more stringent than federal regulations.

The State regulations concerning the use of hazardous materials in the workplace are included in Title 8 of the California Code of Regulations, which contain requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA also

enforces hazard communication program regulations, which contain worker safety training and hazard information requirements, such as procedures for identifying and labeling hazardous substances, communicating hazard information relating to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites.

Title 27, CCR

The California Department of Resources Recycling and Recovery (CalRecycle) and the SWRCB jointly issue regulations pertaining to waste disposal on land, including criteria for all waste management units, facilities and disposal sites; documentation and reporting; enforcement, financial assurance; and special treatment, storage, and disposal units.

California Wildland Hazard/Building Code

On September 20, 2005, the California Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending the California Code of Regulations (CCR), Title 24, Part 2, known as the California Building Code (CBC).

New buildings located in any Fire Hazard Severity Zone shall comply with one of the following:

1. State Responsibility Areas. New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.
2. Local Agency Very-High Fire Hazard Severity Zone. New buildings located in any Local Agency Very High Fire Hazard Severity Zone for which an application for a building permit is submitted on or after July 1, 2008, shall comply with all sections of this chapter.

According to CAL FIRE's maps of fire hazard severity zones, the Planning Area is located in a Local Responsibility Area, and no areas within the Planning Area are identified as very high fire hazard severity areas. However, as described in the Environmental Setting section, the Planning Area does include high wildfire severity zones.

Local Regulations

CalEPA's Unified Program

In 1993, Senate Bill 1082 gave CalEPA the authority and responsibility to establish a unified hazardous waste and hazardous materials management and regulatory program, commonly referred to as the Unified Program. The purpose of this program is to consolidate and coordinate six different hazardous materials and hazardous waste programs, and to ensure that they are consistently implemented throughout the state. CalEPA oversees the Unified Program with support from the DTSC, RWQCBs, the OES, and the State Fire Marshal.

State law requires county and local agencies to implement the Unified Program. The agency in charge of implementing the program is called the Certified Unified Program Agency (CUPA). The Livermore-Pleasanton Fire Department (LPPFD) is the designated CUPA for the county.

Alameda County Local Hazard Mitigation Plan

Long-term prevention, mitigation efforts and risk-based preparedness for specific hazards within the city are addressed as a part of the 2016 Local Hazard Mitigation Plan (LHMP), which was adopted by the County Board of Supervisors in January 2016. The LHMP identifies specific risks for Alameda County and provides methods to help minimize damage caused by natural and man-made disasters. The final list of hazards profiled for Alameda County was determined as wildfire/structure fire, flood, coastal storms/erosion/tsunami, earthquake/liquefaction, rain-induced landslide, dam failure, hazardous materials incidents, and terrorism.

Draft Tri-Valley Multi-Jurisdictional Hazard Mitigation Plan

Starting in April 2017, a Steering Committee made up of local jurisdictions including Livermore, Livermore-Pleasanton Fire Department (LPFD), Pleasanton, Dublin, Dublin San Ramon Services District (DSRSD), and the consulting firm of Tetra Tech have been developing the 2017 Tri-Valley Hazard Mitigation Plan. The Plan is a comprehensive update of the 2012 Local Hazard Mitigation Plan and consistent with the federal Disaster Mitigation Act of 2000. The Plan's objective is to create a uniform hazard mitigation strategy for the Tri-Valley area to reduce the community's vulnerability to natural disasters and hazards. The draft Plan, including annexes from Livermore, Dublin, Pleasanton and DSRSD, will be submitted for public comment scheduled from December 12 to January 11, 2018. Following the public comment period and revisions resulting from public comment, the Plan will be submitted to the California Governor's Office of Emergency Services (Cal OES) for review. After their review and approval, Cal OES will submit the plan to the FEMA Region IX for plan review and approval. Once FEMA has reviewed the Plan and issued an approved pending adoption (APA) notice, each planning partner must have their respective City Council/Board of Directors adopt the Plan. Staff is tentatively planning for City Council final adoption in spring 2018.

Alameda County Emergency Operations Plan

The 2012 Alameda County Emergency Operations Plan describes a comprehensive emergency management system which provides for a planned response to disaster situations associated with natural disasters, technological incidents, and terrorism. It includes annexes that describe in detail the actions required of the local jurisdiction's departments/agencies. Further, the plan describes the role of the Emergency Operation Center (EOC) and the coordination that occurs between the EOC and the local jurisdiction's departments and other response agencies. Finally, the plan describes how the EOC serves as the focal point among local, state, and federal governments in times of disaster.

City of Livermore EOC

To address future emergencies in Livermore and the region, the City of Livermore recently approved a new EOC facility to replace its existing facility in the police headquarters. The new EOC/City Hall building is expected to begin construction in 2108 and can accommodate a full complement of staff including a citizen's volunteer radio communication group: RACES. It will include an audiovisual room and enhancements that allow EOC groups to communicate more effectively by uploading and sharing current information. There are ample dry marker boards and table top areas for each EOC function. The new facility provides separated spaces for different

functions creating an environment more conducive to analysis and response. The new facility also provides adequate data and electrical access to support the needs of the EOC.

Alameda County Department of Environmental Health (ACDEH)

ACDEH is the administrative agency that coordinates and enforces numerous local, state, and federal hazardous materials management and environmental protection programs in Alameda County. LPFD, as the CUPA for Livermore, administers the following programs:

- Hazardous Materials Business Plan Program
- Hazardous Waste Generator Program
- Underground Storage Tank Program
- California Accidental Release Program
- Tiered Permitting Program
- Aboveground Storage Tank Program

The Department's mission is to ensure a safe and healthful environment through education, monitoring and enforcement of regulatory programs as well as ongoing services to the community. As indicated below, hazardous waste programs in Livermore are the primary responsibility of the Livermore-Pleasanton Fire Department. However, hazardous waste programs are also governed by the Alameda County Hazardous Waste Management Plan. The purpose of the Alameda County Hazardous Waste Management Plan is to forecast the potential future waste generation in the County, to encourage an aggressive waste reduction strategy, and to establish acceptable siting criteria.

City of Livermore General Plan

The existing General Plan's Public Safety Element includes policies for the City to promote the safe transport of hazardous materials through Livermore and require environmental investigation as necessary to ensure that soils, groundwater, and buildings affected by hazardous material releases from prior land uses, and lead and asbestos potentially present in building materials, would not have the potential to affect the environment or the health and safety of future property owners or users. This Element also requires periodic reviews and updates of its emergency management plans, in addition to emergency response plans for all large generators of hazardous waste to be submitted as part of use applications.

The General Plan's Circulation Element requires all residential, commercial, and industrial areas to provide efficient and safe access for emergency vehicles.

Livermore Fire Code

The Livermore Fire Code (Chapter 15.06 of the Municipal Code) incorporates the 2013 California Fire Code and local amendments. The local amendments include modifications to permit and construction requirements.

City of Livermore Municipal Code

The Livermore Municipal Code specifies City responsibilities for implementation of the California Health and Safety Code and California Code of Regulations sections regarding hazardous materials release and response plans (Chapter 16.04 of the Municipal Code) and underground storage tanks and hazardous waste (Chapter 16.06 of the Municipal Code).

Livermore Municipal Airport Land Use Compatibility Plan and the Airport Protection Area

The Airport Land Use Compatibility Plan (ALUCP) includes land use safety compatibility criteria developed to minimize the risks to people and property on the ground as well as those people in an aircraft in the event of an accident or emergency landing occurring outside the airport boundary. These criteria focus on reducing the potential consequences of such events when they occur. For various Safety Compatibility Zones, the criteria set maximum site-wide average non-residential intensities (people/acre); recommend a percentage of open land; and prohibit the development of certain land uses.

Additionally, the ALUCP includes airspace protection criteria intended to reduce the risk of harm to people and property resulting from an aircraft accident. This is accomplished by the establishment of compatibility policies that seek to prevent the creation of land use features that can be hazards to the airspace used by aircraft in flight and have the potential to cause an aircraft accident to occur. These land use features include, but are not limited to, glare or distracting lights that could be mistaken for airport lights, sources of smoke that may impair pilot vision, and sources of electrical interference with aircraft communications or navigations.

See the Regulatory Setting section in Section 3.1 of this EIR, *Land Use, Population, and Housing*, for further details regarding land use planning restrictions established in the Livermore Municipal ALUCP and APA.

Livermore-Pleasanton Fire Department

The Hazardous Materials Division of the LPFD has primary responsibility for enforcing most regulations pertaining to hazardous materials in the City of Livermore. The LPFD also acts as first responder to hazardous materials incidents within the City.

Impact Analysis

SIGNIFICANCE CRITERIA

For the purposes of this EIR, a significant adverse impact to hazards and hazardous materials would occur if the proposed Plan would:

- Criterion 1:** Create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials;
- Criterion 2:** Create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Criterion 3:** Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Criterion 4:** Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or environment;
- Criterion 5:** For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- Criterion 6:** For a project located within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
- Criterion 7:** Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Criterion 8:** Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

METHODOLOGY AND ASSUMPTIONS

This analysis considers the range and nature of foreseeable hazardous materials use, storage, and disposal resulting from implementation of the proposed Plan, and identifies the primary ways that these hazardous materials could expose individuals or the environment to health and safety risks. Compliance with applicable federal, State, regional, and local health and safety laws and regulations by residents and businesses in the city is intended to protect the health and safety of the public. State and local agencies are required to enforce applicable requirements. In determining the level of significance, this analysis assumes that development, infill development, and redevelopment under the proposed Plan would comply with relevant federal, State, regional, and local ordinances and regulations.

The range and types of uses accommodated under the proposed Plan are identified only in general terms. For example, specific types of businesses that will occur in commercial and mixed-use land use designations are unknown, as well as whether they would generate or use hazardous materials. Businesses such as gasoline service stations and dry cleaners are some of the most common retail operations that typically use hazardous materials—motor fuels and solvents, respectively—but other possible commercial and industrial uses could potentially use a range of oils and lubricants, solvents, fertilizers, pesticides and herbicides, and other chemicals and materials in liquid, solid, or gas form. Future development in the Planning Area could involve new dwelling units, mixed-use facilities, travel and recreational spaces, industrial uses, and commercial, retail and office spaces. As a result, this analysis assumes and evaluates a broad range of potential uses that could entail the handling of hazardous materials, and a broad range of potential hazardous materials that could be used.

Potential impacts from safety hazards from airports were evaluated based on relevant information from the ALUCP. The potential for impairment of emergency response plans or emergency evacuation plans was evaluated by considering public safety educational and emergency response planning efforts. The potential for exposure to hazards from wildfires was evaluated by considering the location of fire hazard areas with respect to the Planning Area location.

IMPACTS

Impact 3.8-1 Implementation of the proposed Plan could create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials. (*Less than Significant*)

Development under the proposed Plan would result in new housing units, mixed-use facilities, commercial uses, and industrial space. Implementation of the proposed Plan could include land uses that would require the routine use, transport, and disposal of hazardous materials and waste and may increase exposure to risk of hazards.

Federal and State regulations require adherence to specific guidelines regarding the use, transportation, disposal, and accidental release of hazardous materials, as described in the Regulatory Setting section above. The U.S. EPA is responsible for administering the Federal Toxic Substances Control Act and RCRA, which regulate the generation, transportation, treatment, storage, and disposal of hazardous waste, as well as CERCLA to respond to sites contaminated with hazardous substances. As the CUPA for the area, the ACDEH is responsible for implementing State hazardous waste and materials standards and managing fuel storage tanks. The U.S. Department of Transportation, Caltrans, and the California Highway Patrol regulate and manage routine transport of hazardous materials on I-580.

Additionally, the City of Livermore General Plan's Public Safety Element promotes the safe transport of hazardous materials through Livermore. This Element requires emergency response plans for all large generators of hazardous waste to be submitted as part of use applications.

Based on implementation of existing federal, State, and local programs and regulations, the impacts are less than significant.

Mitigation Measures

None required.

Impact 3.8-2 Implementation of the proposed Plan could create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (*Less than Significant*)

The proposed Plan anticipates a wide variety of uses, including commercial and industrial uses. New developments such as dry cleaners, gas stations, or manufacturing facilities could result in potential for upset and accident conditions involving the release of hazardous materials into the environment. Individual projects under the proposed Plan for which there are potential significant impacts related to hazards would require a project-level environmental review at the time they are proposed.

As discussed in Impact 3.8-1, hazardous sites in areas that may receive development are under the responsibility of the CUPA and State agencies. Although the risk of upset and accident conditions involving the release of hazardous materials into the environment cannot be completely eliminated, it can be reduced to a manageable level. Additionally, the City of Livermore General Plan's Public Safety Element requires environmental investigation as necessary to ensure that soils, groundwater, and buildings affected by hazardous material releases from prior land uses, and lead and asbestos potentially present in building materials, would not have the potential to affect the environment or the health and safety of future property owners or users.

Based on implementation of existing federal, State, and local programs and regulations, the impacts are less than significant.

Mitigation Measures

None required.

Impact 3.8-3 Implementation of the proposed Plan could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (*Less than Significant*)

There are no active, existing schools within one-quarter mile of the Planning Area. However, the proposed Plan proposes a school overlay in the Planning Area, at the former Charter School site in the northwestern portion of the Planning Area. Therefore, implementation of the land use changes consistent with the proposed Plan could emit hazardous emissions or involve the handling of hazardous or acutely hazardous materials, substances, or waste. The Plan includes goals and policies to minimize the exposure of new development in the Planning Area to hazardous materials. For these reasons, the impact on schools would be less than significant.

Proposed Plan Goals and Policies that Reduce the Impact

Environmental Resources Chapter

G-ENV-4: Minimize the exposure of new development in the Planning Area to hazardous materials and flooding.

P-ENV-29: Require documentation of the site investigation and any required cleanup to be submitted to City staff during the entitlement review process. Remediation and clean-up of any contaminated sites in the Planning Area shall be in accordance with federal and State standards.

Mitigation Measures

None required.

Impact 3.8-4 Implementation of the proposed Plan could be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or environment. (*Less than Significant*)

As discussed in the Physical Setting section above, there are three sites in the Planning Area that are included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 (see Figure 3.8-1). However, all three of these cases are closed, representing a low to moderate risk of encountering impact during potential future redevelopment. Furthermore, these sites would not be designated residential under the proposed Plan.

Future construction activities associated with implementation of the proposed Plan may also generate hazardous materials and waste, such as fuels and oils from construction equipment and vehicles. Existing regulations and CUPA programs would help by ensuring the reporting and documentation of any hazardous materials incidents in the Planning Area such that property owners could be aware of potential hazards. The City of Livermore General Plan's Public Safety Element requires environmental investigation as necessary to ensure that soils, groundwater, and buildings affected by hazardous material releases from prior land uses, and lead and asbestos potentially present in building materials, would not have the potential to affect the environment or the health and safety of future property owners or users. Additionally, the proposed Plan policies referenced below require remediation and cleanup of contaminated sites. Compliance with these policies, regulations, and programs would reduce the impact to less than significant.

Proposed Plan Goals and Policies that Reduce the Impact

Goal G-ENV-4 and Policy P-ENV-29 as listed under Impact 3.8-3 above.

Mitigation Measures

None required.

Impact 3.8-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public uses airport, the project could result in a safety hazard for people residing or working in the project area. (*Less than Significant*)

As discussed under Impact 3.1-2 in Section 3.1 of this EIR, Land Use, Population, and Housing, the proposed Plan retains the boundaries of the APA but proposes an overlay in the northeast corner of the APA to cover the area where the land use diagram shows new residential uses. In this overlay area, the City would only allow residential uses with conditions aimed at increasing resident awareness. However, the APA was proposed to address noise-related impacts (see Section 3.6 of this EIR, *Noise and Vibration*, for more details), not safety-related impacts. Therefore, this amendment would not result in a significant environmental impact to safety.

As discussed in Section 3.1, the proposed Plan exempts development in the Planning Area from a City Development Code policy limiting building height to 40 feet within 5,000 feet of an airport runway. However, instead of this Development Code provision, new development resulting from the proposed Plan would be subject to ALUCP height limits and regulations on airspace protection, in addition to scenic view and land use compatibility factors. These other regulations reduce and avoid potential effects associated with building height. Therefore, this amendment would not result in a significant environmental impact.

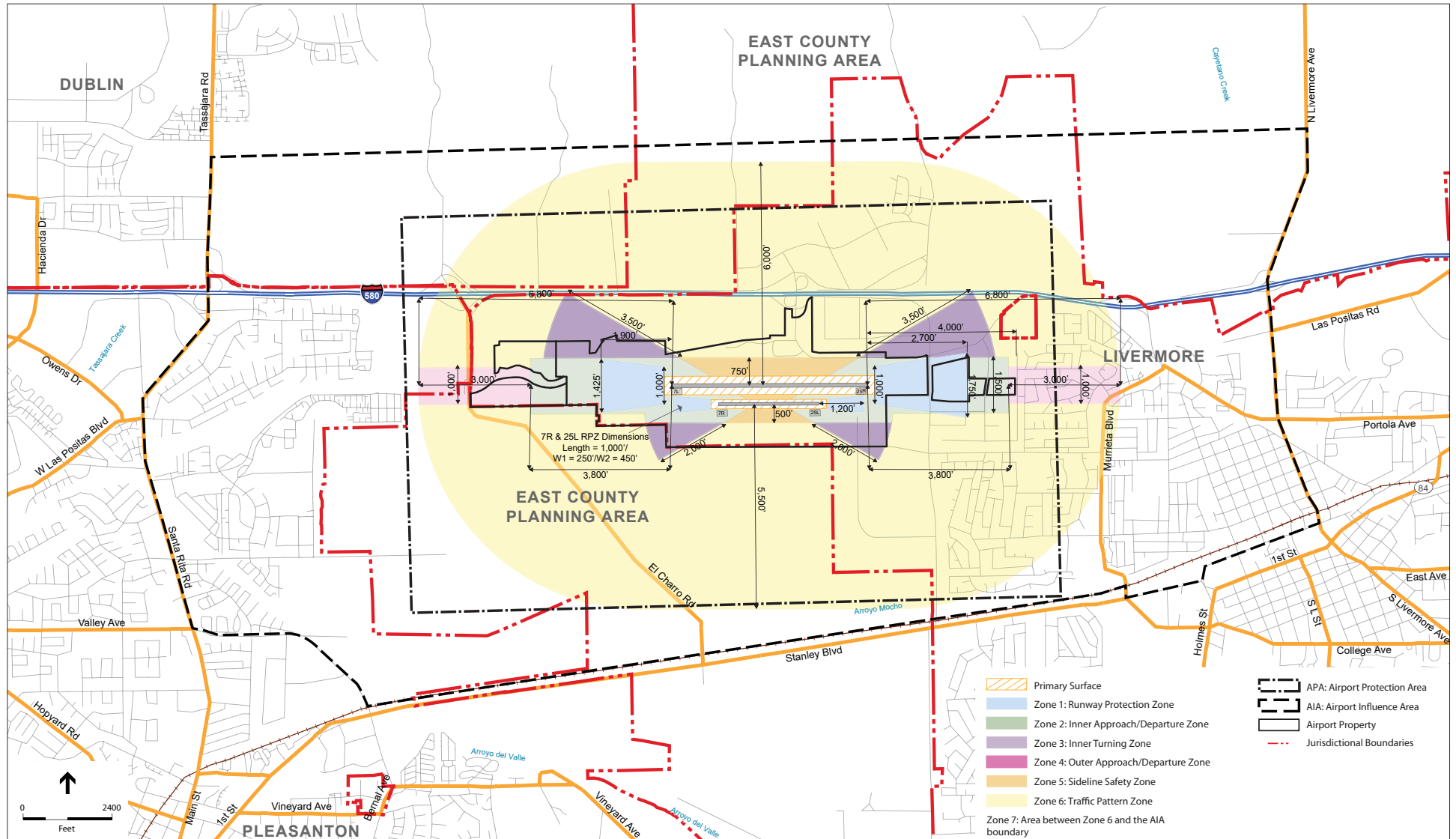
The ALUCP identifies seven safety zones in which land use compatibility criteria are set to minimize risks to people and property in the event of an accident or emergency landing occurring outside the airport boundary. These safety zones are shown in Figure 3.8-3. The majority of the Planning Area is within APA Safety Zone 6, which permits most land uses including new residential uses. The areas envisioned for new residential development are entirely within Safety Zone 6. The other non-residential uses envisioned for the Isabel Neighborhood are also consistent with the Safety Zone 6. There is small a portion of the Planning Area within Safety Zone 3, which allows some low-intensity non-residential uses. The land use designations covering this area would be consistent with Zone 3 standards (ESA Airports, 2012).

The Plan's Land Use Chapter stipulates that land uses are limited by the ALUCP and all developer applicants shall refer to the ALUCP to verify compatibility of proposed uses, including the safety compatibility criteria and airspace protection criteria discussed in the Regulatory Setting section above. Consistency with these criteria, along with State and federal guidance, such as Federal Aviation Regulations Part 77, would result in less than significant impacts from the APA amendment. The Alameda County ALUC must review the proposed Plan to determine consistency with the ALUCP, prior to adoption by the Livermore City Council. Accordingly, the proposed Plan is consistent with the ALUCP to prevent safety hazards for people residing and working in the Planning Area near the Livermore Municipal Airport.

Mitigation Measures

None required.

Figure 3.8-3
**Livermore Municipal Airport
 Safety Compatibility Zones**



Impact 3.8-6 Implementation of the proposed Plan would not result in a safety hazard for people residing or working within the vicinity of a private airstrip. (No Impact)

There are no private airstrips within the Planning Area. Therefore, implementation of the land use changes and policies consistent with the proposed Plan would have no impact related to the safety hazard for people residing or working in the vicinity of a private airstrip.

Mitigation Measures

None required.

Impact 3.8-7 Implementation of the proposed Plan could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Less than Significant)

Alameda County has an Emergency Operations Plan that provides adequate response to disasters associated with natural disasters, technological incidents, and terrorism, and defines the expected roles of City, County, and regional agencies. Additionally, the Alameda County LHMP and Tri-Valley Hazard Mitigation Plan (currently going through public review and approval process) identify potential hazards and strategies for mitigating the threat of hazards such as earthquakes, fire, and storms.

The LPFD has also prepared Community Education Programs for residents to utilize to help them protect themselves, their families, and their possessions (Livermore-Pleasanton Fire Department, 2017).

Implementation of the proposed Plan would result in new development and population growth, resulting in an increase in demand for emergency services, which could affect implementation of the LHMP and the proposed Tri-Valley Hazard Mitigation Plan. However, the proposed Plan includes policies to ensure that emergency response plans are maintained and updated, in addition to other policies that maintain and improve emergency preparedness in the city.

As discussed in the Regulatory Setting section above, the City's existing General Plan's Public Safety Element requires periodic reviews and updates of its emergency management plans. The General Plan's Circulation Element requires all residential, commercial, and industrial areas to provide efficient and safe access for emergency vehicles.

Based on implementation of existing local programs and regulations, the impacts are less than significant.

Mitigation Measures

None required.

Impact 3.8-8 Implementation of the proposed Plan could expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. (*Less than Significant*)

While the City of Livermore has identified high wildfire severity zones in the Planning Area, according to CAL FIRE maps of fire threat potential, none of the Planning Area constitutes a very high fire hazard. Additionally, development would be consistent with Livermore's Fire Code and Chapter 9, Fire Protection Systems, of the California Building Code, which requires improvements such as fire sprinkler systems and fire alarms. Furthermore, the proposed Plan includes policies, listed below, that address emergency access and fire-fighting facilities and services.

Based on implementation of existing State and local programs and regulations as well as the policies of the proposed Plan, the impacts are less than significant.

Proposed Plan Policies that Reduce the Impact

Parks, Public Facilities, and Infrastructure Chapter

- G-PF-3:** Maintain Livermore as a safe and livable community.
- P-PF-25:** Ensure that new development in the Planning Area adequately addresses public safety considerations in building design, site planning, and business operations.
- Refer development proposals to the LPFD to ensure that all new development will have appropriate building design and adequate emergency access, fire flow capacity, and fire hydrants prior to building construction.
 - Refer development proposals to the Police Department to ensure that all new development conforms to the City's security ordinances and incorporates crime prevention measures, as appropriate.
- P-PF-26:** Work with the LPFD to monitor the need for a new Fire Station if Station #10 needs to be relocated and/or additional equipment is needed to serve the Isabel Neighborhood.
- P-PF-27:** Ensure that LPFD and the Police Department have sufficient staffing to serve all new development and associated population growth in the Isabel Neighborhood.

Mitigation Measures

None required.

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