# 2.13 Hazards

This chapter evaluates the potential impacts related to Hazards resulting from the implementation of the proposed Plan. This section describes the existing conditions for hazardous materials, airports, emergency planning, and wildland fires in the Bay Area region. Environmental impacts associated with implementation of the proposed Plan as they relate to these conditions are provided below.

## Environmental Setting

### PHYSICAL SETTING

Materials and waste may be considered hazardous if they are poisonous (toxicity), can be ignited by open flame (ignitability), corrode other materials (corrosivity), or react violently, explode or generate vapors when mixed with water (reactivity). The term "hazardous material" is defined in law as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.[1] In some cases, past industrial or commercial uses on a site can result in spills or leaks of hazardous materials and petroleum causing contamination of underlying soil and groundwater. Federal and State laws require that soils and groundwater having concentrations of contaminants such as lead, gasoline, or industrial solvents that are higher than certain acceptable levels must be handled and disposed as hazardous waste during excavation, transportation, and disposal. The California Code of Regulations (CCR), Title 22, Sections 66261.20–24 contains technical descriptions of characteristics that would cause a soil to be classified as a hazardous waste. The use of hazardous materials and disposal of hazardous wastes are subject to numerous laws and regulations at all levels of government (see the Regulatory Setting section below).

### Generation and Disposal of Hazardous Materials and Waste

Various hazardous materials are commonly transported, stored, used, and disposed of in activities such as construction, industry (both light and heavy), dry cleaning, film processing, landscaping, automotive maintenance and repair, and common residential/commercial maintenance activities. The use, transport, storage and disposal of hazardous materials is regulated by the United States Environmental Protection Agency (EPA) and California EPA (Cal/EPA) plus six boards, departments and offices: Air Resources Board, Department of Pesticide Regulation, Department of Toxic Substances Control (DTSC), Office of Environmental Health Hazard Assessment (OEHHA), State Water Resources Control Board, and the Department of Public Health Center for Environmental Health (DPHCEH). In addition, the DPHCEH

[1] State of California, Health and Safety Code, Chapter 6.95, Section 25501(o).

and other local regulatory agencies closely monitor businesses and industry in the control of hazardous materials. Hazardous materials require special methods of disposal, storage, and treatment, and any unintentional release of hazardous materials requires an immediate response to protect human health and safety, and/or the environment. Improper disposal can harm the environment and people who work in the waste management industry.

Generators of hazardous waste fall into two categories: large-quantity generators (LQGs) and small-quantity generators (SQGs). An LQG is defined as a person or facility generating more than 1,000 kilograms (kg) (2,200 pounds) of hazardous waste per month. An SQG is defined as generating greater than 100 kilograms and less than 1,000 kg of hazardous waste per month. LQGs include industrial and commercial facilities, such as manufacturing companies, petroleum refining facilities, and other heavy industrial businesses.

LQGs must comply with general federal and State requirements for managing hazardous waste. LQGs need an EPA identification number that is used to monitor and track hazardous waste activities. SQGs include facilities such as service stations, automotive repair, dry cleaners, and medical offices. The regulatory requirements for SQGs are less stringent than the requirements for LQGs. However, SQGs must also obtain an EPA identification number, which must be used for traceability on all hazardous waste documentation.

Pursuant to federal law, all hazardous waste generators must register with EPA for record-keeping and recording. The EPA Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs related to hazardous materials and hazardous waste. The state agencies responsible for these programs set the standards for their program while local governments implement the standards. Cal/EPA oversees the implementation of the program as a whole. The Unified Program is implemented at the local level by 84 government agencies certified by the Secretary of Cal/EPA. These Certified Unified Program Agencies (CUPAs) have typically been established as a function of a local environmental health or fire department.

The CUPA is the local administrative agency that coordinates the following six programs regulating hazardous materials and hazardous wastes:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- California Accidental Release Prevention (CalARP) Program
- Underground Storage Tank Program
- Aboveground Petroleum Storage Act Program
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs
- California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements

## Transportation of Hazardous Materials and Waste

Transportation of hazardous materials and hazardous waste is carried out by individuals or entities that move hazardous materials and waste from one site to another by highway, rail, water, or air (see 40 CFR 260.10). This includes transporting hazardous waste from a generator's site to a facility that can recycle, treat, store, or dispose of the waste. It can also include transporting treated hazardous waste to a site for further treatment or disposal. Transportation of hazardous materials is required by law to occur in accordance with the Hazardous Waste Manifest System which is a set of forms, reports, and procedures that track hazardous waste from the time it leaves the generator facility until it reaches the waste management facility that receives it.

Transportation of hazardous materials by truck and rail is regulated by the United States Department of Transportation (USDOT). The USDOT regulations establish criteria for safe handling procedures. Federal safety standards are also included in the California Administrative Code. The California Health Services Department regulates the haulers of hazardous waste. According to the USDOT, Office of Hazardous Materials Safety's most recent Biennial Report on Hazardous Materials Transportation, highway transportation accounts for the largest share of incidents, deaths, and injuries associated with hazardous materials transportation. Rail accounts for the next largest portion, followed by air and water modes of transport. Highway incidents also account for the largest share of economic damage among modes of transport. While hazardous waste incidents account for a small percentage of overall highway incidents, the impact of those incidents can be more significant due to the nature of the material(s) involved. Specific programs have been developed by various responsible agencies to limit or prevent the impact to human health and the environment when hazardous materials/waste incidents occur.

In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by the DTSC. The DTSC maintains a list of active registered hazardous waste transporters throughout California. Shipments of hazardous materials and wastes include a wide variety of chemicals, such as petroleum products, medical waste, and radioactive materials. Each movement of hazardous materials/wastes implies a degree of risk, depending on the material being moved, the mode of transport, and numerous other factors. On a tonnage basis, petroleum products make up the majority—more than 80 percent—of hazardous material moved around the state.

Aside from rail and pipeline, hazardous materials transported within the Bay Area region use many of the same freeways, arterials, and local streets as other traffic. This creates a risk of accidents and associated release of hazardous materials for other drivers and for people along these routes, as does the use of rail modes for hazardous materials shipments.

## Potential Presence of Hazardous Materials in Soil and Groundwater

Hazardous materials, including but not limited to pesticides and herbicides, heavy metals, volatile organic compounds, oil and gas, may be present in soil and groundwater in areas where land uses have resulted in leaking fuel or chemical storage tanks or other releases of hazardous materials have occurred. Land uses that typically involve the handling of hazardous materials include commercial or industrial operations, as well as agricultural areas where soils may contain pesticides and herbicides.

Various federal, State, and local regulatory agencies maintain lists of hazardous materials sites where soil and/or groundwater contamination is known or suspected to have occurred, typically as a result of

leaking storage tanks or other spills. These facilities are readily identified through regulatory agency database searches, such as the State Water Board GeoTracker online database, the Cal/EPA DTSC Envirostor online database, and several other federal, State and local regulatory agency databases. **Table 2.13-1** identifies key database references for hazardous materials.[2]

**TABLE 2.13-1: DESCRIPTION OF REGULATORY AGENCY DATABASES**

| *Acronym* | *Name and Description of Database* |
|---|---|
| CALSITES | List of hazardous waste and substances sites from the DTSC Envirostor database. |
| CDO and CAO | Cease and Desist Orders and Cleanup and Abatement Orders that do not concern the discharge of wastes that are hazardous materials identified by the State Water Board. |
| CERCLIS | Comprehensive Environmental Response, Compensation, and Liability Information System. An EPA maintained database that contains information on hazardous waste sites, potentially hazardous waste sites and remedial activities, including sites on the National Priorities List (see below). |
| CORRACTS | List of hazardous waste facilities subject to corrective action identified by DTSC. |
| CORTESE | Cortese Hazardous Waste and Substances Site List. An historical compilation of sites listed in the LUST, Solid Waste Information System (SWF/LF), and CALSITES databases. This database is no longer updated. |
| DPR | California Department of Pesticide Regulation provides data and information related to pesticide registration, licensing, pesticide use, environmental effects, and enforcement. |
| LUST | Leaking Underground Storage Tanks. Maintained by the State Water Board it includes a list of leaking USTs. Found on the Geotracker Database |
| NPL | National Priorities List. Maintained by the EPA, the database lists priority cleanup sites under the federal Superfund Program. |
| PPIS | Pesticide Product Information System. EPA maintained database that contains information concerning all pesticide products registered in the U.S. |
| RCRAInfo | Resource Conservation and Recovery Act Information. RCRA gives the EPA authority to control the generation, transportation, treatment, storage and disposal of hazardous waste. The information database provides access to information about RCRA and the management of hazardous waste. |
| SCP | Site Cleanup Program (formerly the Spills, Leaks, Investigation, and Cleanup Cost Recovery Listing) is maintained by the State Water Board. Provides information on site investigation and corrective action on sites not overseen by the Underground Tank Program and the Well Investigation Program. Found on the Geotracker Database. |
| SWIS | Solid waste facilities and landfills that are active, closed, or inactive, maintained by the California Department of Resources Recycling and Recovery. |

[2] CalEPA, 2010. Cortese List Data Resources, available online at http://www.calepa.ca.gov/SiteCleanup/CorteseList/default.htm.

**TABLE 2.13-1: DESCRIPTION OF REGULATORY AGENCY DATABASES**

| *Acronym* | *Name and Description of Database* |
|---|---|
| Toxic Pits | Maintained by the State Water Board, the Toxic Pits database lists sites suspected of containing hazardous substances that have not yet been cleaned up. |
| US Brownfields | Maintained by the EPA, the U.S. Brownfields database lists abandoned sites that have known or suspected contamination that are currently underutilized. |
| VCP | Voluntary Cleanup Program Properties. Low-threat properties with either confirmed or unconfirmed releases, where the project proponents have requested that the DTSC oversee investigation and/or cleanup activities. |

Source: State Water Board, U.S. EPA, DTSC 2010.

For the Bay Area region, the number of sites listed on these databases would be too numerous to list here, but in general the majority of sites of known releases of hazardous materials occur in the more densely populated areas of light and heavy industrial uses.

## Naturally Occurring Asbestos

Asbestos is not a formal mineralogical term, but rather a commercial and industrial term historically applied to a group of silica-containing minerals that form long, very thin mineral fibers, which generally form in bundles, once widely used in commercial products.[3] Commercial-grade asbestos was highly regarded for its high tensile strength, flexibility, and resistance to heat, chemicals, and electricity. However, mounting evidence in the 20th century indicated that inhalation of asbestos fibers caused respiratory diseases that have seriously affected many workers who were working closely with asbestos. Once disturbed, microscopic fibers can become airborne and then lodged in the lungs. Exposure to asbestos has been linked to numerous serious health problems and diseases, including asbestosis, lung cancer, and mesothelioma.

Naturally occurring asbestos (NOA) includes minerals described as asbestos that are found in place in their natural state, such as in bedrock or soils. Natural occurrences of asbestos are of concern due to potential exposures to the tiny fibers that can become airborne if asbestos-bearing rocks are disturbed by natural erosion or human activities such as road building, excavations, and other ground disturbing activities. In California, concern over potential public exposure to NOA has led to guidance documents and various regulations for NOA. In 1986, asbestos was identified as a toxic air contaminant by the California Air Resources Board (CARB). In 1990, CARB issued an Airborne Toxic Control Measure (ATCM), which prohibited the use of serpentine aggregate for surfacing if the asbestos content was 5 percent or more.

Government agency and general public concerns about public health resulting from exposure to asbestos led to new regulations and guidance regarding NOA:

[3] United States Geological Survey, Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California, Open File Report 2011-1188, 2011.

- In July 2000, CARB adopted amendments to the existing ATCM prohibiting the use or application of serpentine, serpentine-bearing materials and asbestos-containing ultramafic rock for covering unpaved surfaces unless it has been tested using an approved asbestos bulk test method and determined to have an asbestos content that is less than 0.25 percent. These amendments took effect on November 13, 2001.
- In July 2001, CARB adopted a new ATCM for construction, grading, quarrying, and surface mining operations in areas with serpentine or ultramafic rocks. This ATCM became effective on November 19, 2002.
- In October 2000, the Governor's Office of Planning and Research issued a memorandum providing guidance to Lead Agencies in analyzing the impacts of naturally occurring asbestos on the environment through the California Environmental Quality Act (CEQA) review process.
- In November 2000, the California Department of Real Estate added a section to subdivision forms that included questions related to NOA on property proposed for development.
- In 2004, as part of its school-site review program, the California Department of Toxic Substances Control's School Property Evaluation and Cleanup Division released interim guidance on evaluating NOA at school sites.

Overall, 53 of the 58 California counties, including all nine Bay Area counties, contain reported asbestos occurrences and/or ultramafic rocks such as serpentinite that can contain asbestos fibers.[4] As shown in **Figure 2.13-1**, most of the reported asbestos occurrences are located in San Francisco and Marin counties while ultramafic rock occurrences are most prominent in Napa County but also located throughout the other counties. In general, NOA fibers do not pose a threat unless disturbed and/or introduced into the air as fugitive dust.

[4] Ibid.

Figure 2.13-1

# Naturally Occurring Asbestos and Ultramafic Rocks


Data Source: US Geological Survey, 2011; ESA, 2012; Cal-Atlas Geospatial Clearinghouse, 2012; Tom Tom North America, 2011; Dyett & Bhatia, 2012.

0 5 10 20 Miles

1 in = 16 miles

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## Schools

CEQA Guidelines require EIRs to assess whether a project would emit hazardous air emissions or involve the handling of extremely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school (see CEQA Sections 21151.2 and 21151.4; Appendix G of the CEQA Guidelines). Children are particularly susceptible to long-term impacts from emissions of hazardous materials from roadways near schools as well as high-volume motor vehicle travel on roadways through residential areas. There are numerous schools located throughout the Bay Area region. DTSC has created the School Property Evaluation and Cleanup Division that is responsible for assessing, investigating, and cleaning up proposed school sites. The Division ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who will occupy a new school. All proposed school sites that will receive State funding for acquisition or construction are required to go through a rigorous environmental review and cleanup process under DTSC's oversight.

School districts conduct environmental assessments to provide basic information for determining if there has been a release of hazardous material at the sites, or if a naturally occurring hazardous material that presents a risk to human health or the environment may be present. Outreach activities integrated into the process allow a more active role for stakeholders in the selection process for school sites. Through the environmental review process, DTSC ensures protection of children, staff and the environment from the potential effects of exposure to hazardous materials.

## Airports

There are 26 public use airports in the Bay Area that serve commercial and general aviation users (see **Table 2.13-2** and **Figure 2.13-2**). This regional airport system forms an integral part of the Bay Area's transportation network by providing links to communities throughout the United States and abroad. Bay Area communities must consider housing and economic development along with airport interests in making decisions concerning the amount and type of new development to allow in and near airport flight corridors. Development that is not compatible with aviation activity, due to noise or safety factors, can lead to strained relations between an airport operator and surrounding communities as well as create long-term operational problems for the airport. Potential hazards in relationship to airport operations are generally regulated by the Federal Aviation Administration (FAA), with local planning and evaluation of proposed projects (in terms of a proposed project's compatibility in relationship to air and ground operations and the safety of the public) under the authority of the applicable Airport Land Use Commission (ALUC) through Airport Land Use Compatibility Plans (ALUCPs).

**TABLE 2.13-2: LIST OF PUBLIC USE AIRPORTS AND MILITARY AIRFIELDS IN THE SAN FRANCISCO BAY AREA**

| *County* | *Airport Name* | *Three Letter ID* | *Caltrans Classification* |
|---|---|---|---|
| Alameda | Hayward Executive Airport | HWD | Metropolitan |
| Alameda | Livermore Municipal Airport | LVK | Metropolitan |
| Alameda | Metropolitan Oakland International Airport | OAK | Commercial/Primary |
| Contra Costa | Buchanan Field Airport | CCR | Metropolitan |
| Contra Costa | Byron Airport | C83 | Community |
| Marin | Gnoss Field Airport | DVO | Regional |
| Napa | Angwin Parrett Field Airport | 2O3 | Limited Use* |
| Napa | Napa County Airport | APC | Regional |
| San Mateo | Half Moon Bay Airport | HAF | Regional |
| San Mateo | San Carlos Airport | SQL | Metropolitan |
| San Mateo | San Francisco International Airport** | SFO | Commercial/Primary |
| Santa Clara | Moffett Federal Airfield | NUQ | Military/NASA |
| Santa Clara | Norman Y. Mineta San José Int'l Airport | SJC | Commercial/Primary |
| Santa Clara | Palo Alto Airport | PAO | Metropolitan |
| Santa Clara | Reid-Hillview Airport | RHV | Metropolitan |
| Santa Clara | San Martin Airport | E16 | Regional |
| Solano | Nut Tree Airport | VCB | Regional |
| Solano | Rio Vista Municipal Airport | O88 | Regional |
| Solano | Travis Air Force Base | SUU | Military/NASA |
| Solano | University Airport | EDU | Community |
| Sonoma | Charles M. Schulz - Sonoma County Airport | STS | Commercial/Primary |
| Sonoma | Cloverdale Municipal Airport | O60 | Community |
| Sonoma | Healdsburg Municipal Airport | HES | Community |
| Sonoma | Petaluma Municipal Airport | O69 | Regional |
| Sonoma | Sonoma Skypark | 0Q9 | Community |
| Sonoma | Sonoma Valley Airport | 0Q3 | Community |

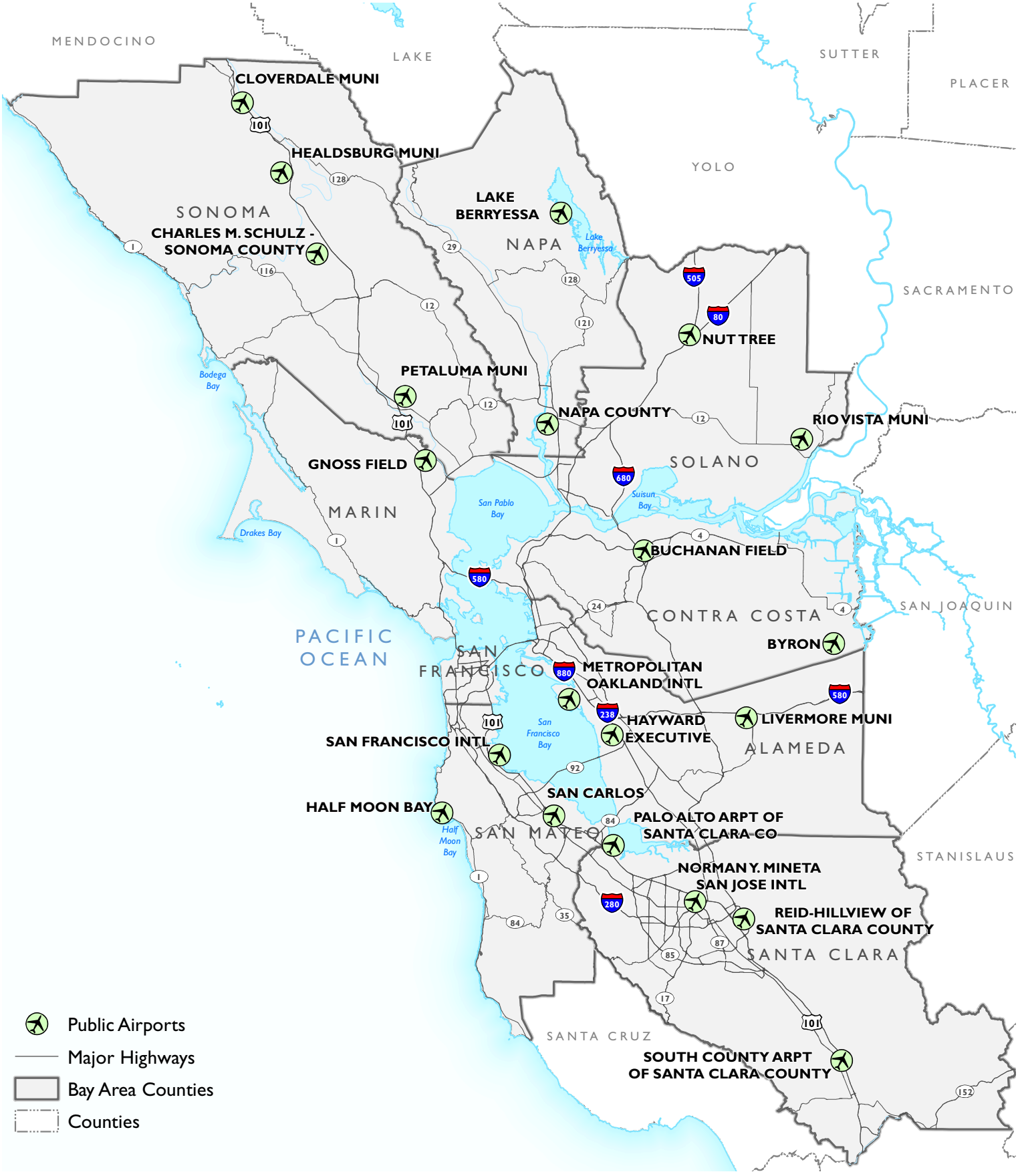
There are no public use airports within the City and County of San Francisco.

* Privately-owned airport that is open to the general public. Owned by Pacific Union College.

** The City and County of San Francisco owns and operates San Francisco International Airport.

Figure 2.13-2

# Public Airports




Data Source: Federal Aviation Administration, 2011; ESA, 2012; Cal-Atlas Geospatial Clearinghouse, 2012; Tom Tom North America, 2011; Dyett & Bhatia, 2012.

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## Emergency Services

The California Emergency Management Agency (Cal EMA) was established as part of the Governor's Office on January 1, 2009, merging the duties, powers, purposes, and responsibilities of the former Governor's Office of Emergency Services with those of the Governor's Office of Homeland Security. Cal EMA is responsible for the coordination of overall State agency response to major disasters in support of local government. The Agency is responsible for assuring the State's readiness to respond to, and recover from, all hazards—natural, man-made, and war-caused emergencies and disasters—and for assisting local governments with emergency preparedness, response, recovery, and hazard mitigation efforts (California Emergency Management Agency, 2011).

Each county has a local Office of Emergency Services (OES), which coordinates with the State during emergency situations. When local and mutual aid resources are exhausted, the State coordinates its emergency resources through its State Operations Center in Sacramento and its multiple Emergency Operations Centers (EOCs) throughout the region.

In coordination with the local OES, jurisdictions house EOCs, which are command centers where emergency service providers (many from the local OES) meet and coordinate response, recovery, and resources during disasters. The following functions are performed in the EOC, as necessary:

- Receiving and disseminating warnings;
- Managing emergency operations;
- Developing emergency response and recovery policies;
- Collecting intelligence from, and disseminating information to, the various EOC representatives, and assuring coordination between the Field Operations Center locations, building managers, and departmental safety representatives throughout the regional system;
- Coordinating information with Cal EMA, the Federal Emergency Management Agency, and other appropriate outside agencies;
- Preparing intelligence/information summaries, situation reports, operation progress reports and other reports as required;
- Preparing incident action plans;
- Maintaining general and specific maps, information display boards, and other data pertaining to emergency operations;
- Continuing analysis and evaluation of all data pertaining to emergency operations; and
- Controlling and coordinating, within established policy, the operations and logistical support of resources committed to the EOC.

## Wildland Fire

The California Department of Forestry and Fire Protection has identified two types of wildland fire risk areas: (1) Wildland Areas That May Contain Substantial Forest Fire Risks and Hazards, and (2) Very High Fire Hazard Severity Zones. Each risk area carries with it code requirements to reduce the potential risk of wildland fires.

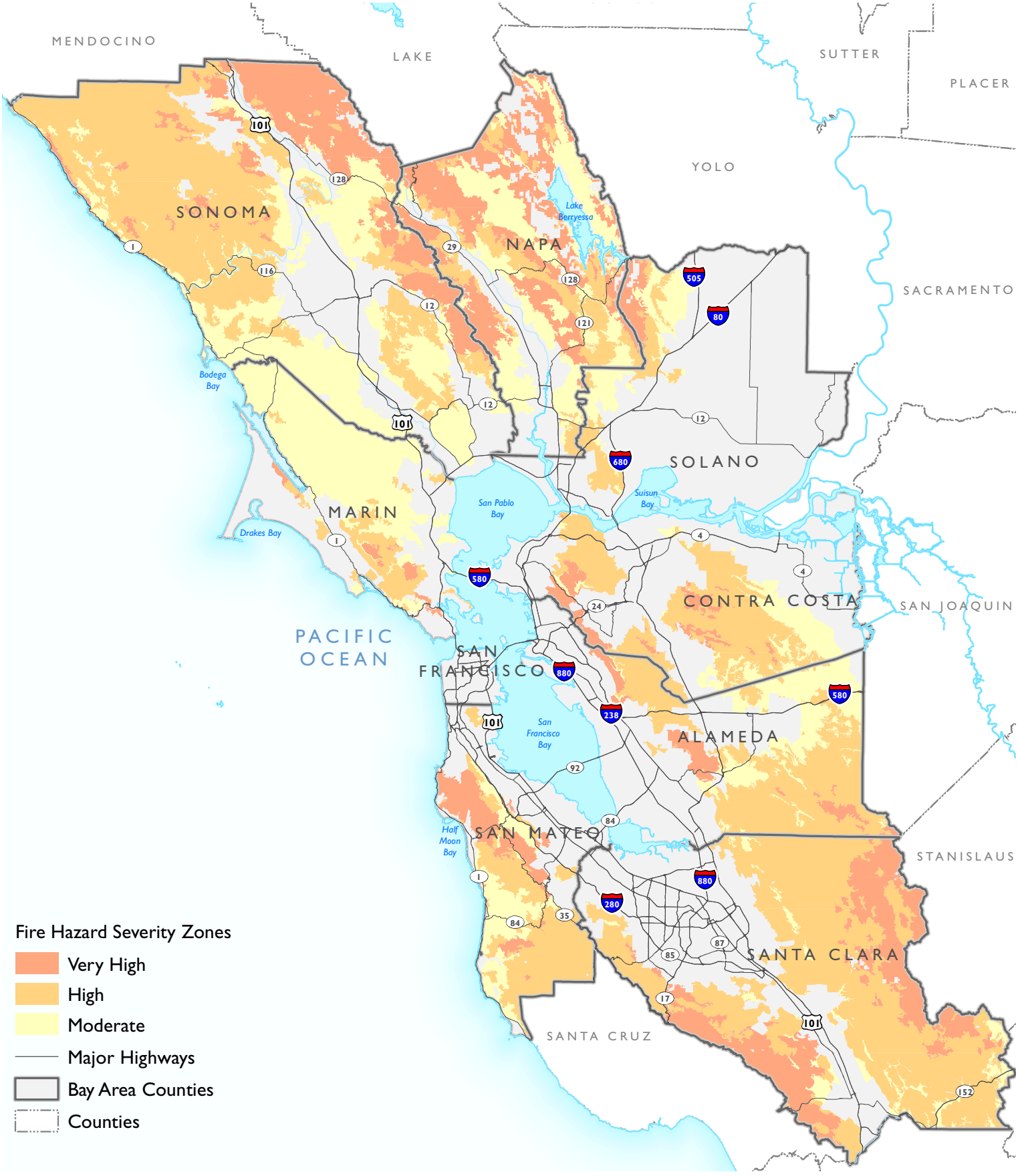
While all of California is subject to some degree of fire hazard, there are specific features that make certain areas more hazardous. The California Department of Forestry and Fire Protection (CAL FIRE) is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors (Public Resources Code 4201-4204 and Government Code 51175-89). Factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. Throughout the Bay Area Region, there is a full range of conditions and fire hazards as indicated in **Figure 2.12-3,** with all Bay Area counties except San Francisco having areas of High and Very High Fire Hazard in areas of CAL FIRE responsibility. The areas of greatest hazard are concentrated in the hillside areas of San Mateo, Santa Clara, Sonoma, and Napa counties, with smaller hazard areas in Marin County, the East Bay Hills of Alameda and Contra Costa counties, and on the slopes of Mount Diablo. The more intensively developed, urbanized portions of the Bay Area are within Local Responsibility Areas and have not been mapped by the State for fire hazard zones.[5] However, CAL FIRE maintains a shared responsibility in these Local Responsibility Areas to transmit information regarding areas of Very High Fire Hazards.

Development that has spread into less densely populated, often hilly areas has increased the number of people living in heavily-vegetated areas where wildlands meet urban development, also referred to as the wildland-urban interface. This trend is spawning a third classification of fires: the urban wildfire. The 1991 Oakland Hills fire above Berkeley and Oakland is an example of an urban wildfire. A fire along the wildland-urban interface can result in major losses of property and structures.

[5] Department of Forestry and Fire Protection (CAL FIRE), 2007. Fire and Resources Assessment Program, *Draft Fire Hazard Severity Zones in Local Responsibility Areas*, May 2007, available online at http://frap.cdf.ca.gov/webdata/maps/statewide/fhszsra_map.pdf, accessed August 8, 2012.

Figure 2.13-3

# Fire Hazards




Data Source: CalFire, 2007; ESA, 2012; Cal-Atlas Geospatial Clearinghouse, 2012; Tom Tom North America, 2011; Dyett & Bhatia, 2012.

0 5 10 20 Miles

1 in = 16 miles

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## REGULATORY SETTING

### Federal Regulations

The U.S. EPA is the lead agency responsible for enforcing federal regulations that affect public health or the environment. The primary federal laws and regulations include the Resource Conservation and Recovery Act of 1976 (RCRA) and the Hazardous and Solid Waste Amendments enacted in 1984; the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA); and the Superfund Act and Reauthorization Act of 1986 (SARA). Federal statutes pertaining to hazardous materials and wastes are contained in the Code of Federal Regulations (CFR), Title 40 - Protection of the Environment.

#### *Resource Conservation and Recovery Act*

The Resource Conservation and Recovery Act was adopted in 1976. RCRA Subtitle C regulates the generation, transportation, treatment, storage and disposal of hazardous waste by "large-quantity generators" (1,000 kilograms per month or more) through comprehensive life cycle or "cradle to grave" tracking requirements. The requirements include maintaining inspection logs of hazardous waste storage locations, records of quantities being generated and stored, and manifests of pick-ups and deliveries to licensed treatment/storage/disposal facilities. RCRA also identifies standards for treatment, storage, and disposal, which is codified in CFR Title 40 Part 260.

According to RCRA Subpart C and the US EPA, materials and waste are considered hazardous based on four characteristics:

- ***Ignitability.*** Ignitable wastes can create fires under certain conditions, are spontaneously combustible, or have a flash point less than 60 degrees Celsius (140 degrees Fahrenheit). Examples include waste oils and used solvents.
- ***Corrosivity.*** Corrosive wastes are acids or bases (pH less than or equal to 2, or greater than or equal to 12.5) that are capable of corroding metal containers, such as storage tanks, drums, and barrels. Battery acid is an example.
- ***Reactivity.*** Reactive wastes are unstable under "normal" conditions. They can cause explosions, toxic fumes, gases, or vapors when heated, compressed, or mixed with water. Examples include lithium-sulfur batteries and explosives.
- ***Toxicity.*** Toxic wastes are harmful or fatal when ingested or absorbed (e.g., containing mercury, lead, etc.)

#### *Comprehensive Environmental Response Compensation and Liability Act*

CERCLA, commonly known as Superfund, is the legal framework for the identification and restoration of contaminated property. In addition, CERCLA:

- Established prohibitions and requirements concerning closed and abandoned hazardous waste sites; and
- Provided for liability of persons or entities responsible for releases of hazardous waste at these sites.

Generally, CERCLA authorizes two kinds of response actions:

- Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response.
- Long-term remedial response actions, that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening.

### *Superfund Amendments and Reauthorization Act of 1986*

Congress enacted CERCLA, setting up what has become known as the Superfund program, in 1980 to establish prohibitions and requirements concerning closed and abandoned hazardous waste sites; provide for liability of persons responsible for releases of hazardous waste at these sites; and establish a trust fund to provide for cleanup when no responsible party can be identified. SARA amended the CERCLA in 1986, emphasizing the importance of permanent remedies and innovative treatment technologies to clean up hazardous waste sites; requiring Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations; providing new enforcement authorities and settlement tools; increasing involvement of the states in every phase of the Superfund program; increasing the focus on human health problems posed by hazardous waste sites; encouraging greater citizen participation in making decisions on how sites should be cleaned up; and increasing the size of the trust fund to $8.5 billion.

### *Emergency Planning Community Right-to-Know Act (EPCRA)*

EPCRA, or SARA Title III, was enacted in October 1986. SARA Title III requires any infrastructure at the state and local levels to plan for chemical emergencies, including identifying potential chemical threats. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community. EPCRA Sections 301 through 312 are administered by USEPA's Office of Emergency Management. USEPA's Office of Information Analysis and Access implements EPCRA's Section 313 program. In California, SARA Title III is implemented through the California Accidental Release Prevention Program.

### *Federal Aviation Administration (FAA)*

The Federal Aviation Administration's primary role is to promote aviation safety and control the use of airspace. Public use airports that are subject to the FAA's grant assurances must comply with specific FAA design criteria, standards, and regulations. Land use safety compatibility guidance from the FAA is limited to the immediate vicinity of the runway, the runway protection zones at each end of the runway, and the protection of navigable airspace. The FAA enforces safety standards and investigates and corrects violations as appropriate.

Federal regulations and FAA Advisory Circulars applicable to compatible land use and/or safety include, but are not limited to, 14 Code of Federal Regulations Part 77 (14 CFR Part 77), Safe, Efficient Use, and Preservation of the Navigable Airspace; FAA Advisory Circular 150/5200-33B, Hazardous Wildlife Attractants on or near Airports; and FAA Order 5200.5A, Waste Disposal Sites on or near Airports.

### *14 Code of Federal Regulations Part 77*

Code of Federal Regulations, Title 14, Part 77, *Safe Efficient Use and Preservation of the Navigable Airspace* (14 CFR Part 77) establishes the federal review process for determining whether proposed development activities in the vicinity of an airport have the potential to result in a hazard to air navigation. 14 CFR Part 77 identifies criteria that govern which projects require notice to be filed with the FAA as well as identifying standards for determining whether a proposed project would represent an obstruction "that may affect safe and efficient use of navigable airspace and the operation of planned or existing air navigation and communication facilities." Objects that are identified as obstructions based on these standards are presumed to be hazards until an aeronautical study conducted by the FAA determines otherwise.

### *FAA Notification*

14 CFR Part 77.9 "Construction or Alteration Requiring Notice" indicates that notice must be filed with the FAA for any construction or alteration of objects within 20,000 feet of a public use airport runway when the height of the objects exceeds (i.e., is taller than) an imaginary surface with a 100:1 (1 foot upward per 100 feet horizontally) slope from the nearest point of the nearest runway. This requirement applies when the airport has at least one runway that exceeds 3,200 feet in length; for shorter runways the notification surface has a 50:1 slope and extends 10,000 feet from the runway. For heliports, the notification surface has a 25:1 slope and extends 5,000 feet from the helicopter takeoff and landing area, commonly referred to as final approach and takeoff area. The notification requirements apply to all public-use airports, military airports, and heliports. When FAA notification is required it must be provided using FAA Form 7460-1, Notice of Proposed Construction or Alteration.

## ***Federal Disaster Mitigation Act of 2000***

The Disaster Mitigation Act of 2000 provided a new set of mitigation plan requirements that encourage state and local jurisdictions to coordinate disaster mitigation planning and implementation. States are encouraged to complete a "Standard" or an "Enhanced" Natural Mitigation Plan. "Enhanced" plans demonstrate increased coordination of mitigation activities at the state level and, if completed and approved, would increase the amount of funding through the Hazard Mitigation Grant Program. California's updated State Hazard Mitigation Plan was adopted on October 8, 2007, and approved by FEMA Region IX on December 17, 2007.

Under the auspices of the Disaster Mitigation Act of 2000, 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.[6] Participating local county and city governments in the Bay Area prepare an Annex to this plan to explain how the plan specifically applies to that agency.

## ***Federal Response Plan***

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that (1) provides the mechanism for coordinating delivery of federal

[6] Multi-Jurisdictional Local Hazard Mitigation Plan for the San Francisco Bay Area, ABAG 2010, http://quake.abag.ca.gov/wp-content/documents/ThePlan-Chapters-Intro.pdf

assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a Presidential declaration of a major disaster or emergency.

### *Hazardous Materials Transportation Act*

The transportation of hazardous materials is regulated by the Hazardous Materials Transportation Act (HMTA), which is administered by the Research and Special Programs Administration (RSPA) of USDOT. HMTA provides USDOT with a broad mandate to regulate the transport of hazardous materials, with the purpose of adequately protecting the nation against risk to life and property, which is inherent in the commercial transportation of hazardous materials. The HMTA governs the safe transportation of hazardous materials by all modes, excluding bulk transportation by water. RSPA carries out these responsibilities by prescribing regulations and managing a user-funded grant program for planning and training grants for states and Indian tribes. USDOT regulations that govern the transportation of hazardous materials are applicable to any person who transports, ships, causes to be transported or shipped, or who is involved in any way with the manufacture or testing of hazardous materials packaging or containers. USDOT regulations pertaining to the actual movement govern every aspect of the movement, including packaging, handling, labeling, marking, placarding, operational standards, and highway routing. Additionally, USDOT is responsible for developing curriculum to train for emergency response, and administers grants to states and Indian tribes for ensuring the proper training of emergency responders. HMTA was enacted in 1975 and was amended and reauthorized in 1990, 1994, and 2005.

### *International Fire Code*

The International Fire Code (IFC), created by the International Code Council, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International Building Code use a hazard classification system to determine what protective measures are required for 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 IFC employs a permit system based on hazard classification. The IFC is updated every three years, and is the basis for the California Fire Code (also updated triennially). Local jurisdictions, including Bay Area cities and counties, then adopt the California Fire Code, in some cases with local amendments.

### *National Fire Plan*

The Department of the Interior's National Fire Plan is intended to ensure an appropriate federal response to severe wildland fires, reduce fire impacts to rural communities, and ensure sufficient firefighting capacity in the future. The Rural Fire Assistance program is funded to enhance the fire protection capabilities of rural fire districts and safe and effective fire suppression in the wildland/urban interface. The program promotes close coordination among local, state, tribal, and federal firefighting resources by conducting training, equipment purchase, and prevention activities on a cost-shared basis.

## State Regulations

### *California Emergency Services Act*

The California Emergency Services Act provides the basic authority for conducting emergency operations following a proclamation of emergency by the governor and/or appropriate local authorities. Local government and district emergency plans are considered to be extensions of the California Emergency Plan, established in accordance with the Emergency Services Act. California Fire Code (CFC). The CFC is Chapter 9 of CCR Title 24. It is created by the California Building Standards Commission and it is based on the IFC created by the International Code Council. 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 hazard 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 three years.

### *California Unified Program Administration*

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs (see below). The Unified Program Administration and Advisory Group (UPAAG) was created to foster effective working partnerships between local, State and federal agencies. The UPAAG's goals and objectives are listed in the UPAAG Strategic Plan. The six programs are:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- California Accidental Release Prevention Program
- Underground Storage Tank Program
- Aboveground Petroleum Storage Act Program
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs
- California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements

The State agency partners involved in the Unified Program have the responsibility of setting program element standards, working with Cal/EPA on ensuring program consistency, and providing technical assistance to the certified unified program agencies. The following State agencies are involved with the Unified Program:

- **California Environmental Protection Agency.** The Secretary of the California Environmental Protection Agency is directly responsible for coordinating the administration of the Unified Program. The Secretary certifies Unified Program Agencies. The Secretary has certified 83 CUPAs to date. These 84 CUPAs carry out the responsibilities previously handled by approximately 1,300 State and local agencies.

- **Department of Toxic Substances Control.** DTSC provides technical assistance and evaluation for the hazardous waste generator program including onsite treatment (tiered permitting).
- **Governor's Office of Emergency Services.** The Governor's Office of Emergency Services is responsible for providing technical assistance and evaluation of the Hazardous Material Release Response Plan (Business Plan) Program and the California Accidental Release Response Plan (CalARP) Programs.
- **Office of the State Fire Marshal.** The Office of the State Fire Marshal is responsible for ensuring the implementation of the Hazardous Material Management Plans and the Hazardous Material Inventory Statement Programs. These programs tie in closely with the Business Plan Program.
- **State Water Resources Control Board.** The State Water Resources Control Board provides technical assistance and evaluation for the underground storage tank program in addition to handling the oversight and enforcement for the aboveground storage tank program.

Under Title 22 of the California Code of Regulations and the California Hazardous Waste Control Law, Chapter 6.5, DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. Both RCRA and the Hazardous Waste Control Law impose "cradle to grave" regulatory systems for handling hazardous waste in a manner that protects human health and the environment. Cal/EPA has delegated some of its authority under the Hazardous Waste Control Law to county health departments and other CUPAs.

### *California Human Health Screening Levels*

The California Human Health Screening Levels (CHHSLs) were developed as a tool to assist in the evaluation of contaminated sites for potential adverse threats to human health. Preparation of the CHHSLS was required by the California Land Environmental Restoration and Reuse Act of 2001 (SB 32 (Chapter 764, Statutes of 2001) (Cal-EPA 2005). The CHHSLs are concentrations of 54 hazardous chemicals in soil or soil gas the Cal/EPA considers to be below thresholds of concern for risks to human health. The CHHSLs were developed by OEHHA, an agency under the umbrella of Cal/EPA, and are contained in its report entitled *Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soil* (OEHHA and CEPA 2004). The thresholds of concern used to develop the CHHSLs are an excess lifetime cancer risk of one in 1 million and a hazard quotient of 1.0 for noncancer health effects. The CHHSLs were developed using standard exposure assumptions and chemical toxicity values published by USEPA and Cal/EPA. The CHHSLs can be used to screen sites for potential human health concerns where releases of hazardous chemicals to soils have occurred. Under most circumstances, the presence of a chemical in soil, soil gas, or indoor air at concentrations below the corresponding CHHSLs can be assumed to not pose a significant health risk to people who may live (residential CHHSLs) or work (commercial/industrial CHHSLs) at the site.

### *Emergency Response to Hazardous Materials Incidents*

The California Emergency Management Agency was established as part of the Governor's Office on January 1, 2009—created by Assembly Bill 38 (Nava), which merged the duties, powers, purposes, and responsibilities of the former Governor's Office of Emergency Services with those of the Governor's Office of Homeland Security.

Cal EMA is responsible for the coordination of overall State agency response to major disasters in support of local government. The Agency is responsible for assuring the State's readiness to respond to and recover from all hazards—natural, manmade, war-caused emergencies and disasters—and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts.

The State of California and local governments throughout the Bay Area have made significant investments in the planning and resources necessary to respond to natural and human-caused emergencies and disasters by recognizing the potential severities that may be possible. Consequently, the State of California Governor's Office of Emergency Services and its local government partners developed the Bay Area Regional Emergency Coordination Plan to provide a framework for collaboration and coordination during regional events. The Regional Emergency Coordination Plan (RECP) has been prepared in accordance with national and state emergency management systems and plans. The RECP provides an all hazards framework for collaboration among responsible entities and coordination during emergencies in the Bay Area. The RECP defines procedures for regional coordination, collaboration, decision-making, and resource sharing among emergency response agencies in the Bay Area.

The RECP does not replace existing emergency response systems. Rather, it builds on the Standardized Emergency Management System and the California State Emergency Plan to provide methods for cooperation among Operational Areas and the Governor's OES, Coastal Region. The RECP provides critical linkages to ensure that existing Bay Area emergency response systems work together effectively during the response to an event. In addition, the RECP complies with the requirements of the National Incident Management System and is consistent with the National Preparedness Goal.

### *Title 23 of the California Code of Regulations, Underground Storage Tank (UST) Act*

The UST monitoring and response program is required under Chapter 6.7 of the California Health and Safety Code and Title 23 of the CCR. The program was developed to ensure that the facilities meet regulatory requirements for design, monitoring, maintenance, and emergency response in operating or owning USTs. The County Department of Environmental Health is the local administering agency for this program.

### *Title 27 of the California Code of Regulations, Solid Waste*

Title 27 of the CCR contains a waste classification system that applies to solid wastes that cannot be discharged directly or indirectly to waters of the State and that, therefore, must be discharged to waste management sites for treatment, storage, or disposal. The California Integrated Waste Management Board and its certified local enforcement agency regulate the operation, inspection, permitting, and oversight of maintenance activities at active and closed solid waste management sites and operations.

### *SB 1889, Accidental Release Prevention Law/California Accidental Release Prevention Program*

SB 1889 required California to implement a new federally mandated program governing the accidental airborne release of chemicals promulgated under Section 112 of the Clean Air Act. Effective January 1, 1997, CalARP replaced the previous California Risk Management and Prevention Program and incorporated the mandatory federal requirements. CalARP addresses facilities that contain specified hazardous materials, known as "regulated substances," 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.

### *California Department of Transportation*

In addition to its role in planning and operating certain key parts of the roadway system serving the State, the California Department of Transportation (Caltrans) is involved in state aviation system planning and research through its Division of Aeronautics and its Office of Research and New Technology. Caltrans prepares and regularly updates the California Aviation System Plan, the vehicle by which Caltrans conducts continuous aviation system planning and guides aviation infrastructure investment priorities (Caltrans, 2003).

### *California State Aeronautics Act*

The purpose of the California State Aeronautics Act pursuant to Public Utilities Code Section 21001 et seq. "is to protect the public interest in aeronautics and aeronautical progress." The California Department of Transportation, Division of Aeronautics, administers much of this statute. The protection of public interest in aeronautics and aeronautical progress is achieved partly through:

- Fostering and promoting safety in aeronautics.
- Effecting uniformity of the laws and regulations relating to aeronautics consistent with federal aeronautics laws and regulations.
- Granting to a state agency powers, and imposing upon it duties, so that the state may properly perform its functions relative to aeronautics and effectively exercise its jurisdiction over persons and property, assist in the development of a statewide system of airports, encourage the flow of private capital into aviation facilities, and cooperate with and assist political subdivisions and others engaged in aeronautics in the development and encouragement of aeronautics.
- Establishing only those regulations which are essential and clearly within the scope of the authority granted by the Legislature, in order that persons may engage in every phase of aeronautics with the least possible restriction consistent with the safety and the rights of others.
- Providing for cooperation with the federal authorities in the development of a national system of civil aviation and for coordination of the aeronautical activities of those authorities and the authorities of this state.
- Assuring that persons residing in the vicinity of airports are protected to the greatest possible extent against intrusions by unreasonable levels of aircraft noise.
- Developing, in cooperation with the private sector, airport management, local jurisdictions, federal authorities, and the general public, informational programs to increase the understanding of current air transportation issues including, but not limited to, aviation safety, planning, airport noise, airport development and management, and the role of aviation in the economic development of the state, as an integral part of the state's transportation system.
- Sponsoring or cosponsoring, with representatives of the aerospace and aviation industry, aviation educational and informational seminars which meet the needs of pilots and other members of the industry for current information on aviation safety, planning, and airport development and management.

### *CEQA Section 21098*

CEQA Section 21098 requires lead agencies to submit a notice to the military service that would be affected by a proposed General Plan Amendment; project of statewide, regional, or areawide significance; or a project that must be referred to the airport land use commission when the project is located within specific boundaries of a low-level flight path, military impact zone, or special use airspace. Noticing is required when a Notice of Preparation of an EIR is issued and when environmental documents are released for public review. Government Code Section 65352 requires that, prior to action by a legislative body to adopt or substantially amend a general plan, the lead agency shall refer the proposed action to various entities, including the branches of the United States Military that have provided the Office of Planning and Research with a mailing address, when the proposed action is:

- Located within 1,000 feet of a military installation;
- Located beneath a low-level flight path; or
- Within special use airspace as defined in CEQA Section 21098.

### *Title 14 Division 1.5 of the California Code of Regulations*

CCR Title 14 Division 1.5 establishes the regulations for CAL FIRE and is applicable in all State Responsibility Areas—areas where CAL FIRE is responsible for wildfire protection. Most of the unincorporated areas of the Bay Area are State Responsibility Areas and any development in these areas must comply with these regulations. Among other things, Title 14 establishes minimum standards for emergency access, fuel modification, setback to property line, signage, and water supply.

### *Government Code Section 65962.5*

Government Code Section 65962.5 is commonly referred to as the "Cortese List" (after the Legislator who authored the legislation that enacted it). The list, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with the CEQA. However, because this statute was enacted over twenty years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented and, in some cases, the information to be included in the Cortese List does not exist.

Government Code § 65962.5 was originally enacted in 1985, and per subsection (g), the effective date of the changes called for under the amendments to this section was January 1, 1992. While Government Code Section 65962.5 makes reference to the preparation of a “list,” many changes have occurred related to web-based information access since 1992 and this information is now largely available on the Internet sites of the responsible organizations. A centralized list is no longer compiled and those requesting a copy of the Cortese “list” are now referred directly to the appropriate information resources contained on the Internet web sites of the boards or departments that are referenced in the statute.

# Impact Analysis

## IMPACT SIGNIFICANCE CRITERIA

Implementation of the proposed Plan would have a potentially significant adverse impact in the Bay Area if it would:

**Criterion 1:** Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

**Criterion 2:** Create a significant hazard to the public or the 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, would create a significant hazard to the public or the environment.

**Criterion 5:** Result in a safety hazard for people residing or working in the planning area for projects 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.

**Criterion 6:** Result in a safety hazard for people residing or working in the planning area for projects within the vicinity of a private airstrip.

**Criterion 7:** Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

**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.

## METHOD OF ANALYSIS

This program-level analysis of potential impacts associated with hazardous materials considers how implementation of the proposed Plan's changes to the land use pattern and transportation network may encounter hazardous materials through ground disturbances or demolition. In addition, changes in land use could result in changes in the transport, storage, and disposal of hazardous materials. Impacts are identified based on the nature of the proposed improvements as compared to currently existing conditions. Impacts are identified for the proposed Plan as a whole and for areas where new development or transportation infrastructure projects are proposed.

The analysis also includes an evaluation of proposed changes in land use patterns that would place development in proximity to major airports and wildfire areas. Safety hazards related to potential development within an airport land use plan area are addressed in general terms and focus on the major

airports in areas with highest projected growth (i.e., San Francisco, Oakland, and San José). The analysis also evaluates hazards associated with the Bay Area's busiest general aviation airports, such as Palo Alto, San Carlos, Reid-Hillview in San José, Gnoss Field in Novato, and Buchanan Field in Concord. The evaluation of hazards and hazardous materials impacts assumes that the construction and development under the proposed Plan will adhere to the latest federal, State, and local regulations, and conform to the latest required standards in the industry, as appropriate for individual projects.

## SUMMARY OF IMPACTS

Implementation of the proposed Plan would result in increased population and associated traffic that could result in increased transport, use, storage and disposal of hazardous materials. If not packaged, stored, handled, or disposed of in a manner that is appropriate for the materials in question, there could be adverse effects on human health or the environment. In addition, construction activities or new land uses in areas where previous activities have released hazardous materials or wastes into the subsurface, could expose workers, the public or the environment to adverse effects. New hazardous materials transport, use, storage, and disposal associated with the land use patterns and new transportation facility designs under the proposed Plan would be required to adhere to a strict regimen of hazardous materials regulations that are designed to minimize exposure. For historic releases of hazardous materials, project-specific studies will be necessary to determine the actual potential for significant impacts.

### Direct Impacts

Implementation of the improvements in the proposed Plan could result in both short term and long term impacts related to hazardous materials and wastes due to increases in hazardous materials needs and disturbance of potential historic releases during project construction. Direct short and long term impacts could result from upset and accident conditions that release hazardous materials and expose the public and the environment to adverse effects. Direct impacts could also be realized from individual projects that are sited near schools, interfere with airport operations, conflict with emergency plans, or are located adjacent to fire prone areas. However, existing regulatory requirements are in place to prevent adverse effects from any of these potential hazards.

### Indirect Impacts

The projected population increase in the Bay Area will result in more residents and increased travel on all modes of transportation. As a result, there would be an increased risk of exposure of people and property to the potentially damaging effects of hazardous materials or wastes if not managed appropriately. Chronic health effects can occur over long time periods of exposure to hazardous materials at relatively lower levels of exposure than where acute effects are observed. However, current standards of practice under the federal, State, and local regulatory framework have been developed to protect human health and the environment in accordance with recent scientific findings. In general, potential indirect adverse effects from hazardous materials are essentially the same as the direct impacts outlined above.

### Impact

**2.13-1: Implementation of the proposed Plan could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.**

### *Impacts of Land Use Projects*

Development associated with the proposed Plan would increase density and population, and would comprise a variety of land uses ranging from residential areas to commercial or industrial areas. New developments could include residential and commercial uses, including specific uses such as dry cleaners, gas stations, and certain industrial uses, all of which could involve routine transport, use, and disposal of hazardous materials such as household hazardous wastes (e.g., paints, cleaning supplies, solvents, and petroleum products) and commercial and industrial hazardous waste. Proposed land uses are identified in general terms, as the specific, parcel-level future land uses are not defined. Routine transportation, use or disposal of hazardous materials poses a potential risk to residents within the planning area by using trucks, rail, and other modes that are shared with the public, through direct contact, inhalation, or ingestion. Exposure to hazardous materials could cause various short-term and/or long-term health effects. Possible health effects could be acute (immediate, or of short-term severity), chronic (long-term, recurring, or resulting from repeated exposure), or both. Acute effects, often resulting from a single exposure, could result in a range of effects from minor to major, such as nausea, vomiting, headache, dizziness, or burns. Chronic exposure could result in systemic damage or damage to organs, such as the lungs, liver, or kidneys. Health effects would be specific to each hazardous material.

The operation of businesses that use, create, or dispose of hazardous materials is regulated and monitored by federal, state, and local regulations and policies to provide a high level of protection to the public and the environment from the hazardous materials manufactured within, transported to, and disposed within the region.

Therefore, hazardous materials impacts related to implementation of the proposed Plan at the regional and local level are potentially significant (PS) for Impact 2.13-1. Mitigation Measure 2.13(a) is discussed below.

### *Impacts of Transportation Projects*

Transportation projects in the proposed Plan include a variety of transportation modifications and improvements such as new Express Lanes, auxiliary lanes, roadway widening, increased transit service and expansion, and other maintenance and rehabilitation projects. The proposed projects and improvements may increase the capacity to transport hazardous materials. Roadway improvements in the proposed Plan would also improve road safety, as well as pedestrian and bicycle safety, thereby potentially reducing the potential for transportation-related hazardous materials risks.

Hazardous materials impacts related to transportation improvements from implementation of the proposed Plan are potentially significant (PS) for Impact 2.13-1. Mitigation Measure 2.13(a) is discussed below.

### *Combined Effects*

The combined effects of land use and transportation projects could increase the routine transport, use, storage, and disposal of hazardous wastes in the region. Therefore, the proposed Plan would have a potentially significant (PS) impact. Mitigation Measure 2.13(a) is discussed below.

### *Mitigation Measures*

Implementing agencies and/or project sponsors shall consider implementation of mitigations measures including but not limited to those identified below.

**2.13(a)** Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. To reduce the impacts associated with the routine transit, use, or disposal of hazardous materials, implementing agencies shall require project sponsors to comply with the Resource Conservation and Recovery Act, Title 22 of the California Code of Regulations, California Hazardous Waste Control Law, Cal/EPA requirements, HAZMAT training requirements, and any local regulations such as city or county Hazardous Materials Management Plans regulating the generation, transportation, treatment, storage, and disposal of hazardous materials and waste. For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to the transport, use, or disposal of hazardous materials.

### *Significance after Mitigation*

As stated in the *Environmental Setting*, RCRA, Title 22 of the CCR, and the Hazardous Waste Control Law regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. These laws impose regulatory systems for handling hazardous waste in a manner that protects human health and the environment, including requirements for the classification of materials, packaging, hazard communication, transportation, handling HAZMAT employee training, and incident reporting. Transport of hazardous materials is regulated by USDOT, through Caltrans and the California Highway Patrol (CHP). The California Health Services Department regulates the haulers of hazardous waste. A valid registration issued by the DTSC is required, unless specifically exempted, to transport hazardous wastes. The CHP also publishes a list of restricted or prohibited highways. Cal/EPA oversees the regulation and management of hazardous materials on a statewide level through DTSC. Use of hazardous materials on-site requires permits and monitoring to avoid hazardous waste release through the local CUPA. DTSC is responsible for the enforcement and implementation of hazardous waste laws and regulations, codified in Title 22 of the CCR. Additionally, businesses that generate hazardous waste are required to have an EPA identification number to monitor and track hazardous waste activities.

To the extent that an individual project adopts all feasible mitigation measures described above, the impact would be less than significant (LS). Projects taking advantage of CEQA Streamlining provisions of SB 375 (Public Resources Code sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure(s) described above to address site-specific conditions. Further, because the measure is tied to existing regulations that are law and binding on responsible agencies and project sponsors, it is reasonable to determine that they would be implemented. Therefore, with the incorporation of mitigation measure 2.13(a), the impact is found to be less than significant with mitigation (LS-M).

## Impact

**2.13-2: Implementation of the proposed Plan could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.**

### *Impacts of Land Use Projects*

As noted in Impact 2.13-1, regional land development associated with the proposed Plan would increase transport, use, and disposal of hazardous materials such as household hazardous wastes and commercial and industrial hazardous waste. With increases in hazardous materials, the potential for upset or accident conditions involving the release of hazardous materials into the environment may also be increased. For example, releases of gas or oil spilling from vehicle accidents or a tanker truck overturning on a highway could release substantial hazardous materials. Businesses that store small or large quantities of hazardous materials (e.g., service stations, gas storage facilities, chemical warehouses, etc.), could potentially experience accidents or upset conditions that result from transporting, pumping, pouring, emptying, injecting, spilling, and dumping or disposing, which could release hazardous materials into the environment. The severity of potential effects varies with the activity conducted and the concentration and type of hazardous materials involved. The possible adverse effects on the public or environment from these and other activities would more likely be acute (immediate, or of short-term severity) as a result of short-term exposure but in some cases could result in chronic or long-term effects.

Hazardous materials impacts related to land use changes from implementation of the proposed Plan at the regional and local level are considered potentially significant (PS) for Impact 2.13-2. Mitigation Measure 2.13(b) is discussed below.

### *Impacts of Transportation Projects*

The proposed transportation projects involve the expansion or extension of the transportation system (e.g., new Express Lanes, auxiliary lanes, roadway widening, increased transit service, and other maintenance and rehabilitation projects), which may increase the capacity to transport hazardous materials. Any increases in hazardous material transport could conceivably result in increased upset and accident conditions. Transportation improvements that expand the transportation system and extend it to new areas expose more adjoining land uses to risks associated with risk of upset on the roadway, highway, or railroad.

Hazardous materials impacts related to transportation improvements from implementation of the proposed Plan at a regional and local level would be potentially significant (PS) for Impact 2.13-2. Mitigation Measure 2.13(b) is discussed below.

### *Combined Effects*

The combined effects of development and transportation projects could increase the routine transport, use, storage, and disposal of hazardous wastes in the planning area and as a result increase the potential for unintentional upset and accident conditions. Therefore, the proposed Plan would have a potentially significant (PS) impact. Mitigation Measure 2.1(b) is discussed below.

### *Mitigation Measures*

Implementing agencies and/or project sponsors shall consider implementation of mitigations measures including but not limited to those identified below.

**2.13(b)** Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. To reduce the impacts associated with the release of hazardous materials into the environment,

implementing agencies shall require project sponsors to comply with Senate Bill 1889, Accidental Release Prevention Law/California Accidental Release Prevention Program (CalARP) regulating the generation, transportation, treatment, storage, and disposal of hazardous materials and waste. In addition, project sponsors shall comply with United States Department of Transportation regulations regarding the transport of hazardous materials and wastes such that accidental upset conditions are minimized. For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to upset and accident conditions involving the release of hazardous materials into the environment.

### *Significance after Mitigation*

Local government jurisdictions are required to adopt emergency plans, which are considered to be extensions of the California Emergency Plan, established in accordance with the Emergency Services Act. Cal EMA administers the Emergency Response Plan to respond to hazardous materials incidents that may occur. CalARP, established by the EPA, applies to a wide variety of facilities that contain regulated substances and aims to prevent accidental releases of hazardous materials into the environment through adoption of proper storing, containing, and handling procedures.

To prevent or minimize the accidental release of hazardous materials into the environment, precautions—such as proper securing of the materials and proper container design—are required by CalARP. CalARP also manages risks associated with accidental release through development of its programs and requirements. CHP also publishes a list of restricted or prohibited highways. In addition, roadway improvements in the proposed Plan would generally improve road safety, thereby reducing the potential for accidents related to hazardous materials. The USDOT enforces the HMTA by regulating transportation of hazardous materials by truck and rail, and governs every aspect of the movement of hazardous materials from packaging, to labeling and shipping.

With implementation of federal, State, and local requirements such as CalARP, the Regional Emergency Coordination Plan (RECP), USDOT, and Caltrans regulations would minimize potential exposure to the public and the environment from accidental releases.

To the extent that an individual project adopts all feasible mitigation measures described above, the impact would be less than significant (LS). Projects taking advantage of CEQA Streamlining provisions of SB 375 (Public Resources Code sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure(s) described above to address site-specific conditions. Further, because the measure is tied to existing regulations that are law and binding on responsible agencies and project sponsors, it is reasonable to determine that they would be implemented. Therefore, with the incorporation of mitigation measure 2.13(b), the impact is found to be less than significant with mitigation (LS-M).

## Impact

**2.13-3: Implementation of the proposed Plan could result in hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.**

### *Impacts of Land Use Projects*

As noted above, development associated with the land use plan would increase density and population through a variety of different land uses. This increase could result in an increase in hazardous materials

use which in turn increases the potential for hazardous emissions within one-quarter mile of an existing or proposed school. Children are particularly susceptible to long-term impacts from emissions of hazardous materials including those from high-volume motor vehicle travel on roadways near schools. There are numerous schools located throughout the San Francisco Bay Area region and new ones that will be built over the course of the proposed Plan timeframe.

Therefore, hazardous materials impacts related to land use changes from implementation of the proposed land use plan at the regional and local level are considered potentially significant (PS) for Impact 2.13-3. Mitigation Measure 2.13(c) is discussed below.

### *Impacts of Transportation Projects*

The proposed transportation projects could include transportation system expansions or other improvements near schools. These transportation improvements may increase the capacity to transport hazardous materials. Therefore, the hazardous materials impacts related to transportation improvements from implementation of the proposed transportation projects at the regional and local level are considered potentially significant (PS) for Impact 2.13-3. Mitigation Measure 2.13(c) is discussed below.

### *Combined Effects*

The combined effects of development and transportation projects could increase the routine transport, use, storage, and disposal of hazardous wastes in the vicinity of new or proposed schools. Therefore, the proposed Plan would have a potentially significant (PS) impact. Mitigation Measure 2.13(c) is discussed below.

### *Mitigation Measures*

Implementing agencies and/or project sponsors shall consider implementation of mitigations measures including but not limited to those identified below.

**2.13(c)** Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. To reduce the impacts associated with handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed schools, implementing agencies shall require project sponsors to comply with DTSC School Property Evaluation and Cleanup Division regulations regarding the cleanup of existing contamination at school sites and requirements for the location of new schools that would minimize potential exposure of hazardous emissions to students, staff, and visitors to existing and planned school sites. For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to hazardous materials near schools.

### *Significance after Mitigation*

DTSC has created the School Property Evaluation and Cleanup Division that is responsible for assessing, investigating, and cleaning up proposed school sites. This Division ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who will occupy a new school. All proposed school sites that will receive State funding for acquisition or construction are required to go through a rigorous environmental review and cleanup process under DTSC's oversight.

School districts also conduct environmental assessments to provide basic information for determining if there has been a release of hazardous material at the sites, or if a naturally occurring hazardous material that presents a risk to human health or the environment may be present. Impacts 2.13-1 and 2.13-2 document an extensive set of existing federal and state regulations controlling emissions and the handling of hazardous materials. Through the environmental review process, DTSC ensures protection of children, staff and the environment from the potential effects of exposure to hazardous materials. Additionally, individual hazardous materials emitters or handlers must adhere to permitting requirements (CEQA Section 21151.4) that require evaluation and notification of where potential materials handling and emissions could occur within one-quarter mile proximity of existing or proposed schools.

For transportation impacts, these impacts are addressed through CalARP, which manages risks associated with accidental release, and CEQA Section 21151.4. To prevent or minimize the accidental release of hazardous materials into the environment, precautions such as proper securing of the materials and container design are required by CalARP. California Vehicle Code and CHP outline general routing and parking restrictions for hazardous material and hazardous waste shipments; the CHP also publishes a list of restricted or prohibited highways. Additionally, roadway improvements in the proposed Plan would improve road safety, thereby reducing the potential for accidents in proximity of schools related to hazardous materials.

To the extent that an individual project adopts all feasible mitigation measures described above, the impact would be less than significant (LS). Projects taking advantage of CEQA Streamlining provisions of SB 375 (Public Resources Code sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure(s) described above to address site-specific conditions. Further, because the measure is tied to existing regulations that are law and binding on responsible agencies and project sponsors, it is reasonable to determine that they would be implemented. Therefore, with the incorporation of mitigation measure 2.13(c), the impact is found to be less than significant with mitigation (LS-M).

## Impact

**2.13-4: Implementation of the proposed Plan could result in projects 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, would create a significant hazard to the public or the environment.**

### *Impacts of Land Use Projects*

Throughout the Planning Area there are many sites where historical releases of hazardous materials or wastes have occurred; these are listed in environmental databases pursuant to Government Code Section 65962.5. These sites can range from small releases that have had localized effects on private property which have already been remediated to large scale releases from long term historical industrial practices that have had wider ranging effects on groundwater. Development of vacant or previously developed lots that have been impacted by petroleum hydrocarbons from leaking underground storage tanks or other chemical constituents could expose individuals to hazardous conditions at the site or on neighboring properties that involve the use of hazardous materials or hazardous wastes.

A common practice and typically required by lending institutions when properties change hands is for a Phase I Environmental Site Assessment (ESA) to be prepared in order to research and disclose the prior uses of the site and the likelihood that residual hazardous materials and/or waste might be present in

underlying soil and/or groundwater. Also, in many instances implementing agencies will require submittal of a Phase I report prior to approval or implementation of a project. These studies include research in a variety of government databases to determine whether the site has had prior underground tanks or other industrial uses that could result in hazardous materials on or below the ground surface.

The American Society for Testing and Materials has developed widely accepted practice standards (ASTM E-1527-05) for the preparation of Phase I ESAs. These include an on-site visit to determine current conditions; an evaluation of possible risks posed by neighboring properties; interviews with persons knowledgeable about the site's history; an examination of local planning files to check prior land uses and permits granted; file searches with appropriate agencies having oversight authority relative to water quality and/or soil contamination; examination of historic aerial photography of the site and adjacent properties; a review of current topographic maps to determine drainage patterns; and an examination of chain-of-title for environmental lines and/or activity and land use limitations. Preparation of and compliance with a Phase I ESA for properties at risk of potential hazardous materials and/or waste contamination will avoid adverse impacts associated with build-out of land uses. If a Phase I ESA indicates the presence, or potential presence of contamination, a site-specific Phase II ESA could then test soil and/or groundwater. Based on the outcome of a Phase II ESA, remediation of contaminated sites under federal and State regulations, administered at the local level, could be required prior to development. Phase I ESA's can also be used to identify the potential for presence of hazardous building materials in situations where older structures intended for demolition could contain lead-based paint, asbestos containing materials, mercury, or polychlorinated biphenyls.

In addition, construction activities that disturb subsurface materials could encounter previously unidentified contamination from past practices or placement of undocumented fill or even unauthorized disposal of hazardous wastes. Encountering these hazardous materials could expose workers, the public or the environment to adverse effects depending on the volume, materials involved, and concentrations. Soil Management Plans or Soil Contingency Plans can include procedural measures to protect and isolate suspected contaminated materials to avoid adverse effects to the workers or public. Soil Management Plans can also be used to identify appropriate procedures that minimize disturbance of any naturally occurring asbestos in subsurface materials.

There is no regulatory requirement to conduct a Phase I ESA or Phase II ESA, nor requirements for soil management contingency plans in the event of encountering hazardous materials. Therefore, the hazard impacts related to land use changes from the implementation of the proposed Plan at the regional and local level are considered potentially significant (PS) for Impact 2.13-4. See Mitigation Measure 2.13(d) below.

### *Impacts of Transportation Projects*

Transportation projects under the proposed Plan would include earthwork activities that would disturb underlying soils and possibly groundwater during construction potentially resulting in exposure to previously released hazardous materials. As with land use projects and development, exposure to these hazardous materials and wastes could cause adverse effects to construction workers, the public, or the environment.

As described above, a common practice when property changes hands for the purpose of development is the preparation of a Phase I ESA in order to research and disclose the prior uses of the site and the likelihood that residual hazardous materials and/or waste might be present. In many instances

implementing agencies will require submittal of a Phase I report prior to approval of or implementation of a project.

Preparation of and compliance with a Phase I ESA for properties at risk of potential hazardous materials and/or waste contamination would avoid adverse impacts associated with build-out of transportation uses. If a Phase I ESA indicates the presence, or potential presence of contamination, a site-specific Phase II ESA could then test soil and/or groundwater. Based on the outcome of a Phase II ESA, remediation of contaminated sites under federal and State regulations, administered at the local level, could be required prior to development.

In addition, construction activities that have soil contingency plans in place can avoid potential exposure of unidentified hazardous materials if suspected contaminated subsurface materials are handled appropriately.

As mentioned above, not all proposed transportation projects will necessarily include a Phase I ESA, Phase II ESA, or soil management contingency plan and therefore the hazard impacts related to transportation improvements from implementation of the proposed Plan at the regional level are considered potentially significant (PS) for Impact 2.13-4. See Mitigation Measure 2.13(d) below.

### *Combined Effects*

The potential for encountering hazardous materials or wastes would be dependent on site-specific conditions. The potential impact is considered potentially significant (PS) for Impact 2.13-4. See Mitigation Measure 2.13(d) below.

### *Mitigation Measures*

Implementing agencies and/or project sponsors shall consider implementation of mitigations measures including but not limited to those identified below.

**2.13(d)** Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:

- Determining whether specific land use and transportation project sites are listed as a hazardous materials and/or waste site pursuant to Government Code Section 65962.5.
- Requiring preparation of a Phase I ESA in accordance with the American Society for Testing and Materials' ASTM E-1527-05 standards for any listed sites or sites with the potential of residual hazardous materials and/or waste as a result of location and/or prior uses. For work requiring any demolition or renovation, the Phase I ESA shall make recommendations for any hazardous building materials survey work that shall be done.
- Implementing recommendations included in a Phase I ESA prepared for a site.
- If a Phase I ESA indicates the presence or likely presence of contamination, the implementing agency shall require a Phase II ESA, and recommendations of the Phase II ESA shall be fully implemented.
- For work requiring any demolition or renovation, the Phase I ESA shall make recommendations for any hazardous building materials survey work that shall be done.

- Requiring construction contractors to prepare and implement soil management contingency plans which provide procedural guidance on the handling, notification, and protective measures to be taken in the event of encountering suspected contamination or naturally occurring asbestos.

### *Significance after Mitigation*

Projects taking advantage of CEQA Streamlining provisions of SB 375 (Public Resources sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measures described above, as feasible, to address site-specific conditions. To the extent that an individual project adopts and implements all feasible mitigation measures described above, the impact would be less than significant with mitigation (LS-M).

MTC/ABAG cannot require local implementing agencies to adopt the above mitigation measures, and it is ultimately the responsibility of a lead agency to determine and adopt mitigation. Therefore it cannot be ensured that this mitigation measure would be implemented in all cases, and this impact remains significant and unavoidable (SU).

## Impact

**2.13-5: Implementation of the proposed Plan could result in a safety hazard for people residing or working in the planning area for projects 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.**

### *Impacts of Land Use Projects*

As noted above in the setting, there are 26 public use airports in the Bay Area that serve commercial and general aviation users (shown in **Table 2.13-2** and **Figure 2.13-2).** Land development associated with the proposed Plan would likely occur in and near airport flight corridors and within areas subject to policies contained in an ALUCP. PDA areas intersect airport influence areas for the three major airports (San Francisco, Oakland, and San José) as well as those for San Carlos, Hayward, Reid-Hillview in San José, Buchanan Field in Concord, Moffett Airfield, Travis Air Force Base, Nut Tree Airport in Vacaville, and Livermore. Development that is not compatible with aviation activity (e.g., tall structures, land uses that produce glint/glare, land uses that attract wildlife that can be hazardous to aircraft, noise sensitive land uses, etc.) may lead to conflict between an airport operator and surrounding communities as well as create long-term operational problems for the airport. In California, potential hazards to airport operations are generally regulated by the Federal Aviation Administration (FAA) (14 Code of Federal Regulations Part 77 (14 CFR Part 77)), with local planning and evaluation of proposed projects (in terms of a proposed project's compatibility in relationship to air and ground operations and the safety of the public) under the authority of the applicable Airport Land Use Commission through ALUCPs.

Potential adverse hazard impacts related to land use changes from implementation of the proposed Plan are considered potentially significant (PS) for Impact 2.13-5. Mitigation Measure 2.13(e) is discussed below.

### *Impacts of Transportation Projects*

For proposed transportation projects that would lie within or intersect an airport influence area or be located within two miles of an airport, there could potentially be incompatibility issues with the associated ALUCP. Transportation projects are located within two miles of all three major airports (San Francisco, Oakland, and San José) as well as Hayward, Reid-Hillview in San José, San Carlos, Livermore, Buchanan, Moffett Airfield, and Travis Air Force Base. However, improvements included in the proposed Plan are more likely to improve safety (through improvements to the roadway network and public transportation) than cause hazards or interfere with airport operations.

Nonetheless, potential adverse hazard impacts related to transportation improvements from the proposed Plan are considered potentially significant (PS) for Impact 2.13-5. Mitigation Measure 2.13(e) is discussed below.

### *Combined Effects*

Both land use development and transportation projects would have a potentially significant (PS) impact. Mitigation Measure 2.13(e) is discussed below.

### *Mitigation Measures*

Implementing agencies and/or project sponsors shall consider implementation of mitigations measures including but not limited to those identified below.

**2.13(e)** Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. To reduce the impacts associated with people residing or working in the planning area for projects 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, implementing agencies shall require project sponsors to comply with any applicable Airport Land Use Compatibility Plan requirements as well as any Federal Aviation Administration (14 CFR Part 77) requirements. Projects shall not be approved by local agencies until project design plans have been reviewed and approved by the Airport Land Use Commission such that proposed projects would not adversely affect subject airport operations. For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to development near a public airport.

### *Significance after Mitigation*

The proposed land uses that fall within ALUCP zones and boundaries could potentially result in adverse safety hazard impacts, as discussed above. Implementing agencies are responsible for analyzing compliance with ALUCPs as a part of their land use approval authority. CEQA Section 21096 requires that when preparing an environmental impact report for any project situated within an airport influence area as defined in an ALUC compatibility plan (or, if a compatibility plan has not been adopted, within two nautical miles of a public-use airport), lead agencies shall utilize the California Airport Land Use Planning Handbook as a technical resource with respect to airport noise and safety compatibility issues.

Military airfields, such as Travis Air Force Base and Moffett Airfield, are required to adopt Air Installation Compatible Use Zone (AICUZ) studies to evaluate compatible land uses in the vicinity of military airfields. Hazards associated with development in the proximity of military airports would be

reduced through CEQA Section 21098. The FAA also requires notice of proposed construction for projects located within 20,000 feet (less for runways under 3,200 feet in length) of a public use airport, and other projects that may pose a potential hazard for people residing or working in the project area, due to height, visual hazard, or the attraction of wildlife.

To the extent that an individual project adopts all feasible mitigation measures described above, the impact would be less than significant (LS). Projects taking advantage of CEQA Streamlining provisions of SB 375 (Public Resources Code sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure(s) described above to address site-specific conditions. Further, because the measure is tied to existing regulations that are law and binding on responsible agencies and project sponsors, it is reasonable to determine that they would be implemented. Therefore, with the incorporation of mitigation measure 2.13(e), the impact is found to be less than significant with mitigation (LS-M).

## Impact

**2.13-6: Implementation of the proposed Plan could result in a safety hazard for people residing or working in the planning area for projects within the vicinity of a private airstrip.**

### *Impacts of Land Use Projects*

Implementation of the proposed Plan could result in development located in the vicinity of private airstrips, creating hazards from tall structures, glare-producing objects, bird and wildlife attractants, radio waves from communication centers, or other features that have the potential to interfere with take-off or landing procedures and pose a risk to aircrafts and the public. However, the activity level and accessibility of private airstrips is typically very limited, and these airstrips affect less land than public airports, thus the safety hazards are comparatively less than public or public use airports. Nonetheless the potential for adverse private airstrip impacts related to land use changes from implementation of the proposed Plan at the regional and local level is considered potentially significant (PS) for Impact 2.13-6. Mitigation Measure 2.13(f) is discussed below.

### *Impacts of Transportation Projects*

In general, many of the transportation projects such as roadway widening and addition of express lanes would have no impact on airstrip operations but some may be subject to regulatory compliance.

The potential for adverse private airstrip impacts related to changes from implementation of the proposed transportation projects at the regional and local level is considered potentially significant (PS) for Impact 2.13-6. Mitigation Measure 2.13(f) is discussed below.

### *Combined Effects*

Potential impacts related to projects located in the vicinity of private airstrips would be potentially significant (PS). Mitigation Measure 2.13(f) is discussed below.

### *Mitigation Measures*

Implementing agencies and/or project sponsors shall consider implementation of mitigations measures including but not limited to those identified below.

**2.13(f)** Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. To reduce impacts associated with people residing or working in the planning area for projects within the vicinity of a private airstrip implementing agencies shall require project sponsors to comply with any applicable local land use regulations and federal aviation guidelines as well as any Federal Aviation Administration (14 CFR Part 77) requirements applicable to projects located within two miles of a private airstrip. Projects shall not be approved by local agencies until project design plans can demonstrate compliance with subject airstrip, local and federal aviation requirements. For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to development near a private airstrip.

### *Significance after Mitigation*

Implementing agencies are responsible for analyzing safety and compatibility issues associated with approval of land use and transportation project development proximate to private airstrips for which operation is to continue. Furthermore, Caltrans requires operators to obtain a permit from the Division of Aeronautics prior to air operations, and FAA regulation (14 C.F.R. Section 77) includes provisions that apply to public as well as private airstrips. Although the regulatory environment for private airstrips is not as explicit as for public airstrips, adherence to state and local permits, existing regulations, and FAA requirements would reduce the potential for a safety hazard for people residing or working in the vicinity of private airstrips.

To the extent that an individual project adopts all feasible mitigation measures described above, the impact would be less than significant (LS). Projects taking advantage of CEQA Streamlining provisions of SB 375 (Public Resources Code sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure(s) described above to address site-specific conditions. Further, because the measure is tied to existing regulations that are law and binding on responsible agencies and project sponsors, it is reasonable to determine that they would be implemented. Therefore, with the incorporation of mitigation measure 2.13(f), the impact is found to be less than significant with mitigation (LS-M).

## Impact

**2.13-7: Implementation of the proposed Plan could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.**

### *Impacts of Land Use Projects*

By 2040, the region is projected to support an additional two million residents and 1.1 million new jobs. Implementation of the proposed Plan would focus growth in PDAs and as a result would result in relatively more compact development compared to existing conditions.

Public service standards, performance measures, and related policies are usually set in city and county general plans. For fire, police, and emergency services these standards usually take the form of response times or service ratios. To meet increased demand, existing facilities would likely need additional personnel and equipment to maintain adequate service levels. In some cases, depending on the pattern of development, it might be necessary to construct new facilities to maintain adequate response times, capital capacity, equipment, and personnel. Given that no specific locations for such facilities can be identified at this time, it would be speculative to attempt to analyze the impacts of such construction.

Emergency response and emergency evacuation plans are designed by the Office of Emergency Services for each county in the region to respond to a possible emergency situation (e.g., fires, floods, earthquakes, etc.). These plans cover all of the land within the region including both incorporated and unincorporated areas. These plans provide a process for evacuating people from danger, preventing or minimizing loss of life and property. The management of emergency and emergency evacuation plans includes regular updates to these plans that incorporate new or proposed developments into the plans. Development under the proposed Plan would increase population and residential densities which would be reflected in updated emergency and evacuation plans.

Therefore, given the emergency plans and programs in place on a countywide and individual jurisdictional basis, and the project-level review required for all individual projects to ensure adequate levels of emergency response, the potential for adverse emergency services and emergency evacuation plan impacts related to land use changes from the implementation of the proposed Plan at the regional level are considered less than significant (LS) for Impact 2.13-7. No mitigation is required.

### *Impacts of Transportation Projects*

The proposed transportation projects would include improvements to existing networks through construction of new Express Lanes, auxiliary lanes, roadway widening, increased transit service, and other transit projects that would generally increase circulation capacity and thereby have the potential to improve response times for police, fire, and emergency service providers, especially in heavily-congested areas where such projects will strive to alleviate bottlenecks and reduce congestion. Overall, congestion for the region is projected to increase over the proposed Plan time horizon, with total vehicle hours of delay increasing by 49 percent and the average delay per vehicle increasing from 4.6 to 5.6 minutes. Regardless, emergency and evacuation plans are regularly updated to incorporate current conditions and the proposed transportation projects do not otherwise physically interfere with emergency or evacuation plans. Also, with implementation of the proposed transportation projects that include improved transit opportunities, more people would be able to move through the regional transportation system and implementation of the proposed transportation projects will result in the construction of roadway projects that coincide with new housing and employment developments, thereby facilitating efficient access to these developments by public service providers.

Transit projects could also increase the size of the service areas of police, fire, and emergency services providers, as new stations and transfer points will require patrolling in order to maintain public safety. Development of proposed transportation projects in the region would improve overall transportation system efficiency and in some instances improve capacity. As such, the transportation projects in the proposed Plan would have beneficial effects on emergency response and evacuation.

Therefore, with the improved transportation system efficiency, the potential for adverse emergency services and emergency evacuation plan impacts related to transportation improvements from the implementation of the proposed Plan at the regional and local level is considered less than significant (LS) for Impact 2.13-7. No mitigation is required.

### *Combined Effects*

Both land use and transportation projects would be subject to implementation of State and federal regulations as well as local/regional requirements for adequate emergency response and emergency evacuation plans, such as those required by the California Emergency Services Act and California

Emergency Management Agency. These plans are periodically updated and would include measures that would accommodate growth associated with the proposed Plan. Therefore, potential impacts related to interference with emergency response and evacuation plans would be less than significant (LS) impact. No mitigation is required.

### *Mitigation Measures*

None required.

## Impact

**2.13-8: 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.**

### *Impacts of the Land Use Projects*

Wildfires can cause injury, loss of life, and significant damage to property if conditions are present such that they spread quickly across large areas. Land development under the proposed Plan could pose a hazard if it results in the loss, injury, or death and damage to property adjacent to wildlands or where residences are intermixed with wildlands.

In general, PDAs are located within urbanized areas not immediately adjacent to upland areas where there is more of a wildfire threat. However, as was experienced in 1991 during the East Bay Hills fire, loss of life and significant damage can occur in relatively urbanized areas that are adjacent to open space areas with high fuels (e.g., dry vegetation). A list of PDAs—where the majority of land use changes would occur under the proposed Plan—located within a fire hazard zone is provided in Appendix I. According to this data, 8 PDAs are located within or partially within wildfire hazard zones ranging from moderate to very high.

Therefore, the potential for wildland fire hazard impacts related to land use changes from implementation of the proposed Plan at the regional and local level are considered potentially significant (PS) for Impact 2.13-8. Mitigation Measure 2.13(g) is discussed below.

### *Impacts of Transportation Projects*

The proposed transportation projects generally involve the expansion or extension of the transportation system, which is not typically considered to be at risk from wildland fires in terms of potential injury, loss of life, or damage to improvements. Transportation improvements that expand the transportation system into new areas or areas closer to open spaces with higher fire hazards, however, can expose more urban-adjoining land uses to risks associated with wildland fires, although they would also provide better access to evacuate should a wildfire occur. The sum total of linear mileage of proposed transportation projects located within moderate to very high hazard areas for the entire proposed Plan is approximately 155 miles. The full list of transportation projects located within wildfire hazard zones ranging from moderate to very high is provided in Appendix I.

Transportation improvements, especially capacity improvements, generally improve the transportation network to move people more efficiently, in case there is a need to evacuate due to a wildfire. The potential for wildfire hazard impacts related to improvements associated with the transportation projects

in the proposed Plan at the regional and local level is considered potentially significant (PS) for Impact 2.13-8. Mitigation Measure 2.13(g) is discussed below.

### *Combined Effects*

Both land use development and transportation projects would have a potentially significant (PS) impact. Mitigation Measure 2.13(e) is discussed below.

### *Mitigation Measures*

Implementing agencies and/or project sponsors shall consider implementation of mitigations measures including but not limited to those identified below.

**2.13(g)** Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. To reduce wildland fire impacts, implementing agencies shall require project sponsors to comply with safety measures that minimize the threat of fire as stated in the California Fire Code as well as compliance with Title 14 of the California Code of Regulations, Division 1.5 to minimize exposing people and structures to loss, injury, or death and damage. Projects shall not be approved by local agencies until project design plans can demonstrate compliance with fire safety requirements. For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to wildfire hazards.

### *Significance after Mitigation*

New construction is subject to the California Fire Code, which includes safety measures to minimize the threat of fire. The threat of wildfires from development of areas or transportation improvements within CAL FIRE's responsibility, which include non-federal lands in unincorporated areas with watershed value, is addressed through compliance with Title 14 of the CCR, Division 1.5 to minimize exposing people and structures to loss, injury, or death and damage. Title 14 sets forth the minimum development standards for emergency access, fuel modification, setback, signage, and water supply, which help prevent damage to structures or people by reducing wildfire hazards.

In addition, wildfire prevention is a shared responsibility between federal, State, and local agencies including local city and county fire departments. Federal lands fall under Federal Responsibility Areas, most of the unincorporated areas of the Bay Area are State Responsibility Areas, and generally all incorporated areas and some unincorporated lands are classified as Local Responsibility Areas which are typically addressed by city and county fire departments. The National Fire Plan does provide the necessary coordination between agencies in areas of federal lands. However, the majority of the Planning Area is covered by CAL FIRE and local fire agencies.

To the extent that an individual project adopts all feasible mitigation measures described above, the impact would be less than significant (LS). Projects taking advantage of CEQA Streamlining provisions of SB 375 (Public Resources Code sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure(s) described above to address site-specific conditions. Further, because the measure is tied to existing regulations that are law and binding on responsible agencies and project sponsors, it is reasonable to determine that they would be implemented. Therefore, with the incorporation of mitigation measure 2.13(g), the impact is found to be less than significant with mitigation (LS-M).