

I. HAZARDS AND HAZARDOUS MATERIALS

This chapter describes hazards and hazardous materials¹ within the vicinity of the Larkspur SMART Station Area Plan (Plan) area that could pose a significant threat to human health or the environment. The impacts and mitigation measures section defines the criteria of significance and identifies potential impacts and mitigation measures related to hazards and hazardous materials in the Plan area.

1. Setting

The setting section describes existing conditions in the Plan area, including pertinent federal, State, and local agency laws, regulations, and programs related to hazards and hazardous materials.

a. Hazardous Materials. In other sections of this Draft EIR, the regulatory section follows a description of the existing conditions. However, because the regulatory framework provides a key description of what constitutes hazardous materials, the regulatory framework discussion precedes a description of the existing conditions in this section.

(1) Regulatory Framework. Products as diverse as gasoline, paint, solvents, household cleaning products, refrigerants, and radioactive substances are categorized as hazardous materials. The proper management of hazardous materials is a common concern for all communities. Beginning in the 1970s, governments at the federal, State, and local levels became increasingly concerned about the effects of hazardous materials on human health and the environment. Numerous laws and regulations were developed to investigate and mitigate these effects. As a result, the storage, use, generation, transport, and disposal of hazardous materials are highly regulated by federal, State, and local laws and regulations. These agencies and information about the laws, regulations, and programs they administer are summarized below.

Federal Regulations. The U.S. Environmental Protection Agency (EPA) is the lead agency responsible for enforcing federal laws and regulations governing hazardous materials that affect public health or the environment. The major federal laws and regulations enforced by the EPA include: the Resource Conservation and Recovery Act (RCRA); the Toxic Substances Control Act (TSCA); the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); and the Superfund Amendments and Reauthorization Act (SARA).

In 1976, RCRA was enacted to provide a general framework for the EPA to regulate hazardous waste from the time it is generated until its ultimate disposal. In accordance with RCRA, facilities that generate, treat, store, or dispose of hazardous waste are required to ensure that the wastes are properly managed from “cradle to grave.”

¹ The California Health and Safety Code defines a hazardous material as “... any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, radioactive materials, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.” (Health and Safety Code, Section 25501).

In 1976, TSCA was enacted to provide the EPA authority to regulate the production, importation, use, and disposal of chemicals that pose a risk of adversely impacting public health and the environment, such as polychlorinated biphenyls (PCBs), asbestos-containing materials (ACM), and lead-based paint. TSCA also gives the EPA authority to regulate the cleanup of sites contaminated with specific chemicals, such as PCBs.

In 1980, CERCLA, commonly known as the Superfund, was enacted to ensure that a source of funds was available for the EPA to remediate uncontrolled or abandoned hazardous materials release sites that pose a risk of adversely impacting public health and the environment. Prohibitions and requirements regarding closed or abandoned hazardous waste sites and liability standards for responsible parties were also established by CERCLA. In 1986, SARA amended CERCLA to increase the Superfund budget, modify contaminated site cleanup criteria and schedules, and revise settlement procedures.

While the EPA regulates overall use and cleanup of hazardous materials, the U.S. Department of Transportation (DOT) is the federal administering agency responsible for hazardous materials transportation regulations. The DOT Office of Hazardous Materials Safety oversees a national safety program to minimize the risks related to commercial transportation of hazardous materials. The federal hazardous materials transportation law is the basic statute regulating hazardous materials transportation in the United States.² Federal hazardous materials transportation regulations are contained in 49 Code of Federal Regulations (CFR) Parts 171-180. In California, the California Department of Transportation (Caltrans) is the implementing agency for DOT laws and regulations.

Worker health and safety is protected by federal and State laws and regulations. The Occupational Health and Safety Administration (OSHA) is the federal agency responsible for enforcement and implementation of federal laws and regulations pertaining to worker health and safety. Under OSHA jurisdiction, the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations require training and medical supervision for workers at hazardous waste sites.³ Additional regulations have been developed for construction workers regarding exposure to lead and asbestos during construction activities.⁴ State regulations pertaining to worker health and safety are discussed below.

Other relevant federal laws include the Hazardous and Solid Waste Amendments Act (HSWA) regarding hazardous waste management, the Toxic Substances Control Act (TSCA), pertaining to the tracking and screening of industrial chemicals, and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), which controls pesticide distribution, sale and use. Applicable federal regulations and guidelines are contained primarily in CFR Titles 10, 29, 40, and 49.

State Regulations. In California, the EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (Cal/EPA). The mission of Cal/EPA is to restore, protect, and enhance the environment to ensure public health, environmental quality, and economic vitality. Under the authority of Cal/EPA, the Department of

² United States Code of Federal Regulations, Title 49, Section 5101 et seq.

³ United States Code of Federal Regulations, Title 29, Section 1910.120.

⁴ United States Code of Federal Regulations, Title 29, Sections 1926.62 and 1926.1101.

Toxic Substances Control (DTSC) and the San Francisco Bay Regional Water Quality Control Board (Water Board) are responsible for overseeing the cleanup of contaminated soil and groundwater sites in the Plan area. Water Board regulations applicable to hazardous materials are contained in Title 27 of the California Code of Regulations (CCR). Additional State regulations applicable to hazardous materials are contained in CCR Title 22. CCR Title 26 is a compilation of those sections or titles of the CCR that are applicable to hazardous materials.

The California Department of Industrial Relations, Division of Occupational Safety and Health (DOSH), enforces State worker health and safety regulations related to construction activities. Regulations include exposure limits, protective clothing, and training requirements to prevent exposure to hazardous materials. DOSH also enforces occupational health and safety regulations specific to lead and asbestos investigations and abatement, which equal or exceed their federal counterparts.⁵

Local Regulations. The routine management of hazardous materials in California is administered under the Unified Program.⁶ The Cal/EPA has granted responsibilities to the Marin County Department of Public Works, Waste Management Division (MCDPW) for implementation and enforcement of hazardous material regulations under the Unified Program as a Certified Unified Program Agency (CUPA). CUPA responsibilities and requirements are codified in the Marin County Municipal Code Title 7 (Health and Sanitation), Chapters 7.80-7.83. In addition, the Larkspur Fire Department (LFD) ensures that businesses in the Plan area maintain required hazardous materials permits through annual business inspections to enforce the City's Fire Code.⁷

The City of Larkspur 1990 General Plan policies related to hazardous materials include the following:

Health and Safety Element

Goal 9: Protect Larkspur from accidental exposure to hazardous materials from spills, leaks, vapor releases, and improper or illegal storage and disposal.

- **Policy q:** Limit the use and storage of hazardous materials in Larkspur to commercial and industrial areas.
 - **Action Program [34]:** Designate zone districts where hazardous materials can be used and stored.
 - **Action Program [35]:** Closely monitor and enforce regulations concerning the use and handling of hazardous materials.
 - **Action Program [36]:** Require transporters of hazardous materials to notify the City before moving such materials along City streets.

(2) Hazardous Materials Programs. Within the Plan area, most hazardous materials programs are administered and enforced under the Unified Program, described below. These

⁵ California Code of Regulations, Title 8, Sections 1529, 1532.1, and 5192.

⁶ California Health and Safety Code, Chapter 6.11, Sections 25404-25404.8.

⁷ Chapter 14.04 of the Larkspur Municipal Code.

programs address businesses only. Household hazardous waste, generated by residents, is administered separately.

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following hazardous materials programs: Hazardous Materials Business Plan (HMBP) Program, California Accidental Release Prevention (CalARP) Program, Underground Storage Tank (UST) Program, Aboveground Storage Tank (AST) Program, Hazardous Waste Generator Program, and Hazardous Waste Tiered-Permitting Program. The hazardous materials programs administered under the Unified Program are described below.

Hazardous Materials Business Plan Program. Any facility storing aggregate quantities of any hazardous materials equal to or greater than 10 gallons of liquids, 50 pounds of solids, or 200 cubic feet of gases is required to report their chemical inventories to the LFD by preparing a HMBP. An HMBP must include measures for safe storage, transportation, use, and handling of hazardous materials. The HMBP must also include a contingency plan that describes the facility's response procedures in the event of a hazardous materials release. This informs the community on chemical use, storage, handling, and disposal practices. It is also intended to provide essential information to fire fighters, health officials, planners, elected officials, workers, and their representatives so that they can plan for and respond to potential exposures to hazardous materials.

California Accidental Release Prevention Program. Under The CalARP Program, the HMCD requires facilities that handle more than a threshold quantity of a regulated hazardous substance (listed in Tables 1-3, 19 CCR 2770.5), such as federally listed extremely hazardous toxic and flammable substances and state listed acutely hazardous materials, to prepare a risk management plan (RMP). An RMP must analyze the potential for an accidental release and provide measures that can be implemented to reduce this potential. Facilities that are required to prepare an RMP must obtain and keep current a CalARP Program Facility Permit. Based on a review of environmental regulatory databases, no CalARP facilities are located within the Plan area.

Underground Storage Tank Program. Due to fire hazards, flammable liquids, such as gasoline, have historically been stored in USTs, which, over time, may leak, resulting in potential risks for the general public and the environment. The UST Program implemented by the MCDPW requires that USTs be installed, monitored, operated, and maintained in a manner that protects public health and the environment. Tanks must be constructed with primary and secondary levels of containment and be designed to protect public health and the environment for the lifetime of the installation. The USTs must be monitored for leaks and built such that a leak from the primary container into the secondary container will be detected. When a UST is proposed to be removed, a detailed permit application must be submitted to MCDPW. The MCDPW oversees UST removal activities to identify potential evidence of leakage.

Aboveground Storage Tank Program. The Aboveground Petroleum Storage Act (APSA) requires facilities in California storing petroleum products in aboveground tanks greater than or equal to 55 gallons and having an aggregate aboveground storage capacity greater than or equal to 1,320 gallons to prepare and implement a Spill Prevention, Countermeasure, and Control (SPCC) plan (40 CFR 112). An SPCC plan must address prevention, preparation, and response measures to prevent oil discharges into navigable water and adjoining shorelines. Facilities with aggregate aboveground

storage capacity of 1,320 gallons or more of petroleum are required to operate under a Hazardous Materials Permit and submit a tank facility statement annually to the MCDPW. At least once every three years, the MCDPW inspects storage tanks with a storage capacity of 10,000 gallons or more of petroleum to determine if the owner or operator is in compliance with the SPCC plan requirements of the APSA.

Hazardous Waste Generator Program. Once a hazardous material has been used or processed, what remains may be considered a hazardous waste. Facilities that generate more than 100 kilograms of hazardous waste per month, or more than one kilogram of acutely hazardous waste, must be registered with EPA's RCRA program and are subject to extensive regulations regarding storage and disposal. At least once every three years, the MCDPW inspects hazardous waste generators to ensure that they are adhering to RCRA requirements.

(3) Household Hazardous Wastes (HHW). Many residents routinely store and dispose of hazardous materials, such as paints and thinners, cleaning products, motor oil, batteries, electronics, and other such items. Long-term storage of hazardous products in residences poses an unnecessary risk of accidentally poisoning children and/or pets. When residents discard these kinds of hazardous materials, they become HHW. Pouring HHW down the drain, into storm sewers, or on the ground and placing HHW in the trash could potentially contaminate soil, groundwater, or surface water.

In California, it is illegal to dispose of HHW in the trash, down the drain, or by abandonment.⁸ The Marin Hazardous and Solid Waste Joint Powers Authority provides recycling and disposal options for HHW. Drop-off services for HHW are available to Plan area residents at the Marin Household Hazardous Waste Facility at 565 Jacoby Street in San Rafael.

(4) Hazardous Materials in Soil, Groundwater, and Surface Water. The following describes reported hazardous materials releases in the Plan area.

Hazardous Materials Release Sites. Releases of hazardous materials may occur during use, storage, transfer, and disposal activities and contaminate soil, groundwater, and surface water. Known or suspected contaminated sites under DTSC or Water Board oversight are identified by Cal/EPA pursuant to Government Code 65962.5. The provisions of Government Code 65962.5, which are commonly referred to as the Cortese List, require the DTSC, the Water Board, the California Department of Health Services, and the California Integrated Waste Management Board to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal, and/or hazardous materials releases to the Secretary of Cal/EPA. Under the authority of the DTSC and Water Board, the MCDPW oversees the investigation and remediation of leaking UST (LUST) sites in the Plan area.

Redevelopment projects at or near hazardous material release sites have the potential to encounter hazardous materials in soil and groundwater during construction, and, if not remediated, this contamination could result in health risks to future workers or residents. A review of environmental database information identified 11 reported hazardous material release sites at and adjacent to the

⁸ California Health and Safety Code, Section 25218-25218.13

Plan area.⁹ These included two sites in Sub-Area 1A, two sites in Sub-Area 1B, three sites in Sub-Area 2, and four sites in the light industrial area west of Sub-Area 2. These sites are listed in Table IV.I-1 and the locations are shown in Figure IV.I-1.

Table IV.I-1: Hazardous Materials Release Sites In and Adjacent to the Plan Area

Figure IV.I-1 Site ID	Site Name/Address	Hazardous Material(s) Involved	Status
1	2000 Larkspur Landing	Lead, Diesel, Motor Oil, PCBs	Investigation and remedial action at this site were completed and certified by DTSC in 2006. Some additional soils with contaminants above remedial action cleanup levels were identified in a subsequent soil investigation. The contamination was believed to be related to imported fill. A remedial plan was prepared in 2007 to remove up to 1,600 cubic yards of fill materials at the site. After completion of this proposed remedial plan, all contamination above residential land use thresholds would be removed from the site.
2	Corte Madera Corporation Yard 81 Lucky Drive	Gasoline	Remediation of release from UST has been completed – case closed.
3	Shell 295 Sir Francis Drake Blvd	Waste Oil	Remediation of release from UST has been completed – case closed.
4	Marin Car Wash 2066 Redwood Highway	Gasoline	Open case – investigation and remediation is ongoing.
5	Super 7 2070 Old Redwood Highway	Gasoline	Remediation of release from UST has been completed – case closed.
6	Exxon 200 Nellen Avenue	Gasoline	Remediation of release from UST has been completed – case closed.
7	Larkspur Ferry Terminal 101 E. Sir Francis Drake Blvd	Oil	Four spills (ranging from approximately one cup to approximately 20 gallons in volume) have been reported at the ferry terminal. Cleanups were performed at the time of the spills.
8	Allen Heating & Sheet Metal 36 Industrial Way	Gasoline	Remediation of release from UST has been completed – case closed.
9	Chevron 301 Sir Francis Drake Boulevard	Gasoline	Remediation of release from UST has been completed – case closed.
10	Marin Municipal Water District 220 Tamal Vista	Waste Oil	Remediation of release from UST has been completed – case closed.
11	Wincup Holdings Inc. 195 Tamal Vista Blvd	Diesel	Remediation of release from UST has been completed – case closed.

Source: Baseline Environmental Consulting, 2012.

⁹ Environmental Data Resources, 2012. *EDR Radius Map with GeoCheck, Larkspur SMART Station Area*, Inquiry Number 3345737.1s. June 15.

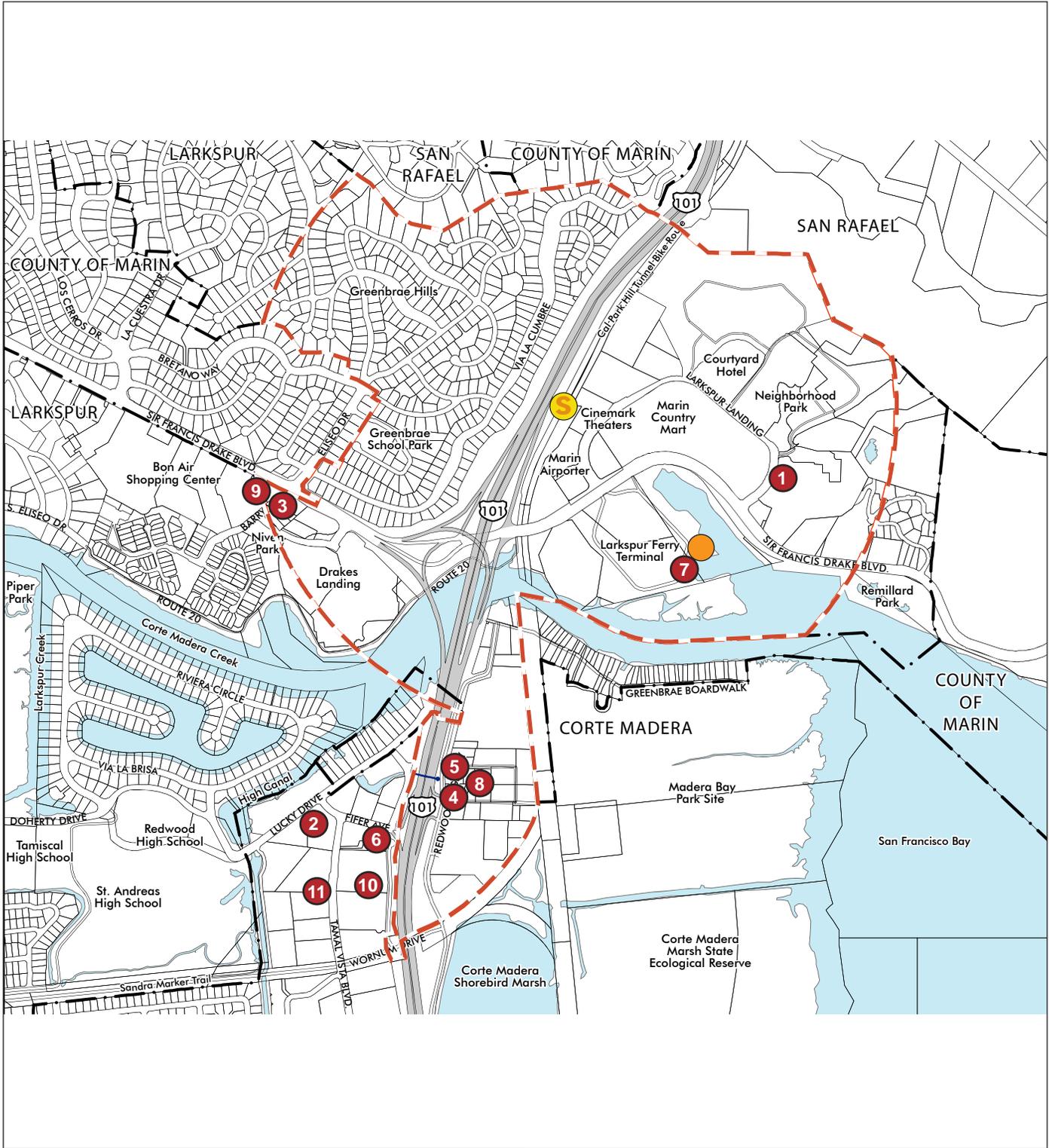
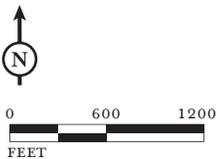


FIGURE IV.I-1

LSA

- - - Plan Area Boundary
- · - City Boundary
- SMART Station Location
- Larkspur Ferry Terminal
- 4 Hazardous Material Release Site
- Water

NOTE: See Table IV.I-1 for site names, addresses and status.



City of Larkspur SMART Station Area Plan EIR
 Hazardous Materials Release Sites
 In and Adjacent to the Plan Area

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Nine of the reported release sites involve the release of petroleum products from a LUST. As these releases are underground, contamination from LUST release sites may spread to groundwater, through which it can migrate away from the release site. Eight of the nine LUST sites have been closed by MCDPW, indicating that remediation is complete or was not necessary (Table IV.I-1). Only the Marin Car Wash site, at 2066 Redwood Highway (Site 4 on Table IV.I-1 and Figure IV.I-1) remains under active investigation.

The two remaining release sites include the 2000 Larkspur Landing site (Site 1 on Table IV.I-1 and Figure IV.I-1), where contaminated soil is known to be present, and the Larkspur Ferry Terminal (Site 7 on Table IV.I-1 and Figure IV.I-1), where four small releases of oil have been reported.

Aerially-Deposited Lead. Lead alkyl compounds were first added to gasoline in the 1920s. Beginning in 1973, the EPA ordered a gradual phase out of lead from gasoline that significantly reduced the prevalence of lead by the mid-1980s.¹⁰ Soils adjacent to major roadways often contain elevated concentrations of aerially-deposited lead. The lead deposition is the result of airborne particulates and surface water runoff associated with tailpipe emissions prior to the time lead was phased out of vehicle fuels.¹¹ Lead has commonly been found within 30 feet of the edge of pavement and within the top 6 inches of soil.¹²

In the Plan area, a soil investigation was performed in 2010 for the Central Marin Ferry Connection Project to evaluate the presence of aerially-deposited lead.¹³ The investigation included the collection of 12 soil samples from four locations near the intersection of Highway 101 and Sir Francis Drake Boulevard. Total lead in soil was identified at concentrations ranging from 8.0 to 100 milligrams per kilogram (mg/kg, often referred to as parts per million), below the health-risk based threshold of 200 mg/kg for residential land uses established by the Water Board.¹⁴ As Highway 101 and Sir Francis Drake Boulevard are the most heavily trafficked roadways in the Plan area, these findings suggest that aerially-deposited lead is not present in significantly elevated concentrations in the Plan area.

(5) Sensitive Receptors. Some populations, such as children, the elderly, and the infirm, are more susceptible to health effects of hazardous materials than the general population. Hazardous materials use near schools, day care centers, senior housing, and hospitals must consider potential health effects to these populations, often referred to as “sensitive receptors.” Construction or redevelopment on contaminated properties that could potentially generate vapors or fugitive dust containing contaminants may potentially pose a health risk to these populations. In addition, commercial and industrial facilities in proximity to sensitive receptors may have hazardous emissions or handle hazardous or acutely hazardous materials that could pose a health risk to these sensitive receptors.

¹⁰ California Department of Toxic Substances Control, 2004. *Draft Lead Report*. August.

¹¹ California Department of Toxic Substances Control, 2000a. *Variance No. 00-H-VAR-01*. September 22.

¹² California Department of Toxic Substances Control, 2000b. *Fact Sheet, Variance for Caltrans Districts 4,6,7,8,10,11,12 for Reuse of Lead-Contaminated Soils*.

¹³ Transportation Authority of Marin, 2010. *Phase II Soil Investigation, Central Marin Ferry Connection, Larkspur, California*. April.

¹⁴ *Ibid.*

In the Plan area, residential areas and schools would be considered areas with sensitive receptors. These include the multi-family residential buildings in Sub-Area 1A, the single-family homes in the Sub-Area 1B, and the mobile home communities in Sub-Area 2. Schools in and near the Plan area include the Children's Cooperative Pre-school at 2900 Larkspur Landing Circle in Sub-Area 1B, and the Redwood, San Andreas, and Tamiscal High Schools located west of Sub-Area 2.

(6) Hazardous Building Materials. Hazardous materials are commonly found in the types of building materials that may be affected during demolition and renovation activities in the Plan area. Building materials such as thermal system insulation, surfacing materials, and asphalt and vinyl flooring materials installed in buildings prior to 1981 may contain asbestos according to DOSH.¹⁵ Asbestos is a known human carcinogen.¹⁶ Prior to 1978, lead compounds were commonly used in interior and exterior paints. Demolition or renovation in the Plan area could release asbestos fibers and lead particles into the air from structures constructed prior to 1981 and 1978, respectively, which then may be inhaled by construction workers and the general public. In addition, other common items present in buildings, such as electrical transformers, fluorescent lighting, electrical switches, heating/cooling equipment, and thermostats could contain hazardous materials, which may pose a health risk if not handled and disposed of properly.

Federal and State regulations govern the removal of asbestos-containing material (ACM) from structures prior to demolition. These requirements are promulgated by the EPA, OSHA, DTSC, and the Bay Area Air Quality Management District (BAAQMD). The BAAQMD, under authority of the California Air Resources Board (CARB), is the lead agency overseeing hazardous air emissions. All friable (crushable by hand) ACMs, or non-friable ACMs subject to damage, must be abated prior to demolition in accordance with applicable requirements. Friable ACM must be disposed of as an asbestos waste at an approved facility. Non-friable ACM may be disposed of as non-hazardous waste at landfills that will accept such wastes. Workers conducting asbestos abatement must be trained in accordance with DOSH and OSHA requirements. The BAAQMD must be notified at least ten working days prior to commencement of renovation or demolition involving the removal of regulated ACM. In addition, Section 19827.5 of the California Health and Safety Code prohibits local agencies from issuing demolition permits until an applicant has demonstrated compliance with asbestos notification requirements pursuant to the National Emissions Standards for Hazardous Air Pollutants (40 CFR Part 61).

Federal and State regulations also govern the renovation or demolition of structures where lead or material containing lead is present. Regulations pertaining to renovation or demolition of structures with lead-based paint are promulgated by the EPA, the U.S. Department of Housing and Urban Development (HUD), DOSH, and DTSC. Federal regulations require that lead-based paint equal to or greater than 1.0 milligram per square centimeter or 0.5 percent by weight be removed prior to renovation or demolition if the paint is loose and peeling (40 CFR 745.227(h)). Loose and peeling paint must be disposed of as a State and/or federal hazardous waste if the concentration of lead equals or exceeds applicable waste thresholds. State and federal construction worker health and safety regula-

¹⁵ California Code of Regulations, Title 8, Section 5208.

¹⁶ Agency for Toxic Substances and Disease Registry, 2001. *ToxFAQs for Asbestos*. September.

tions require air monitoring and other protective measures during demolition activities where lead-based paint is present, and notification to DOSH for abatement activities (8 CCR 1532.1).

Fluorescent lighting tubes and ballasts, mercury thermometers, and several other common items containing hazardous materials are regulated as “universal wastes” by the State of California. Universal waste must be recycled to be managed under the simple, streamlined universal waste handler standards for the State of California.¹⁷

b. Wildland Fire Hazards. In accordance with California Public Resource Code Section 4201 4204 and Government Code Section 51175-51189, the California Department of Forestry and Fire Protection (CalFire) has mapped areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), represent the risks associated with wildland fires. Fire Hazard Severity Zones mapped by CalFire for State and local responsibility areas are classified as either “Medium,” “High,” or “Very High” based on fire hazards; however, the law only requires identification of Very High Fire Hazard Severity Zones in local responsibility areas. Wildland-Urban Interface Areas designated by local agencies are also classified as Fire Hazard Severity Zones. No Fire Hazard Severity Zones for State responsibility areas¹⁸ or Very High Fire Hazard Severity Zones for local responsibility areas¹⁹ have been identified in the Plan area, though part of the San Quentin peninsula east of Sub-Area 1A, including San Quentin prison and Shoreline Band Park, has been designated as a Medium Fire Hazard Severity Zone.²⁰

The Health and Safety Element of the Larkspur 1990 General Plan contains the following policies and action programs related to wildland fire hazards.

Health and Safety Element

Goal 7: Protect Larkspur residents and property from hazards.

Goal 8: Minimize the risk of wildland and structural fires, and ensure adequate fire protection.

- Policy o: Maintain an aggressive fire prevention program.
 - Action Program [28]: Continue to inspect all businesses, public buildings and apartment buildings annually for fire and building code violations.
 - Action Program [29]: Continue to require that all vacant lots annually be cleared of excessive vegetation.
 - Action Program [30]: Continue to require smoke alarms and Class C or better fire retardant roofs for all new construction.

¹⁷ California Code of Regulations, Title 22, Division 4.5.

¹⁸ California Department of Forestry and Fires, 2007. *Fire Hazard Severity Zones in SRA, Marin County*, Adopted by CAL FIRE on November 7.

¹⁹ California Department of Forestry and Fires, 2008. *Very High Fire Hazard Severity Zones in LRA, Marin County*, Recommended for Adoption by CAL FIRE in October.

²⁰ California Department of Forestry and Fires, 2007, op. cit.

- **Policy p:** Establish more stringent fire protection standards for private development in high risk fire hazard areas.
 - **Action Program [31]:** Require that automatic sprinkler systems be installed in new residences in areas with difficult access and/or poor water supply.
 - **Action Program [32]:** Require that brush be cleared for a distance of 30 feet from residences in high fire-hazard areas.
 - **Action Program [33]:** Establish landscaping guidelines that encourage the use of fire-resistant plants in high fire-hazard areas.

c. Aviation Hazards. No public airports or private use airfields are located within 2 miles of the Plan area. As a result, no likely sources of aviation hazards are present in the area.

d. Emergency Response. Larkspur's Emergency Management Plan (EMP)²¹ is the City's action plan for responding to major disasters, including but not limited to flooding, a major earthquake, landslides, a major transportation accident, wildland fire, and hazardous materials incident. The EMP establishes operation protocols for an Emergency Operations Center (located at the Twin Cities Police Authority station), and addresses the coordination and integration of Larkspur's emergency response operations with other governmental agencies. The LFD participates with other agencies in Marin County's emergency preparedness programs including Get Ready Marin and the County's Community Emergency Response Training program.

The City of Larkspur 1990 General Plan has the following policies and action programs related to emergency response:

Health and Safety Element

Goal 2: Prepare and make a planned, coordinated response to a disaster.

- **Policy a:** Maintain an updated emergency response plan.
- **Policy b:** Identify essential emergency facilities and make provisions to ensure that they will function in the event of a disaster.
- **Policy c:** Strive to educate the community about environmental hazards, measures which can be taken to protect lives and property, and methods for responding to various disasters.
- **Policy d:** Cooperate with other public agencies to store, organize, distribute, and administer emergency medical equipment, supplies, services, and communications systems.
 - **Action Program [1]:** Continue to update the City's emergency plan.
 - **Action Program [2]:** Identify specific facilities and lifelines critical to effective disaster response, and evaluate their abilities to survive and operate efficiently immediately after a major disaster.

²¹ San Rafael, City of, 2010. Office of Emergency Services. *City of Larkspur Emergency Management Plan*, October.

2. Impacts and Mitigation Measures

This section provides an assessment of the potential adverse impacts related to hazards and hazardous materials for development within the Plan area. It begins with the criteria of significance, which establishes the threshold for determining whether an impact is significant. The latter part of this section identifies potential impacts and evaluates how they relate to potential development under the Plan. Where potentially significant impacts are identified, mitigation measures are recommended.

a. Criteria of Significance. Implementation of the Station Area Plan would have a significant impact if it were to result in:

- The creation of a significant hazard to the public or the environment through the routine transportation, use, or disposal of hazardous materials;
- The creation of 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;
- Hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;
- Development located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 (if such development would create a significant hazard to the public or the environment);
- Development located in an area covered by an airport land use plan (or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport), if it would result in a safety hazard for people residing or working in the project area;
- Development within the vicinity of a private airstrip, if it would result in a safety hazard for people residing or working in the project area;
- Impairment of or physical interference with the implementation of an adopted emergency response plan or emergency evacuation plan; or
- Exposure of people or structures to 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.

b. Impacts Analysis. The following section provides an evaluation and analysis for the potential impacts of the Station Area Plan for each of the criteria of significance listed above and potential cumulative impacts.

(1) Transport, Use, Handling or Disposal of Hazardous Materials. While the SMART train and the Larkspur Ferry would be used solely for passenger transportation, new development or redevelopment in the Plan area would involve the routine management of hazardous materials that could pose a significant threat to human health or the environment if not properly managed or accidentally released. During construction, this would include the use of fuels, lubricants, and other hazardous materials associated with heavy construction equipment. During operation, it would be expected that small quantities of cleaning, maintenance, and landscaping chemicals would be used and stored in buildings developed under the Station Area Plan.

The routine storage, use, handling, generation, transport, and disposal of hazardous materials during site construction and operation activities are addressed by federal, State, and local laws, regulations, and programs, including RCRA, TSCA, DOT regulations in 49 CFR, and hazardous materials regulations in CCR Title 26 on the federal and State levels. On the local level, the MCDPW and LFD implement regulatory programs for sites that routinely manage hazardous materials to ensure the safe storage, management, and disposal of hazardous materials in accordance with the Unified Program and City policies (see discussion, above).

Compliance with federal, State, and local requirements would reduce these potential impacts to a level of less-than-significant and no further mitigation would be required.

(2) Release of Hazardous Materials. As shown on Table IV.I-1 and Figure IV.I-1, several hazardous material releases have been reported within and adjacent to the Plan area. There may be a potential for other, previously unreported releases to have occurred in the Plan area as part of historical land uses. Aerially-deposited lead may be present in soils near busy roadways from vehicle exhaust during the period before lead was phased out of gasoline in California. If present, contaminants in soil or groundwater could expose future workers, residents, the nearby public, and the environment to potential hazards. Future construction workers would have direct contact with potentially contaminated soils and groundwater, and contamination could be spread via fugitive dust or improper groundwater dewatering. Future residents and workers could also be exposed to hazardous materials in soils or migrating into indoor air via soil gases.

In addition, some materials in buildings that would be demolished or remodeled under the Station Area Plan likely contain lead, asbestos, and other hazardous materials. Though these materials would not pose a health risk during use, if not abated prior to building demolition, these hazardous materials could be released to the air, posing a potential impact to construction workers and the nearby public.

The potential presence of hazardous materials in soils, groundwater, and building materials is a significant impact.

Impact HAZ-1: Implementation of the Station Area Plan could result in an impact to human health and/or the environment related to hazardous materials present in soil, groundwater, and building materials within the Plan area. (S)

Implementation of the following two mitigation measures would ensure that potential impacts from releases of hazardous materials currently present in soils, groundwater, and building materials within the Plan area would be less than significant.

Mitigation Measure HAZ-1: The following language shall be included as a Condition of Approval for new projects associated with implementation of the Station Area Plan:

- A Phase I Environmental Site Assessment (ESA) shall be prepared to American Society for Testing and Materials (ASTM) standards for development and redevelopment projects conducted under the Station Area Plan. If the Phase I identifies the potential for soil or groundwater contamination to be present at the site, a Phase II ESA shall be prepared by a qualified environmental professional.

If contamination is identified during Phase I and II investigations, projects undertaken under the Plan shall incorporate any necessary measures to ensure that any potential added health risks to construction workers, maintenance and utility workers, site users, and the general public as a result of hazardous materials are reduced to a cumulative risk of less than 1×10^{-6} (one in one million) for carcinogens and a cumulative hazard index of 1.0 for non-carcinogens, or as otherwise required by a regulatory oversight agency. The risk evaluation and any required response actions would be a condition of approval for construction, demolition, or grading permits and would be subject to review and/or approval by regulatory oversight agencies. These agencies could also require additional site investigation to more fully delineate the extent of contaminants of concern at the site. If extensive on-site excavation and/or soil off-haul is determined to be the appropriate response action, additional CEQA review may be required to evaluate potential impacts for the response related to air quality, noise, and traffic.

- Hazardous building materials surveys shall be conducted by a qualified and licensed professional for all structures, not previously inspected or abated, proposed for demolition or renovation as part of a project associated with the Station Area Plan. All loose and peeling lead-based paint and ACM shall be abated by certified contractor(s) in accordance with local, State, and federal requirements. All other hazardous materials, such as “universal wastes,” shall be removed from buildings prior to demolition in accordance with DOSH regulations. The completion of the abatement activities shall be documented by a qualified environmental professional(s) and submitted to the City for review with applications for issuance of construction and demolition permits. (LTS)

(3) Existing and Proposed School Sites. In general, children are more susceptible to health effects from exposure to hazardous materials, substances, and/or waste than adults. Under State law, prospective school sites must be reviewed to determine that such sites are not contaminated by hazardous materials or located within 0.25 mile of land uses that manage substantial quantities of hazardous materials. California Education Code Sections 21151.2, 21151.4, and 21151.8 specifically require investigation of prospective school sites in accordance with DTSC guidance. Existing schools in the Plan vicinity include the Children’s Cooperative Pre-school in Sub-Area 1B, and the Redwood, San Andreas, and Tamiscal High Schools west of Sub-Area 2.

No impact would be expected during the operational phase of projects developed under the Station Area Plan. The residential, office, hotel, and retail uses proposed to be developed in the Plan area would not emit hazardous materials potentially affecting school sites. The implementation of Mitigation Measure HAZ-1, addressing existing hazardous materials that may be present in soils, groundwater, and building materials, in conjunction with existing regulatory requirements for hazardous materials would reduce the potential for school children to be exposed to hazardous or acutely hazardous materials during construction to a less-than-significant level. No additional mitigation is required.

(4) Hazardous Material Sites. Hazardous material contamination from hazardous material release sites compiled in accordance with Government Code section 65962.5 can affect human health and the environment. Direct contact, inhalation, or ingestion of hazardous materials could potentially cause adverse health effects to construction workers and future site users. Implementation of Mitigation Measure HAZ-1, which would require a review and evaluation of hazardous materials sites as

part of a Phase I environmental site assessment for projects developed under the Station Area Plan, would reduce this impact to a less-than-significant level. No additional mitigation is required.

(5) Public Airport and Private Airstrip Hazards. No public airports or private use airfields are located within 2 miles of the Plan area, so no aviation hazards would be anticipated.

(6) Emergency Response and Evacuation Plans. The type of development and redevelopment projects associated with the Station Area Plan would not include significantly different land uses or reconfiguration of major roadways that would be likely to affect existing emergency response and evacuation plans. Existing policies and action programs in the City General Plan require that the City's Emergency Response Plan be maintained and updated (Policy d, Action Program 1). No additional mitigation is required.

(7) Wildland Fire Hazards. According to CalFire, there are no Fire Hazard Severity Zones for State responsibility areas or Very High Fire Hazard Severity Zones for local responsibility areas within the Plan area. Based on this mapping, impacts related to wildland fire hazards on new development or redevelopment in the Plan area would be less than significant and no mitigation is required.

c. Cumulative Impacts of the Station Area Plan. Hazardous materials and other public health and safety issues are generally site-specific and would not contribute to impacts associated with other contaminated sites in the Plan vicinity. For example, investigation and possible subsequent remediation of a development or redevelopment site in the Plan area would not affect other investigation and remediation sites within Larkspur or other areas of Marin County. Therefore, the Plan's contribution to cumulative impacts related to hazards and hazardous materials would not be significant.