4.10 Hazards and Hazardous Materials

This section analyzes impacts related to hazardous materials and airport safety hazards in the SJCOG region. Impacts related to exposure to excessive aviation related noise are discussed in detail in Section 4.13, *Noise*, and impacts related to impairment or interference of emergency response or evacuation plans are discussed in Section 4.14, *Transportation*. Impacts related to wildfire hazards are discussed in Section 4.16, *Wildfire*.

4.10.1 Setting

Overview of Hazardous Materials and Waste

The term "hazardous material" is defined in the State of California's Health and Safety Code (HSC), Chapter 6.95, Section 25501(o) 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 if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that 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.

Hazardous waste is hazardous material generated, intentionally or unintentionally, as a byproduct of some process or condition. Hazardous wastes are defined in California HSC Section 25141(b) as wastes that:

> …because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

According to the U.S. Environmental Protection Agency (USEPA), waste may be considered hazardous under the Resource Conservation and Recovery Act (RCRA, the primary Federal hazardous materials law) if it is specifically listed as known hazardous waste or if it meets the one or more of the following characteristics of a hazardous waste:

- **Toxicity.** Poisonous, harmful when ingested or absorbed
- **Ignitability.** Capable of being ignited by open flame, liquids with flash points[1] below 60 degrees Celsius, non-liquids that cause fire through specific conditions, ignitable compressed gases and oxidizers
- **Corrosivity.** Capable of corroding other materials, aqueous wastes with a pH of 2 or less or greater than or equal to 12.5
- **Reactivity.** May be unstable under normal conditions, may react with water, may give off toxic gases or may be capable of detonation or explosion under normal conditions or when heated

[1] Flash point is the lowest temperature at which the vapors of a volatile combustible substance ignite in the air when exposed to flame.

Generation and Disposal of Hazardous Materials and Waste

Many chemicals used in household cleaning, construction, light and heavy industry, dry cleaning, landscaping, and automotive maintenance and repair are considered to generate hazardous materials and waste. Additionally, in some cases, past industrial or commercial uses on a site may have resulted in spills or leaks of hazardous materials and petroleum that have caused contamination of the underlying soil and groundwater. Federal and state laws require that soils and groundwater having concentrations of contaminants that are higher than certain acceptable levels are 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. Hazardous materials require special methods of disposal, storage, and treatment, and the release of hazardous materials requires an immediate response to protect human health and safety, and the environment. Improper disposal can harm the environment and people who work in the waste management industry.

Businesses that handle or generate hazardous materials within the SJCOG region are monitored by USEPA; the Central Valley Regional Water Quality Control Board (CVRWQCB); the San Joaquin County Environmental Health Department (EHD); Local Enforcement Agency (LEA) programs; and San Joaquin Valley Air Pollution Control District (Valley Air District). Generators of hazardous waste fall into two categories: large-quantity generators (LQG) and small-quantity generators (SQG). An LQG is defined as a person or facility generating more than 2,200 pounds of hazardous waste per month. An SQG is defined as generating greater than 100 kilograms (kg) and less than 1,000 kg (2,200 pounds) 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 federal and state requirements for managing hazardous waste. LQGs need an U.S. 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 U.S. EPA identification number, which must be used for traceability on all hazardous waste documentation. Pursuant to federal law (40 CFR 262.41-43), all such generators must register with U.S. EPA for record-keeping and reporting.

Transportation of Hazardous Materials and Waste

Hazardous materials, hazardous wastes, medical waste, and petroleum products are a subset of the goods routinely shipped along the transportation corridors in the SJCOG region. 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 CalEPA Department of Toxic Substances Control (DTSC). The DTSC maintains a list of active registered hazardous waste transporters throughout California, and the California Department of Public Health regulates the haulers of hazardous waste. There are 30 registered hazardous waste transporters based in the SJCOG region (DTSC 2021).

Transportation of hazardous materials and wastes within the SJCOG region occurs through a variety of modes: truck, rail, air, ship, and pipeline. Transportation of hazardous materials by truck is regulated by the DOT. The DOT's Federal Motor Carrier Safety Administration identifies several highways and roads in the SJCOG region as a Hazardous Materials Route in its National Hazardous

Materials Route Registry. Federally designated Hazardous Materials Routes are listed in Table 4.10-1.

Table 4.10-1 Federally Designated Hazardous Routes in the SJCOG Region

Road or Highway Name		
Interstate Highways		
▪ Interstate 5	▪ Interstate 205	▪ Interstate 580
State Highways		
▪ Highway 4	▪ Highway 120	▪ Highway 132
▪ Highway 26	▪ Highway 12	▪ Route 33
▪ Highway 88	▪ Highway 99	
County and City Streets		
▪ Ahern Road	▪ Kasson Road	▪ Patterson Pass
▪ Byron Road	▪ Bird Road	
▪ Grant Line Road	▪ Chrisman Road/11th Street	

Source: Federal Motor Carrier Safety Administration 2020

In 2015, flammable liquids accounts for the largest share of hazardous materials shipped nationally by tonnage and value. Transport by truck accounted for approximately half of the hazardous materials transported in the nation, with pipelines handling another 24 percent. Although trucks carry the most hazardous material by tonnage, the total distance traveled by hazardous materials by truck (ton-miles) is lower than any other mode, due to the short distances trucks generally carry materials over (BTS 2021). Considering the abundance of roads in the SJCOG region compared to rail and pipelines, trucks are generally responsible for transporting most hazardous materials within the SJCOG region. According to the DOT's Pipeline and Hazardous Materials Safety Administration, highway transport consistently accounts for the largest share of reportable accidents or incidents each year in California. For example, from 2011 through 2020, truck transport accounted for between 80 and 90 percent of the reportable incidents in the State, while rail and air transport accounted for the rest 10 percent. Air transport incidents come in second, with freight third and pipeline incidents occurring very rarely (PHMSA 2020). While hazardous waste incidents account for a small percentage of overall highway incidents, the impact of these incidents can be more severe due to the nature of the material(s) involved. However, about two thirds of all hazardous material spills from all modes of transport do not occur during transport; they occur during loading and unloading of the materials (BTS 2021).

The transport of hazardous materials by rail is also regulated by DOT. Freight railroads have employee safety training requirements and operating procedures that govern the handling and movement of hazardous goods, including crude oil. Federal regulations and self-imposed safety practices dictate train speeds, equipment and infrastructure inspections, and procedures for how to handle and secure trains carrying hazardous materials. The freight rail industry provides instruction to local public safety officials at the Transportation Technology Center's Security and Emergency Response Training Center, a training facility where cargo trucks and freight trains are routinely used in large-scale hazardous response trainings. Individual railroads conduct additional local training for first responders. Freight railroads also work with State emergency planning committees and local first responders to develop municipal emergency response plans. In accordance with a February 2014 agreement between the DOT and Association of American Railroads, railroads have developed an inventory of emergency response resources and provided the DOT with information on the

deployment of those resources. This information is available upon request to appropriate emergency responders. A list of the rail facilities in the SJCOG region is provided in Chapter 2.

Pipelines, primarily underground, are used to transport a variety of potentially hazardous substances, including natural gas, crude oil, and other petroleum products throughout the SJCOG region. For example, Pacific Gas & Electric (PG&E) maintains and operates a natural gas pipeline that is roughly parallel to Interstate 5 through most of the SJCOG region, passing through the city of Stockton, and Phillips 66 Pipeline operates a crude oil pipeline parallel to Interstate 580 in the southwestern portion of the SJCOG region. Most of the pipelines in the SJCOG region run through urban areas, although some that are segments of longer intra- or interstate lines run through rural and agricultural areas (NPMS 2021). The Transportation Research Boards' 2004 report *Transmission Pipelines and Land Use: A Risk-Informed Approach,* encouraged the use of zoning regulations to minimize casualties in the event of a catastrophic pipeline rupture. Possible land use techniques include, for example, establishing setbacks (the Report emphasized using the American Petroleum Institutes' recommended setbacks of 50 feet from petroleum and hazardous liquids lines for new homes, businesses, and places of public assembly; 25 feet for garden sheds, septic tanks, and water wells; and 10 feet for mailboxes and yard lights; as the vast majority of pipeline spills are caused by homeowner or contractor digging), regulating or prohibiting certain types of structures and uses near transmission pipelines; and encouraging, through site and community planning, other types of activities and facilities, such as mini-storage businesses, linear parks, and recreational paths, within or in the vicinity of pipeline rights-of-way (TRB 2004).

The Port of Stockton is located within the SJCOG region, on the Stockton Deepwater Ship Channel, 80 miles from the Pacific Ocean along the San Joaquin River. The Port owns and operates a major, diversified intermodal transportation center that encompasses more than 4,200 acres of operating area and real estate. The Port of Stockton has over 11,000 lineal feet of waterside docking for berthing and cargo operations of up to 17 vessels, as well as 1.1 million square feet of dockside transit sheds and shipside rail trackage, with 60 miles of rail track that can be served by Union Pacific or Burlington Northern Santa Fe (BNSF) Railroads. Existing facilities include 7.7 million square feet of warehousing for both dry bulk and general cargo, which compose the largest percentage of the Port's dockside operations. Stockton's deepwater channel has an average depth of 35 feet. Panamax-sized vessels with load capacity up to 45,000-ton dead-weight class, which are fully loaded, and partially loaded 80,000-ton dead-weight vessels can be accommodated. There is no width restriction of vessels and ships up to 900 feet in length can navigate the Stockton Ship Channel. The Port is stationed along the Deep Water Ship Channel next to I-5, State Route 99, and the Union Pacific and BNSF Railway. (SJCOG 2018).

Hazardous Material Use and Hazardous Material Sites

Many activities in the SJCOG region involve the use, storage, or production of hazardous materials. The use of hazardous materials is commonplace in commercial, industrial, and manufacturing activities, and many businesses within the SJCOG region are permitted to handle and transport hazardous materials. There are historic and existing land uses that have generated hazardous waste as part of daily business operations. LQGs and SQGs include such commercial uses as painters, dry cleaners, automotive service stations, medical offices, and industrial uses such as metal fabrication, scrap yards, railways, cement companies, food manufacturing, chemical manufacturing, landfill and waste disposal, and electrical substations. In addition, older structures may contain building materials that are considered hazardous, such as asbestos and lead-based paint. In general, these historic and current uses and building materials are located throughout the SJCOG region. The

County Environmental Health Department oversees permitting and regulation of hazardous material generators in the SJCOG region and currently identifies 1,150 facilities that they are actively managing (San Joaquin County EHD 2021).

California Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to prepare an annual Hazardous Waste and Substances List, commonly referred to as the Cortese List. The addition or inclusion of a site on the Cortese List has bearing on the local permitting process and compliance with CEQA. For example, projects proposed at a site on the Cortese List are not eligible for categorical exemptions to CEQA per Section 15300.2(e) of the State CEQA Guidelines. The Cortese List is not maintained as a centralized list, however, a variety of governmental data sources identify sites where hazardous substances may have been released or may have created a hazardous condition on-site. These include:

- DTSC Active Transporter Registry
- DTSC EnviroStor Database tracking hazardous waste facilities and sites with known contamination or that are under investigation
- State Water Resources Control Board (SWRCB) GeoTracker database of sites that require cleanup, such as leaking underground storage tank (UST) sites and landfills
- California Office of Emergency Services (OES) Hazardous Materials Spill Notification database on reported hazardous material accidental releases or spills
- DOT Hazardous Materials Incident Report System database on hazardous material spill incidents
- California Department of Resources Recycling and Recovery's (CalRecycle) Solid Waste Inventory System database of active and closed solid waste sites
- USEPA Envirofacts database of Resource Conservation and Recovery Act (RCRA) sites and other hazardous sites including Superfund and brownfield sites
- USACE list of Formerly Used Defense Sites for closed or inactive military bases and facilities

All databases listed above have identified sites within the SJCOG region. The DTSC Active Transporter Registry identifies 30 registered hazardous waste transporters in the SJCOG region. The DOTs Hazardous Materials Incident Report System database identified 250 hazardous materials spill incidents in the SJCOG region between January 2006, and September 2021. Five sites in the SJCOG region are identified on the USACE list of Formerly Used Defense Sites for California. According to CalRecycle's Solid Waste Inventory System database, there are 13 active landfill, recycling, and transfer sites in the SJCOG region, an additional 33 sites that have been closed, and four that are inactive but not closed. None are currently on the CalRecycle list of sites that are violating minimum standards, and nine are operating without permits or are under notification of permit expiration.

For some databases, such as the DTSC EnviroStor and USEPA Envirofacts databases, the list of identified sites is too exhaustive to provide in its entirety for purposes of this EIR. For example, the EnviroStor identifies 357 cleanup sites in the SJCOG region including closed sites that have been fully remediated, sites where contamination is contained but land use restrictions are in place, and sites under evaluation, active remediation, or monitoring. Among these sites are Superfund sites, state response hazardous sites, contaminated soil sites, school cleanup sites and leaking UST sites. The USEPA Envirofacts database also identifies hundreds of RCRA sites in the region, most of which are also listed in the EnviroStor database. Examples of some of the RCRA sites identified in the region include gas stations, dry cleaners, automotive repair shops, medical facilities, automobile dealerships, paint stores, and trucking companies. The SWRCB GeoTracker database identifies 2,628 cleanup sites, most of which represent remediated and closed cases, and some of which have yet to

be closed. For purposes of this EIR, it is more important to note that many sites on the Cortese list exist throughout the SJCOG region, typically within proximity to the transportation network and more densely populated areas in the region, than to list or analyze each of the hundreds or thousands of relevant sites throughout the SJCOG region.

To address the potential for documented and undocumented hazards on a site, the American Society for Testing and Materials has developed widely accepted practice standards for the preliminary evaluation of site hazards (E-1527-05). Phase I Environmental Site Assessments (ESAs) 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. If a Phase I ESA indicates the presence, or potential presence of contamination, a site-specific Phase II ESA is generally conducted to test soil and/or groundwater. Based on the outcome of a Phase II ESA, remediation of contaminated sites under federal and state regulations may be required prior to development. Phase I ESAs 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 (PCBs).

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 (termed amphiboles), which generally form in bundles, that were once widely used in commercial products. Naturally occurring asbestos includes minerals in their natural state, such as in bedrock or soils. Naturally occurring asbestos, which was identified as a toxic air contaminant by CARB in 1986, is 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. Once disturbed, microscopic fibers can become lodged in the lungs, which can potentially lead to serious health problems. Tulare County contains one former asbestos exploration prospect site and ultramafic rocks, such as serpentinite, which can contain asbestos fibers. Naturally occurring asbestos sites are most concentrated in the central/western area of the County (USGS 2011). In general, naturally occurring asbestos fibers do not pose a threat unless disturbed and introduced into the air as fugitive dust.

Schools

Children are particularly susceptible to long-term effects from emissions of hazardous materials. Therefore, locations where children spend extended periods of time, such as schools, are particularly sensitive to hazardous air emissions and accidental release associated with the handling of extremely hazardous materials, substances, or wastes. According to the California Department of Education (CADOE) there are 246 public and private schools in the SJCOG region (CADOE 2021). According to the San Joaquin County Office of Education, there are 14 school districts with more than 151,000 students enrolled (SJCOE 2021).

Airports

The SJCOG region contains public-use airports and seven private air facilities including hospital heliports and small agricultural airstrips. Currently, there are no operational military airfields in the SJCOG region. The six public use airports are Kingdon, Lodi, Lodi Precessi Airpark, New Jerusalem, Stockton Metropolitan, and Tracy Municipal. Only the Stockton Metropolitan Airport provides scheduled air carrier service and it is the primary regional airport.

Potential aviation related hazards to the public, 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 an airport land use compatibility plan (ALUCP). Applicable ALUCPs to the SJCOG region are discussed in the Regulatory Setting, below.

4.10.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

The USEPA is the lead agency responsible for enforcing federal regulations that affect public health or the environment. The primary federal laws and regulations include the RCRA of 1976 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 CFR Title 40 - Protection of the Environment.

Toxic Substances Control Act

The Toxic Substances Control Act of 1976 (15 U.S. Code Section 2601 et seq.) grants EPA the authority to develop reporting, record-keeping, and testing requirements for, as well as restrictions on, the manufacture, use, and sale of chemical substances. Pursuant to Title II of the Toxic Substances Control Act, the EPA adopted the Asbestos Model Accreditation Plan in 1994. The Model Accreditation Plan requires that all persons who inspect for asbestos-containing materials or design or conduct response actions with respect to friable asbestos obtain accreditation by completing a prescribed training course and passing an exam. Section 403 of the Toxic Substances Act establishes standards for lead-based paint hazards in paint, dust, and soil.

Resource Conservation and Recovery Act

RCRA Subtitle C regulates the generation, transportation, treatment, storage, and disposal of hazardous waste by LQGs (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 40 CFR 260.

Comprehensive Environmental Response Compensation and Liability Act

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. 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

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. Currently the fund has approximately $3.5 billion earmarked for cleanup and remediation activities. 'Special accounts' are used to hold money levied from responsible parties to generate interest while performing remediation activities; in 2020 EPA deposited approximately $203 million into the accounts from polluters.

Hazardous Materials Transportation Act

The transportation of hazardous materials is regulated by the Hazardous Materials Transportation Act (49 CFR § 101 et seq.), which is administered by the Research and Special Programs Administration of U.S. DOT. The Hazardous Materials Transportation Act governs the safe transportation of hazardous materials by all modes. The DOT regulations that govern the transportation of hazardous materials are applicable to any person who transports, ships, or causes to be transported or shipped hazardous materials, or who is involved in any way with the manufacture or testing of hazardous materials packaging or containers. The DOT regulations govern every aspect of the movement of hazardous materials including packaging, handling, labeling, marking, placarding, operational standards, and highway routing.

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act (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 301–312 are administered by EPA's Office of Emergency Management. EPA'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 (CalARP).

Federal Disaster Mitigation Act

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" Hazard Mitigation Plan. "Enhanced" plans demonstrate increased coordination of mitigation activities at the state level and, if completed and approved, increase the amount of funding through the Hazard Mitigation Grant Program. California's HMP is a 'Enhanced' Plan.

FAA Regulations

The primary role of the FAA 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. 14 CFR 77, *Safe Efficient Use and Preservation of the Navigable Airspace*, 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 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.

b. State Laws, Regulations, and Policies

California Asbestos Regulations

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. 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. In July 2001, CARB adopted a new ATCM for construction, grading, quarrying, and surface mining operations in areas with serpentine or ultramafic rocks. These regulations are codified in Title 17, Section 93105 of the CCR. The regulations require preparation and implementation of an Asbestos Dust Mitigation Plan for construction or grading activities on sites greater than 1 acre in size with known NOA soils. The air districts enforce this regulation. In October 2000, the Governor's Office of Planning and Research issued a memorandum providing guidance to lead agencies in analyzing the impacts of NOA on the environment through the CEQA review process. In November 2000, the California Department of Real Estate added a section to subdivision forms that includes questions related to NOA on property proposed for development. In 2004, as part of its school-site review program, DTSC's School Property Evaluation and Cleanup Division released interim guidance on evaluating NOA at school sites. In addition, California Health and Safety Code Section 19827.5 prohibits issuance of demolition permits by local and State agencies without assessment of the potential for the structure to contain asbestos.

Lead Regulation

The California Division of Occupational Safety and Health Administration (Cal/OSHA) lead standard for construction activities is implemented under Title 8 of the CCR. The standard applies to any construction activity that may release lead dust or fumes, including, but not limited to, manual

scraping, manual sanding, heat gun applications, power tool cleaning, rivet busting, abrasive blasting, welding, cutting, or torch burning of lead-based coatings. Unless otherwise determined by approved testing methods, all paints and other surface coatings are assumed to contain lead at prescribed concentrations, depending on the application date of the paint or coating.

California Fire Code

The California Fire Code is Chapter 9 of CCR Title 24. 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 California Fire Code regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The California Fire Code 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 California Fire Code employs a permit system based on hazard classification.

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program 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. The CalARP Program 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 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, as listed below:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- CalARP Program
- Underground Storage Tank (UST) 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 CalEPA on ensuring program consistency, and providing technical assistance to the Certified Unified Program Agencies (CUPA). The following state agencies are involved with the Unified Program:

- CalEPA is directly responsible for coordinating the administration of the Unified Program. The Secretary of the CalEPA certifies CUPAs
- DTSC provides technical assistance and evaluation for the hazardous waste generator program including onsite treatment (tiered permitting)

- OES is responsible for providing technical assistance and evaluation of the Hazardous Material Release Response Plan (Business Plan) Program and the CalARP Programs
- 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
- SWRCB provides technical assistance and evaluation for the UST program in addition to handling the oversight and enforcement for the aboveground storage tank program

The CUPA for the SJCOG region is the San Joaquin County Environmental Health Department (EHD). The EHD is responsible for implementing the federal and state laws and regulations pertaining to the handling of hazardous wastes and hazardous materials.

California Health and Safety Code

Pursuant to the California Health and Safety Code section 25150, the DTSC shall adopt, and revise when appropriate, standards and regulations for the management of hazardous wastes to protect against hazards to the public health, domestic livestock, wildlife, or the environment. Pursuant to section 25159.5, in adopting or revising standards and regulations pursuant to this chapter the Department shall, insofar as practicable, make the standards and regulations conform with corresponding regulations adopted by the USEPA pursuant to the federal act. This section does not prohibit the department from adopting standards and regulations that are more stringent or more extensive than federal regulations.

Pursuant to the Health and Safety Code section 57008, CalEPA's Office of Environmental Health Hazard Assessment, in cooperation with the DTSC and the SWRCB, shall publish a list of screening numbers for select contaminants. Screening numbers are defined as the concentration of a contaminant published by CalEPA as an advisory number. In determining screening numbers, CalEPA considers the toxicology of the contaminant, risk assessments prepared by federal or state agencies, epidemiological studies, risk assessments or other evaluations of the contaminant during remediation of a site, and screening numbers that have been published by other agencies.

California Land Environmental Restoration and Reuse Act of 2001

The California Land Environmental Restoration and Reuse Act of 2001 established California Human Health Screening Levels (CHHSLs) as a tool to assist in the evaluation of contaminated sites for potential adverse threats to human health. The CHHSLs were developed by the Office of Environmental Health Hazard Assessment. 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 non-cancer health effects. The CHHSLs were developed using standard exposure assumptions and chemical toxicity values published by USEPA and CalEPA. The CHHSLs can be used to screen sites for potential human health concerns where releases of hazardous chemicals to soil gas have occurred. Under most circumstances, the presence of a chemical in soil gas 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.

California Multi-Hazard Mitigation Plan

The State Hazard Mitigation Plan (SHMP) represents the state's primary hazard mitigation guidance document - providing an updated analysis of the state's historical and current hazards, hazard mitigation goals and objectives, and hazard mitigation strategies and actions. The plan represents

the state's overall commitment to supporting a comprehensive mitigation strategy to reduce or eliminate potential risks and impacts of disasters in order to promote faster recovery after disasters and, overall, a more resilient state. State Hazard Mitigation Plans are required to meet the Elements outlined in FEMA's State Mitigation Plan Review Guide (revised March 2015, effective March 2016).

OES is responsible for the development and maintenance of the State's plan for hazard mitigation. The State's multi-hazard mitigation plan was last approved by the Federal Emergency Management Agency (FEMA) as an Enhanced State Mitigation Plan in 2018 (CalOES 2018). The plan is designed to reduce the effects of disasters caused by natural, technological, accidental, and adversarial/human-caused hazards. The SHMP sets the mitigation priorities, strategies, and actions for the state. The plan also describes how risk assessment and mitigation strategy information is coordinated and linked from local mitigation plans into the SHMP and provides a resource for local planners of risk information that may affect their planning area. The State of California is required to review and revise its mitigation plan and resubmit for FEMA approval at least every five years to ensure continued funding eligibility for certain federal grant programs.

California Public Resources Code 21151.4

Pursuant to Public Resources Code Section 21151.4, projects that can be reasonably anticipated to produce hazardous air emissions or handle extremely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school must consult with the potentially affected school district and provide written notification not less than 30 days prior to the proposed certification or adoption of an environmental document. Where a school district proposes property acquisition or the construction of a school, the environmental document must address existing environmental hazards, and written findings must be prepared regarding existing pollutant sources.

California Education Code

Sections 17071.13, 17072.13, 17210, 17210.1, 17213.1-3, and 17268 of the California Education Code became effective January 1, 2000. Together, they establish requirements for assessments and approvals regarding toxic and hazardous materials that school districts must follow before receiving final site approval from the DOE and funds under the School Facilities Program. These requirements are consistent with those described above for certification or adoption of an environmental document under Public Resources Code Section 21151.4.

California Education Code Section 17213(b) establishes requirements for assessments and approvals that address the potential for existing contamination on the site, and whether nearby land uses might reasonably be anticipated to emit hazardous air emissions or handle hazardous materials. Assessment of existing contamination is conducted in coordination with DTSC's School Property Evaluation and Cleanup Division, which 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.

Carpenter-Presley-Tanner Hazardous Substances Account Act

The Carpenter-Presley-Tanner Hazardous Substance Account Act imposes liability for hazardous substances removal or remedial actions and requires the State Attorney General to recover from the liable person, as defined, certain costs incurred by the DTSC or any of the state's nine RWCQBs, upon the request of the DTSC or RWQCB. The act authorizes, except as specified, a party found liable for any costs or expenditures recoverable under the act for those actions to establish, as

specified, that only a portion of those costs or expenditures are attributable to the party and requires the party to pay only for that portion. If each party does not establish its liability, the act requires a court to apportion those costs or expenditures, as specified, among the defendants and the remaining portion of the judgment is required to be paid from the Toxic Substances Control Account. Existing law authorizes the money deposited in the Toxic Substances Control Account in the General Fund to be appropriated to the DTSC for specified purposes, including the payment of the costs incurred by the state for those actions.

Lempert-Keene-Seastrand Oil Spill Prevention and Response Act

The Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 granted the Office of Spill Prevention and Response the authority to direct prevention, removal, abatement, response, containment, and cleanup efforts with regard to all aspects of any oil spill in marine waters of California. The Office of Spill Prevention and Response implements the California Oil Spill Contingency Plan, consistent with the National Contingency Plan, which pays special attention to marine oil spills and impacts to environmentally- and ecologically-sensitive areas. In 2014, the Office of Spill Prevention and Response program was expanded to cover all statewide surface waters at risk of oil spills from any source, including pipelines and the increasing shipments of oil transported by railroads.

Local Community Rail Security Act

The Local Community Rail Security Act of 2006 (Public Utilities Code Sections 7665-7667) requires all rail operators to provide security risk assessments to the California Public Utilities Commission, the Director of Homeland Security, and the Catastrophic Event Memorandum Account that describe the following:

- Location and function of each rail facility
- Types of cargo stored at or typically moved through the facility
- Hazardous cargo stored at or moved through the facility
- Frequency of hazardous movements or storage
- Description of sabotage-terrorism countermeasures
- Employee training programs
- Emergency response procedures
- Emergency response communication protocols

c. Regional and Local Laws, Regulations, and Policies

San Joaquin County General Plan

The San Joaquin County General Plan Public Health and Safety Element includes policies in an effort to minimize the impacts of man-made or natural disasters, hazardous materials, or other safety concerns. Relevant policies to the proposed 2022 RTP/SCS EIR include the following (San Joaquin County 2016):

- **Policy PHS-7.1: Minimize Hazardous Materials and Wastes.** The County shall discourage the use of hazardous materials and the creation of hazardous wastes.
- **Policy PH-7.2: Avoid Contamination of Resources.** The County shall strive to ensure that hazardous materials and wastes do not contaminate air, water, or soil resources.

- **Policy PHS-7.3: Control Hazardous Materials.** The County shall require the use, storage, and disposal of hazardous materials and wastes to comply with local, State, and Federal safety standards
- **Policy PHS-7.4: County Hazardous Waste Management Plan.** The County shall maintain and implement the County Hazardous Waste Management Plan.
- **Policy PHS-7.5: Locate Hazardous Materials Away from Populated Areas.** To the extent feasible, the County shall require proposed activities and land uses that use, store, or dispose of hazardous materials or wastes to be located away from existing and planned populated areas.
- **Policy PHS-7.6: Require Hazardous Materials Management Plans.** The County shall require businesses that use or store materials and wastes on-site to prepare Hazardous Materials Management Plans (Business Plans) that map and inventory all hazardous materials and contain contingency plans for accidents, designate an individual or individuals as emergency coordinator(s), and ensure that all employees understand the potential for accidents and the appropriate response. Plans must follow the requirements for Federal, State, and/or local defined special flood hazard areas.
- **Policy PHS-7.7: County Hazardous Materials Area Plan.** The County shall maintain and implement the County Hazardous Materials Area Plan for emergency response to a release or threatened release of hazardous material within the unincorporated County.
- **Policy PHS-7.8: Consistency with Hazardous Waste Management Plan.** The County shall require all new development to be consistent with the County Hazardous Waste Management Plan (CHWMP). Any proposed hazardous waste facility, or expansion of an existing hazardous waste facility, shall be consistent with the CHWMP.
- **Policy PHS-7.9: Require Disclosure of Hazardous Materials and Waste.** The County shall require public disclosure of hazardous materials and wastes for existing and proposed businesses.
- **Policy PHS-7.10: Household Hazardous Waste.** The County shall provide educational programs to inform the public about household hazardous waste and the proper disposal methods.
- **Policy PHS-7.11: Hazardous Materials Transportation Routes.** The County shall continue to maintain route designations for hazardous materials transport within San Joaquin County.
- **Policy PHS-7.12: Hazardous Liquids Storage Tanks.** The County shall maintain and implement hazardous material regulations for the storage of hazardous liquids in underground or aboveground storage tanks.
- **Policy PHS-7.13: Hazardous Waste Disposal Waste.** The County shall provide areas for hazardous waste disposal facilities sufficient to meet the needs of county residents and businesses.
- **Policy PHS-7.14: Legislative Support.** The County shall support legislation that would further reduce public risks associated with hazardous materials, reduce hazardous waste generation, aid in cleanup, or provide assistance for hazardous materials management.
- **Policy PHS-7.15: Site Cleanup Support.** The County shall support programs and funding for determination of sites contaminated with hazardous materials and for site cleanup.
- **Policy PHS-7.16: Hazardous Waste Property Designations.** When known, the County shall refer contaminated sites to the appropriate lead agency with established authority/jurisdiction for the required assessment and cleanup activities.

City General Plans

Local planning policies related to hazards and hazardous materials are established in each jurisdiction's General Plan, generally in the Safety Element or equivalent chapter. Safety Elements are required to address geologic hazards, fire hazards, dam failure, evacuation routes, flooding, and emergency response among other issues. For emergency services, some of the relevant policies may include coordinating with other agencies that are responsible for planning medical facilities to meet the health care needs of residents in the region, retaining hospitals, evaluating medical facility proposals, providing emergency response services, and participating in mutual-aid agreements.

Incorporated cities in the SJCOG region each have an adopted General Plan which includes a Safety Element or equivalent chapter. For projects within the municipal area of these cities these Plans would supersede the elements of the County General Plan. The most notable goals and policies of these General Plans concerning hazards and hazardous materials are listed in the following sections.

City of Lodi

The City of Lodi's Safety Element of the General Plan identifies the natural and manmade hazards that exist within the city and seeks to mitigate their potential impacts through both preventative and response measures. Relevant goals to the proposed 2022 RTP/SCS EIR include the following (City of Lodi 2010)

- **Policy S-G1**: Ensure a high level of public health and safety
- **Policy S-G2:** Prevent loss of lives, injury, illness, and property damage due to flooding, hazardous materials, seismic and geological hazards, and fire.
- **Policy SG-3**: Protect the public from disasters and provide guidance and response in the event a disaster or emergency.
- **Policy S-P10:** Require that all fuel and chemical storage tanks are appropriately constructed; include spill containment areas to prevent seismic damage, leakage, fire and explosion; and are structurally or spatially separated from sensitive land uses, such as residential neighborhoods, schools, hospitals and places of public assembly.
- **Policy S-P11:** Ensure compatibility between hazardous material users and surrounding land use through the development review process. Separate hazardous waste facilities from incompatible uses including, but not limited to, schools, daycares, hospitals, public gathering areas, and high-density residential housing through development standards and the review process.
- **Policy S-P12:** Consider the potential for the production, use, storage, and transport of hazardous materials in approving new development. Provide for reasonable controls on such hazardous materials. Ensure that the proponents of applicable new development projects address hazardous materials concerns through the preparation of Phase I or Phase II hazardous materials studies, as necessary, for each identified site as part of the design phase for each project. Require projects to implement federal or State cleanup standards outlined in the studies during construction.
- **Policy S-**P13: Regulate the production, use, storage, and transport of hazardous materials to protect the health of Lodi residents. Cooperate with the County and Lodi Fire Department in the identification of hazardous material users, development of an inspection process, and implementation of the City's Hazardous Waste Management and Hazardous Materials Area plans. Require, as appropriate, a hazardous materials inventory for project sites, including an assessment of materials and operations for any development applications, as a component of

the development environmental review process or business license review/building permit review.

- **Policy S-P14:** Work with waste disposal service provider(s) to educate the public as to the types of household hazardous wastes and the proper methods of disposal and shall continue to provide opportunities for residents to conveniently dispose of household hazardous waste.
- **Policy S-P15**: Continue to follow the County Comprehensive Airport Land Use Plan for guidelines on land use compatibility near airports, land use restrictions, and to ensure public safety.
- **Policy S-P16:** Support grade-separated railroad crossings, where feasible, and other appropriate measures adjacent to railroad tracks to ensure the safety of the community.
- **Policy S-P17**: Continue to mark underground utilities and abide by federal safe-digging practices during construction.

City of Manteca

The City of Manteca's General Plan Safety element includes policies that exist within the city that minimize the impacts of man-made or natural disasters, hazardous materials, or other safety concerns. Relevant policies to the proposed 2022 RTP/SCS EIR include the following (Manteca 2021):

- **Policy S-4.1:** Maintain an awareness of hazardous materials throughout the Manteca region.
- **Policy S-4.2:** Strictly regulate the production, use, storage, transport, and disposal of hazardous materials to protect the health and safety of Manteca residents.
- **Policy S-4.3:** As part of the development review process, consider the potential for the production, use, storage, transport, and/or disposal of hazardous materials and provide for appropriate controls on such hazardous materials consistent with federal, state, and local standards.
- **Policy S-4.4:** Use the environmental review process to comment on Hazardous Waste Transportation, Storage and Disposal Facilities proposed in the Manteca Planning Area and throughout the County to request a risk assessment and ensure that potentially significant, widespread, and long-term impacts on public health and safety of these facilities are identified and mitigated, as such impacts do not respect jurisdictional boundaries.

City of Tracy

The City of Tracy's General Plan Safety Element provides information about the risks in Tracy due to natural and human-made hazards with policies geared towards minimizing the level of risk. These policies fall under goal SA-4 which may be relevant to the 2022 RTP/SCS EIR and is stated in following way:

- Goal SA-4: Protection from the harmful effects of hazardous materials and waste.

Local Hazard Mitigation Plans

Local jurisdictions develop, adopt, and update hazard mitigation plans to establish guiding principles for reducing hazard risk, as well as specific mitigation actions to eliminate or reduce identified vulnerabilities. San Joaquin County OES's Local Hazard Mitigation Plan was last updated in November of 2017 and is currently under update for 2023. The LHMP recognized earthquakes, floods, dam inundation, landslides, and wildfire as the local natural hazards among others. The LHMP also states mitigation strategies and actions that serve as the long-term blueprint for reducing potential losses. Activities such as seismic retrofitting essential facilities and implementing erosion

and sediment control regulations are examples of specific actions which can be taken to prevent or minimize damage. Such activities have been identified for each hazard in the LHMP (San Joaquin County OES 2017).

Airport Land Use Compatibility Plans

The six public airports within the SJCOG region are: Kingdon Airport, Lodi (Lind's) Airport, Lodi (Precissi) Airpark, New Jerusalem Airport, Stockton Metropolitan Airport, and Tracy Municipal Airport. The ALUC adopted two ALUCPs for these airports. The Stockton Metropolitan ALUCP was adopted in 2016, and the other ALUCP, which covers the other five airports, was adopted in 2009. Each ALUCP establishes areas of influence within which airport operations are likely to affect land uses or land uses could affect airport operations. Safety and noise criteria are identified in the ALUCP so that land use conflicts with airport operations are minimized. Prior to amending a general plan, a local agency must "refer" the proposed action to the ALUC (Pub. Util. Code Sec. 21676, et seq.) County and city General Plans must be consistent with the applicable ALUCP (Government Code Section 65302.2).

4.10.3 Impact Analysis

a. Methodology and Significance Thresholds

Appendix G of the State CEQA Guidelines identifies criteria for determining whether a project's impacts would have a significant impact related to hazards and hazardous materials, namely an analysis of whether or not the 2022 RTP/SCS would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
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.
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
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 it create a significant hazard to the public or the environment.
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area.
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Impacts related to exposure to wildland fires (Criterion 7), are discussed in detail Section 4.16, *Wildfire,* under Impact WF-1.

The methodology used for the following evaluation is based on a review of documents and publicly available information about hazardous and potentially hazardous conditions in the SJCOG region to determine the potential for implementation of the 2022 RTP/SCS to result in an increased health or

safety hazard to people or the environment. This includes city and county planning documents, and hazardous materials database information maintained by various state and federal agencies, such as DTSC and SWRCB. Due to the large area of the SJCOG region, known sites of current or former contamination were not evaluated in detail, and physical surveys were not conducted. Rather, this program-level analysis is based on hazards typically associated with certain land uses and an overall understanding of the key safety concerns that could result from implementation of the 2022 RTP/SCS.

The evaluation of hazards and hazardous materials impacts reasonably assumes that the construction and development under the 2022 RTP/SCS would adhere to the latest federal, state, and local regulations, and conform to the latest required standards in the industry, as appropriate for individual projects.

b. Project Impacts and Mitigation Measures

The following section discusses potential impacts and mitigation measures that may be associated with transportation projects and the land use scenario contained within the 2022 RTP/SCS. Section 4.10.3.c summarizes the impacts associated with capital improvement projects proposed in the 2022 RTP/SCS. Due to the programmatic nature of the 2022 RTP/SCS, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible at this time. In general, however, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by the 2022 RTP/SCS could result in the impacts as described in the following sections.

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

Impact HAZ-1 TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PATTERNS INCLUDED IN THE 2022 RTP/SCS MAY FACILITATE THE ROUTINE TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIAL, AND MAY RESULT IN REASONABLY FORESEEABLE UPSET AND ACCIDENT CONDITIONS. MANDATORY COMPLIANCE WITH EXISTING REGULATIONS AND PROGRAMS WOULD MINIMIZE THE RISK ASSOCIATED WITH THESE ACTIVITIES OR ACCIDENT CONDITIONS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Land use patterns and transportation projects associated with implementation of the 2022 RTP/SCS would temporarily increase the regional transport, use, storage, and disposal of hazardous materials commonly used at construction sites, such as diesel fuel, lubricants, paints and solvents, and asphalt and cement products containing strong basic or acidic chemicals. Hazardous waste generated during construction may consist of welding materials, fuel and lubricant containers, paint and solvent containers, and discarded asphalt and cement products.

Construction associated with implementation of the proposed 2022 RTP/SCS could result in impacts related to use of hazardous materials and disturbance of potentially hazardous materials, including asbestos. However, the most likely incidents involving construction-related hazardous materials are generally associated with minor spills or drips. Small fuel or oil spills are possible but would have a negligible impact on public health. All hazardous materials would be stored, handled, and disposed of according to the manufacturers' recommendations and spills would be cleaned up in accordance with applicable regulations, as described in Title 49 CFR 171–180 and the Hazardous Materials

Transportation Act. Hazardous materials spills or releases, including petroleum products such as gasoline, diesel, and hydraulic fluid, regardless of quantity spilled, must be immediately reported if the spill has entered or threatens to enter a water of the State, including a stream, lake, wetland, or storm drain, or has caused injury to a person or threatens injury to public health. Immediate notification must be made to the local emergency response agency, or 911, and the OES Warning Center. For non-petroleum products, additional reporting may be required if the release exceeds federal reportable quantity thresholds over a release period of 24 hours as detailed in HSC Section 25359.4 and in 40 CFR 302.4.As described above, the DOT has identified multiple routes within the SJCOG region as hazardous material routes (DOT 2021). According to the DTSC Hazardous Waste Tracking System database, approximately 56,000 tons of hazardous waste was transported within the SJCOG region in 2020. Additionally, trucks transporting hazardous material would also have to use local collector and arterial streets to access individual project sites in the SJCOG region. Transportation projects would also require the temporary storage and use of hazardous materials at locations along project roads. Thus, trucks transporting hazardous materials for project construction would use many of the same freeways, arterials, and local streets as other traffic. This would create a risk of accidents and associated release of hazardous materials affecting drivers and people along these routes, as well as drivers of those trucks. Although the transportation of hazardous materials could result in accidental spills, leaks, toxic releases, fire, or explosion, the DOT prescribes strict regulations for the safe transportation of hazardous materials, as described in Title 49 of the CFR and the Hazardous Materials Transportation Act. These standard accident and hazardous materials recovery training and procedures are enforced by the state and followed by private state-licensed, certified, and bonded transportation companies and contractors.

The construction of land use patterns and transportation projects included in the 2022 RTP/SCS that require demolition of existing structures, particularly older structures, would have the potential to expose workers and the public to asbestos containing materials or dust containing asbestos. HSC Section 19827.5 requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. Mandatory compliance with asbestos abatement and disposal regulations and requirements would minimize the risk of exposure.

Land use patterns included in the 2022 RTP/SCS would have the potential to increase population, jobs, and households and a variety of land uses including residential, commercial, and industrial. Specific uses such as dry cleaners, gas stations, and certain industrial uses, would 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. The operation of businesses facilitated by land use patterns included in the 2022 RTP/SCS that use, create, or dispose of hazardous materials would be regulated and monitored by federal, state, and local regulations that provide a high level of protection to the public and the environment from the hazardous materials manufactured within, transported to, and disposed within the SJCOG region. Use of hazardous materials at these businesses would also require permits and monitoring to avoid hazardous waste release through the local CUPA. During operation, businesses that store hazardous materials could potentially experience accidents or upset conditions that result from their routine use. These businesses would be required to prepare spill prevention, containment, and countermeasures plans (pursuant to 40 CFR 112) or, for smaller quantities, a spill prevention and response plan. These plans identify best management practices for spill and release prevention and provide procedures and responsibilities for rapidly, effectively, and safely cleaning up and disposing of any spills or releases. Oversight is provided by the CUPA.

Pursuant to the requirements and liabilities of applicable regulations, the routine use or accidental spill of hazardous materials at business and industrial uses facilitated by the land use patterns included in the 2022 RTP/SCS would not pose a substantial hazard to the public or the environment. Disposal of hazardous waste generated by these businesses would be subject to compliance with DTSC and CalEPA regulations.

Transportation projects included in the 2022 RTP/SCS include a variety of transportation modifications such as new travel lanes, auxiliary lanes, roadway widening, increased transit service and expansion, and other maintenance and rehabilitation projects. The projects may increase the capacity of roadways to transport hazardous materials. Roadway projects in the 2022 RTP/SCS would also improve road safety, as well as pedestrian and bicycle safety, thereby potentially reducing transportation-related hazardous materials risks because fewer accidents would occur on safer roads. Based on the requirements of Title 49 CFR 171–180, construction and operation of transportation projects would provide for the safe transport and disposal of hazardous waste.

The 2022 RTP/SCS encourages infill development and increased population and employment density near public transit stops, including rail. There could also be increased urbanization along transportation corridors. Thus, the number of people potentially exposed to hazardous conditions could increase as a result of land use patterns included in the 2022 RTP/SCS. To be declared a sustainable communities project under Public Resources Code Section 21155.1, projects in transit priority areas must demonstrate that there would not be an “unusually high” risk of fire or explosion from materials stored or used on or near the property and the project would not result in a risk of exposure to a potentially hazardous material at levels that exceed state and federal standards. This would occur on a project-specific basis and does not affect the other streamlining strategies and statutes under the Sustainable Communities Act.

As described above in the Regulatory Setting discussion, the DOT regulates the transport of hazardous materials by all modes, including rail and highway under the regulations of the Hazardous Materials Transportation Act. The Local Community Rail Security Act of 2006 requires all rail operators to provide security risk assessments to California Public Utilities Commission, which includes emergency response procedures and communication protocols. Mandatory implementation of additional federal, state, and local requirements such as CalARP Program and the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act would minimize potential exposure to the public and the environment from accidental releases. Therefore, although population density would increase in proximity to major transportation corridors that are used to transport hazardous and flammable materials, the increased risk of hazard from routine transport or accidental upsets during transport would be minimal.

In conclusion, both planned land use patterns and transportation projects could increase the routine transport, use, storage, and disposal of hazardous wastes in the SJCOG region. The planned land use patterns and transportation projects could also increase the potential for unintentional upset and accident conditions. Because of the existing federal, state, and local regulations and oversight in place that would effectively reduce the inherent hazard associated with routine transport, use, storage and disposal activities, and regulations that effectively reduce the potential for individual projects to create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required because this impact would be less than significant.

Threshold 3:	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

Impact HAZ-2 TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PATTERNS INCLUDED IN THE 2022 RTP/SCS WOULD FACILITATE HAZARDOUS EMISSIONS OR HANDLING OF ACUTELY HAZARDOUS MATERIALS, SUBSTANCES OR WASTE WITHIN ONE-QUARTER MILE OF AN EXISTING OR PROPOSED SCHOOL. EXISTING REGULATIONS AND PROGRAMS WOULD REDUCE THE RISK TO SCHOOLS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

As described in Section 4.10.1.c*,* there are 246 public and private schools in the SJCOG region with more than 151,000 students enrolled (SJCOE 2021). Land use patterns included in the 2022 RTP/SCS would increase population, jobs, and households and a include a variety of land uses including residential, commercial, and industrial. Specific uses such as dry cleaners, gas stations, and certain industrial uses, would involve routine handling of hazardous materials such as household hazardous substances (e.g., paints, cleaning supplies, solvents, and petroleum products) and commercial and industrial hazardous waste. The 2022 RTP/SCS could increase the amount of hazardous materials handled within 0.25 mile of schools, depending on the specific location of land uses relative to schools in the region. Many of the proposed transportation projects and land use scenarios would occur in the main urban areas of the SJCOG region and as a result, may occur near schools.

Any new commercial or industrial operations in proximity to existing schools would be required to comply with regulations related to the routine use, storage, and transport of hazardous materials. Land uses that would generate emissions or involve the handling of extremely hazardous materials, substances, or waste within 0.25 mile of an existing school must notify the affected school district pursuant to Public Resources Code Section 21151.4. Compliance with existing regulations would reduce the exposure to potential hazards associated with these land uses.

For new schools that may be developed to address the population distribution changes resulting from land use patterns included in the 2022 RTP/SCS, the California Education Code, including Education Code Section 17213(b), establishes requirements for assessments and approvals that address the potential for existing contamination on the site, and whether nearby land uses might reasonably be anticipated to emit hazardous air emissions or handle hazardous materials. Assessment of existing contamination is conducted in coordination with DTSC's School Property Evaluation and Cleanup Division, which 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. Therefore, hazardous emissions and handling impacts on schools related to land use patterns included in the 2022 RTP/SCS would be less than significant.

The transportation projects included in the 2022 RTP/SCS could increase the capacity to transport hazardous materials on roads within the SJCOG region, including within 0.25 mile of schools. However, all materials must be used, stored, and disposed of in accordance with applicable federal, state, and local laws, which would effectively reduce the potential impacts associated with hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or potential future school. Transportation projects in the 2022 RTP/SCS may also improve road safety, thereby reducing the potential for accidents in proximity of schools related to hazardous materials. Therefore, the hazardous materials impacts related to existing and proposed schools from implementation of the transportation projects included in the 2022 RTP/SCS would be less than significant.

Mitigation Measures

No mitigation measures are required because this impact would be less than significant.

Threshold 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 it create a significant hazard to the public or the environment

Impact HAZ-3 THE 2022 RTP/SCS INCLUDES LAND USE PATTERNS AND TRANSPORTATION PROJECTS THAT COULD OCCUR ON PREVIOUSLY UNKNOWN HAZARDOUS MATERIAL SITES OR SITES ON THE LIST COMPILED BY GOVERNMENT CODE SECTION 65962.5, AND THEREFORE CREATE A SIGNIFICANT HAZARD TO THE PUBLIC OR ENVIRONMENT. THIS IMPACT WOULD BE SIGNIFICANT BUT MITIGABLE.

Throughout the SJCOG region 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. As described above, there are hundreds of documented sites of contamination in some stage of DTSC or SWRCB oversight in the region. These sites range from small releases that have had localized effects on private property and have already been remediated to large scale releases from long-term historical industrial practices that have had wider ranging effects on groundwater. Specific sites of documented contamination are not evaluated in this analysis because this is a programmatic level document. Further, because the precise timing of future land use developments is unknown, an evaluation of the potential for specific sites of known contamination within the SJCOG region to be affected by land use patterns included in the 2022 RTP/SCS cannot be conducted at this time. However, land use can be used to generally characterize the potential for release of hazardous materials (i.e., hazardous materials releases are more likely to have occurred in areas that currently or historically supported industrial uses). 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.

A common practice that is typically required by lending institutions when properties change hands is for a Phase I ESA to be prepared 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 and/or permitting agencies require submittal of a Phase I ESA 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. However, with the exceptions for streamlining projects in transit priority areas and siting public schools, there are no general regulatory requirements to conduct a Phase I ESA, or subsequent investigation of potential contamination. Therefore, because it cannot be assumed these practices would regularly occur, the impacts related to in land use patterns included in the 2022 RTP/SCS would be potentially significant.

Similarly, there would be potential for transportation projects to encounter previously unidentified contamination from past practices on sites that have not been listed in environmental databases pursuant to Government Code Section 65962.5. Thus, the impacts of transportation projects included in the 2022 RTP/SCS would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, SJCOG shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measure developed for the 2022 RTP/SCS program where applicable for transportation projects that would be located on or near hazardous materials. Municipalities in the SJCOG region can and should implement this measure, where relevant to land use projects implementing the 2022 RTP/SCS.

HAZ-3 Site Remediation

If an individual project included in the 2022 RTP/SCS is located on or near hazardous materials and/or waste site pursuant to Government Code Section 65962.5, or has the potential for residual hazardous materials and/or waste as a result of location and/or prior uses, the project sponsor shall prepare a Phase I ESA in accordance with the American Society for Testing and Materials' E-1527-05 standard. 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. All recommendations included in a Phase I ESA prepared for a site shall be implemented. 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. Examples of typical recommendations provided in Phase I/II ESAs include removal of contaminated soil in accordance with a soil management plan approved by the local environmental health department; covering stockpiles of contaminated soil to prevent fugitive dust emissions; capturing groundwater encountered during construction in a holding tank for additional testing and characterization and disposal based on its characterization; and development of a health and safety plan for construction workers.

For any project located on or near sites that are not listed and do not have the potential for residual hazardous materials as a result of historic land uses, no action is required unless unknown hazards are discovered during development. In that case, the implementing agency shall discontinue development until DTSC, RWQCB, SJVAPCD, and/or other responsible agency issues a determination, which would likely require a Phase I ESA as part of the assessment.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are SJCOG and transportation project sponsor agencies. Implementing agencies for land use projects are cities and the County. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction, as applicable.

Significance After Mitigation

With implementation of Mitigation Measure HAZ-3, this impact would be reduced to below thresholds of significance because project sites with hazardous material contamination that are previously unknown and not included on the list compiled by the Government Code Section 65962.5 would be identified prior to commencement of project construction. Additionally, prior to commencement of construction, measures to remediate contamination, such as containment and disposal of contaminated soil pursuant to federal and state regulations would be required. These measures would prevent construction workers or other people from substantial exposure to hazardous materials.

Threshold 5:	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area

Impact HAZ-4 TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE SCENARIO ENVISIONED BY THE 2022 RTP/SCS MAY BE LOCATED AT OR NEAR A PUBLIC USE AIRPORT OR PRIVATE AIRSTRIP. EXISTING REGULATIONS AND REGULATORY OVERSIGHT WOULD REDUCE THE INHERENT HAZARD OF DEVELOPMENT NEAR AIRPORTS TO SAFE LEVELS, AND THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Land use patterns and transportation projects included in the 2022 RTP/SCS may be located at or near one of the six public use airports or the private airstrips in the SJCOG region, and/or within the ALUCP areas. Impacts associated with development at or near existing airports are largely dependent upon site- and project-specific information that is not currently available and would be provided in the future as projects within the 2022 RTP/SCS undergo project level environmental review. However, any development and subsequent planning decisions in proximity to airports would be subject to review under the State Aeronautics Act provided under Public Utilities Code § 21167 et seq. Specific projects that may affect navigable airspace are also subject to FAA review, as outlined under 14 CFR Parts 77.5, 77.7, and 77.9. Additionally, the 2022 RTP/SCS would not change existing land use designations or zoning, and land use development would be subject to existing zoning regulations, including height restrictions. Because there are existing federal, state, and local regulations and oversight in place that would effectively reduce the inherent hazard associated with development near airports to an acceptable and safe level, the 2022 RTP/SCS would result in a less than significant impact.

Mitigation Measures

No mitigation measures are required because this impact would be less than significant.

Threshold 6:	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

Impact HAZ-5 TRANSPORTATION IMPROVEMENT PROJECTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2022 RTP/SCS COULD INTERFERE WITH EXISTING EMERGENCY RESPONSE AND EVACUATION. HOWEVER, REQUIRED REGULAR UPDATES TO EMERGENCY RESPONSE AND EVACUATION PLANS WOULD ACCOUNT FOR DEVELOPMENT AND PROJECTS AND STANDARD NOTIFICATION OF EMERGENCY RESPONSE AGENCIES DURING CONSTRUCTION ACTIVITIES WOULD ENSURE EVACUATION AND RESPONSE ROUTES ARE MODIFIED APPROPRIATELY. IMPACTS RELATED TO INTERFERENCE OR IMPAIRMENT OF AN ADOPTED EMERGENCY RESPONSE PLAN OR EMERGENCY EVACUATION PLAN WOULD BE LESS THAN SIGNIFICANT.

Construction of the land use scenario and transportation projects included in the 2022 RTP/SCS would require temporary road closures that could impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Some of the transportation projects may require multiple years to construct. However, standard construction practices include notification of emergency responders where road closures are required. Because road closures are temporary and would be coordinated with emergency responders so that alternative evaluation routes could be developed and employed, construction activities would have a less than significant impact.

The land use patterns included the 2022 RTP/SCS emphasize infill and transit-oriented development, which would generally focus growth in existing urbanized areas of the SJCOG region. Thus,

population density in urbanized areas would increase, which may improve emergency response by eliminating the need to travel to more rural and dispersed locations in the region. Alternatively, large concentrations of people could also cause adverse effects related to the implementation emergency plans because the increased population may overburden adopted evacuation routes and other emergency response resources. However, the management of emergency response and emergency evacuation plans includes regular updates to these plans that incorporate new or proposed developments. Thus, land use patterns in the 2022 RTP/SCS would be reflected in the regular updates of emergency and evacuation plans applicable to the SJCOG region.

Additionally, the proposed transportation projects would generally increase mobility and circulation capacity and, thereby, have the potential to improve response times for police, fire, and emergency service providers, especially in heavily congested areas. However, as described above, emergency and evacuation plans are regularly updated to incorporate current conditions. Therefore, potential impacts related to interference with emergency response and evacuation plans would be less than significant.

Mitigation Measures

No mitigation measures are required because this impact would be less than significant.

c. Specific 2022 RTP/SCS Projects That May Result in Impacts

The analysis within this section discusses the potential hazards and hazardous materials related impacts associated with the transportation improvement projects and the land use scenario included in the 2022 RTP/SCS. The projects within the 2022 RTP/SCS are evaluated herein in their entirety, and all would be subject to existing federal, state, and local regulations and programs that regulate and manage hazards and hazardous materials. As described above, the 2022 RTP/SCS includes land use development patterns and transportation projects that could increase the transport, use, storage, and disposal of hazardous materials and waste within the SJCOG region. A comprehensive list of specific projects that could increase the transport, use, storage, and disposal of hazardous materials and waste within the SJCOG region cannot be provided in this section because the specific location of land use development projects is undetermined. However, the transportation projects would involve increasing the capacity on roads that the U.S. DOT has identified as hazardous material routes. Increasing the capacity of these roads could increase the amount of hazardous material and waste transported on the roads. Furthermore, construction of any number of the land use development and transportation projects would presumably require the use of petroleum products and similar construction-related hazardous materials, at a minimum.

As described above, the land use development and transportation projects could also be located on hazardous material sites, including sites on the list compiled by Government Code Section 65962.5 (i.e., Cortese list). However, there are no specific projects that can be listed in this section because the specific timing of land use development projects is undetermined.

4.10.4 Cumulative Impacts

The cumulative impact analysis area for hazards and hazardous materials consists of the SJCOG region and adjoining counties. Information regarding these adjoining counties can be found in Section 3.1 – Environmental Setting, Table 3-1. Future development in this region that could result in impacts related to hazards and hazardous materials is considered in the analysis. This cumulative extent is used to evaluate potential direct and indirect, and permanent and temporary impacts to

the public or the environment associated with hazardous materials, hazardous emissions, or other safety hazards within the context of the SJCOG region and adjoining counties.

The potential impacts related to hazards and hazardous materials are generally related to site specific and project specific characteristics and conditions; however, hazardous sites or releases can occur across multiple adjoining properties or jurisdictions. Although the transport of hazardous materials may occur on rail or on roadways, such as Interstate 5, that traverse both the SJCOG region and adjacent counties, there are existing federal, state, and local regulations and oversight in place that would effectively reduce the inherent hazard associated with routine transport of such materials. Regulations and oversight, as outlined above in Section 4.10.2, *Regulatory Setting*, would also effectively reduce the potential for individual projects to create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions, within the SJCOG region as well as adjoining counties. Land use development envisioned as part of the proposed 2022 RTP/SCS could result in the development of sites listed in environmental databases pursuant to Government Code Section 65962.5. Although development of listed sites would be required to undergo remediation and comply with Mitigation Measure HAZ-3, cumulative impacts related to hazards and hazardous materials would be significant, and implementation of the proposed 2022 RTP/SCS would result in cumulatively considerable impacts pre-mitigation, and less-than-cumulatively considerable post-mitigation.

Impacts related to airport hazards are also site-specific, depending on the characteristics and design of individual projects and their location relative to distance and location of nearby airports. Existing regulations place limitations on the types of development that can be permitted within various aircraft zones surrounding an airport, such as building height restrictions or prohibiting residential occupancy. Mandatory compliance with these regulations would prevent substantial hazards related to exposure to airport related safety hazards. Cumulative impacts related to airport hazards would be less than significant and implementation of the proposed 2022 RTP/SCS would not result in cumulatively considerable impacts.