4.10 Hazards and Hazardous Materials

This section analyzes impacts related to hazardous materials, airports, emergency planning, and wildland fires in San Joaquin County. This section also describes the existing conditions for hazardous materials, airports, emergency planning, and wildland fires in San Joaquin, as well as the regulatory framework.

4.10.1 Setting

a. Physical Setting

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 (U.S. EPA) (2017), waste may be considered hazardous 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[7] 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.

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

- 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.

Generation and Disposal of Hazardous Materials and Waste

Many chemicals used in household cleaning, construction, light and heavy industry, dry cleaning, film processing, 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 San Joaquin County are monitored by U.S. EPA; the San Joaquin County Environmental Health Department; the Central Valley Regional Water Quality Control Board (RWQCB); 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 a 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 San Joaquin County. 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 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 25 registered hazardous waste transporters in San Joaquin County (DTSC 2017a).

Transportation of hazardous materials and wastes within San Joaquin County 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, Federal Motor Carrier Safety Administration, identifies several highways and county roads in San Joaquin County as a Hazardous Materials Route in its National Hazardous Materials Route Registry (2017). These highways and roads include sections of:

- Ahern Road
- Bird Road
- Byron Road
- Chrisman Road/11th Street
- Grant Line Road
- Patterson Pass Road
- Kasson Road
- State Highway 4
- State Highway 12
- State Highway 26
- State Route 33
- State Highway 88
- State Highway 99
- State Highway 120
- State Highway 132
- Interstate 5
- Interstate 205
- Interstate 580

On a tonnage basis, transport by truck accounted for approximately 94.6 percent of the hazardous materials transported in the nation in 2007 (FHWA, 2013). Considering the abundance of roads compared to rail and pipelines in the San Joaquin region, trucks are likely responsible for transporting the majority of hazardous materials within the SJCOG region. According to the DOT (2017), truck transport consistently accounts for the largest share of reportable incidents each year in California. For example, in 2016, truck transport accounted for approximately 90 percent of the reportable incidents in the State, while rail and air transport accounted for the other 10 percent. Reportable incidents in 2017, through and October 23, 2017, have shown a similar trend, with truck transport accounting for approximately 90 percent of the reportable incidents in the state (DOT 2017). 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.

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, and individual railroads conduct additional local training for first responders (Association of American Railroads 2015). Freight railroads also work with State emergency planning committees and local first responders to develop 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 (Association of American Railroads 2015). A list of the rail facilities in San Joaquin County is provided in Section 4.14, *Transportation and Circulation*.

Pipelines, primarily underground, are used to transport a variety of potentially hazardous substances, including natural gas, crude oil, and other petroleum products throughout San Joaquin County. For example, Pacific Gas & Electric maintains and operates a natural gas pipeline that is roughly parallel to Interstate 5 through most of the County, 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 county, among other (NPMS 2017). The American Petroleum Institute recommends

setbacks of 50 feet from petroleum and hazardous liquids lines for new homes, businesses, and places of public assembly. It also recommends 25 feet for garden sheds, septic tanks, and water wells; and 10 feet for mailboxes and yard lights (American Petroleum Institute, 2004). The Transportation Research Board (1988) encourages 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; 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.

The Port of Stockton is located within San Joaquin County, 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 2,000 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 40 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 37 feet at average low tide and 40 feet at average high tide. 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 1 mile from I-5 and all interconnecting major highway systems. The nearest port of entry for container cargo is the Port of Oakland (SJCOG 2014).

Potential for Hazardous Materials and Hazardous Materials Sites

Many activities in San Joaquin County 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 San Joaquin County 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, and medical offices, and industrial uses such as metal fabrication, metal scrap yards, railways, cement companies, food manufacturing, chemical manufacturing, and Pacific Gas & Electric substations (U.S. EPA, 2017). 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 San Joaquin County.

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, and 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 County Search Report (2017a);
- DTSC EnviroStor database (DTSC 2017b) (Cortese List) for tracking hazardous waste facilities and site with known contamination or sites where there may be reasons to investigate further;
- State Water Resources Control Board's (SWRCB) GeoTracker database (SWRCB 2017) of records for sites that require cleanup, such as leaking underground storage tank (UST) sites, Department of Defense sites, landfill sites, and Cleanup Program sites;
- California Office of Emergency Services (OES) Hazardous Materials Spill Notification database (2017) that includes information on reported hazardous material accidental releases or spills;
- The DOT's Hazardous Materials Incident Report System database (DOT 2017), which is maintained by the U.S. EPA and contains data on hazardous material spill incidents;
- California Department of Resources Recycling and Recovery's (CalRecycle) Solid Waste Inventory System database (CalRecycle 2017) of active and closed solid waste sites;
- The U.S. EPA Envirofacts database (2017b) of Resource Conservation and Recovery Act (RCRA) sites, as well as other hazardous sites, such as superfund and brownfield sites; and
- The United States Army Corps of Engineers (USACE) list of Formerly Used Defense Sites for California (2015).

All of the databases listed above have identified sites within San Joaquin County. As described above, the DTSC Active Transporter County Search Report identifies 23 registered hazardous waste transporters in the county. The DOT's Hazardous Materials Incident Report System database identified 35 hazardous materials spill incidents in San Joaquin County between January 1, 2017, and November 30, 2017. Seven incidents were in Stockton, 19 were in Tracy, two were in Manteca, five were in Lathrop, one was in French Camp, and one was in Escalon. Of these, only one incident was considered a serious incident. On July 31, 2017, approximately 7,000 gallons of alcohol was released from a tank car. No injuries were reported. Five sites in San Joaquin County are identified on the USACE list of Formerly Used Defense Sites for California. According to CalRecycle's Solid Waste Inventory System database, there are seven active landfill sites in San Joaquin County and an additional 29 landfill sites that have been closed.

For some databases, such as the DTSC's EnviroStor database and the U.S. EPA Envirofacts database, the list of identified sites is too exhaustive to provide in its entirety for purposes of this EIR. For example, the EnviroStor identifies 341 cleanup sites in San Joaquin County, 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, and monitoring. Among these sites are superfund sites, state response hazardous sites, contaminated soil sites, and school cleanup sites and leaking UST sites. The U.S. EPA Envirofacts database also identifies hundreds of RCRA sites in the region, including some that 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 1,236 cleanup sites, some have been which remediated and closed, 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 San Joaquin County, typically within proximity to the transportation network and more densely populated areas in the 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.

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 (DOE) (2017b), there are 246 public schools in San Joaquin County. There are an additional 41 private schools in the county (DOE 2017a). According to the San Joaquin County Office of Education, there are 14 school districts with more than 135,000 students enrolled (SJCOE 2017).

Airports

San Joaquin County has six public-use aviation airports, which include the following:

- Kingdon Executive
- Lodi
- Lodi Precissi Airpark
- New Jerusalem
- Stockton Metropolitan
- Tracy Municipal

Of these airports, only the Stockton Metropolitan Airport provides scheduled air carrier service. There are also seven private airports in the county, including hospital heliports and small agricultural airstrips. Currently, there are no operational military airfields in the county.

Municipalities and communities in San Joaquin County must consider housing and economic development along with airport interests in making decisions concerning the amount and type of new development to allow in and near airport flight corridors. Potential hazards in relationship to airport operations are generally regulated by the Federal Aviation Administration (FAA), with local planning and evaluation of proposed projects (in terms of a proposed project's compatibility in relationship to air and ground operations and the safety of the public) under the authority of the

applicable airport land use commission (ALUC) through an airport land use compatibility plan (ALUCP). Applicable ALUCPs to the SJCOG region are discussed in the Regulatory Setting, below.

Wildland Fires

In California, responsibility for wildfire prevention and suppression is shared by federal, state, and local agencies. Federal agencies are responsible for federal lands in Federal Responsibility Areas. The State of California has determined that some non-federal lands in unincorporated areas with watershed value are of statewide interest and have classified those lands as State Responsibility Areas (SRA), which are managed by the California Department of Forestry and Fire Protection (CAL FIRE). All incorporated areas and other unincorporated lands are classified as Local Responsibility Areas (LRA).

While all of California is subject to some degree of wildfire hazard, there are specific features that make certain areas more hazardous. CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors (Public Resources Code 4201-4204 and California Government Code 51175-89). Factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. CAL FIRE has identified two types of wildland fire risk areas: 1) Wildland Areas That May Contain Substantial Forest Fire Risks and Hazards, and 2) Very High Fire Hazard Severity Zones. Each risk area carries with it code requirements to reduce the potential risk of wildland fires. Under state regulations, areas within very high fire hazard risk zones must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life within these areas.

Based on the Fire Hazard Severity Zone Map for San Joaquin County, moderate hazard zones are present in the northeastern and southwestern portions of the county, and high hazard zones are mapped in the southwestern portion of the county (CAL FIRE 2007).

b. Regulatory Setting

Federal

The U.S. EPA is the lead agency responsible for enforcing federal regulations that affect public health or the environment. The primary federal laws and regulations include the 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.

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.

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, causes to be transported or shipped, 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, including packaging, handling, labeling, marking, placarding, operational standards, and highway routing.

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” Natural 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.

Code of Federal Regulations, Title 14, Part 77

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.

State

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 Program;
- Aboveground Petroleum Storage Act Program;
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs; and
- 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 San Joaquin County 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 Department of Toxic Substances Control 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 Environmental Protection Agency 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, in cooperation with the DTSC and the State Water Resources Control Board and the Office of Environmental Health Hazard Assessment, 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.

In 2017 DTSC Office of Human and Ecological Risk (HERO) issued Human Health Risk Assessment Note Number 3. HERO Note 3 lists DTSC-Modified screening levels (DTSC-SL) for select compounds in soil, tap water, and air.

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, an agency under the umbrella of CalEPA. 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 EPA 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 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.

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 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; and
- Emergency response communication protocols.

Regional and Local

City and County 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.

As of January 1, 2014, Senate Bill 1241 (SB 1241) requires that, upon the next revision of the housing element, jurisdictions review and update the Safety Element as necessary to address the risk of fire in SRAs and very-high fire hazard severity zones. These revisions must take into account specified considerations, including the provisions outlined in "Fire Hazard Planning" by the Office of Planning and Research.

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. Applicable hazard mitigation plans for San Joaquin County apply.

Emergency Response and Evacuation Plans

Emergency response plans include elements to maintain continuity of government, emergency functions of governmental agencies, mobilization and application of resources, mutual aid and public information. Emergency response plans are maintained at the federal, state and local levels for all types of disasters, human-made and natural. Local governments have the primary responsibility for preparedness and response activities.

The San Joaquin County Office of Emergency Services (OES) coordinates planning, preparing, and training for, responding to, and recovering from, emergencies for the San Joaquin Operational Areas. The OES has direct responsibility to support and coordinate the efforts of County departments carrying out their functions in the field and provides disaster information, logistical support, facilitates mutual aid requests, and facilitates inter-jurisdictional coordination.

In cooperation with others, OES maintains and oversees the Multi-Hazard Functional plans in place, which is the Countywide disaster preparedness program, including dam evacuation procedures and hazardous materials incidents response.

Airport Land Use Compatibility Plans

The six public airports within San Joaquin County 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. The 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 ALUCP (Government Code Section 65302.2).

4.10.2 Impact Analysis

a. Methodology and Significance Thresholds

Appendix G of the State CEQA Guidelines identifies the following criteria for determining whether a project's impacts would have a significant impact to hazards and hazardous materials:

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 handles 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 compiled by the Government Code Section 65962.5 and, as a result, would 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 for people residing or working in the project area;
6. For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
7. Impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan; and/or
8. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

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 San Joaquin County to determine the potential for implementation of the 2018 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 San Joaquin County, 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 2018 RTP/SCS.

The evaluation of hazards and hazardous materials impacts assumes that the construction and development under the 2018 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

This section describes generalized impacts associated with the 2018 RTP/SCS. Due to the programmatic nature of the 2018 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 2018 RTP/SCS would result in hazards and hazardous materials 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 PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PATTERNS INCLUDED IN THE 2018 RTP/SCS WOULD 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. THUS, HAZARDS TO THE PUBLIC OR ENVIRONMENT WOULD BE LESS THAN SIGNIFICANT.

Land use patterns and transportation projects associated with implementation of the 2018 RTP/SCS would temporarily increase the regional transport, use, storage, and disposal of hazardous materials and petroleum products 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.

As described above, the DOT has identified several highways and a county road within San Joaquin County as hazardous material routes (DOT 2017). Additionally, trucks transporting hazardous material would also have to use local collector and arterial streets to access individual project sites in the County. 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.

Construction associated with implementation of the 2018 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. 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.

The construction of land use patterns and transportation projects included in the 2018 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 2018 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 2018 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 County. 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 2018 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 2018 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 2018 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 2018 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 2018 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 County. 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.

Significance After Mitigation

Impacts would be less than significant without mitigation.

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

IMPACT HAZ-2 PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PATTERNS INCLUDED IN THE 2018 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. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Land use patterns included in the 2018 RTP/SCS would 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 handling of hazardous materials such as household hazardous substances (e.g., paints, cleaning supplies, solvents, and petroleum products) and commercial and industrial hazardous waste. Thus, the 2018 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. Certain industrial uses, such as chemical plants, may also generate hazardous emissions as byproducts, typically in the form of air emissions.

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. As discussed in detail above, 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 2018 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 2018 RTP/SCS would be less than significant.

The transportation projects included in the 2018 RTP/SCS could increase the capacity to transport hazardous materials on roads within San Joaquin County, 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 2018 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 2018 RTP/SCS would be less than significant.

Mitigation Measures

No Mitigation Measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 4:	Be located on a site which is included on a list of hazardous materials compiled by the Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment

IMPACT HAZ-3 THE 2018 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. THUS, CONSTRUCTION OF THESE PROJECTS COULD CREATE A HAZARD TO THE PUBLIC OR ENVIRONMENT. IMPACTS WOULD BE SIGNIFICANT BUT MITIGABLE.

Throughout San Joaquin County 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 County to be affected by land use patterns included in the 2018 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 2018 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 2018 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 2018 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 2018 RTP/SCS.

HAZ-1 Site Remediation

If an individual project included in the 2018 RTP/SCS is located on or near a 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.

Significance After Mitigation

With implementation of Mitigation Measure HAZ-1, impacts would be reduced to less than significant 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. Thus, impacts would be reduced to a less than significant level.

Threshold 5:	For a project located within an airport land use plan or, where such a plan has not be adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area
Threshold 6:	For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area

IMPACT HAZ-4 TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE SCENARIO ENVISIONED BY THE 2018 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 IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Land use patterns and transportation projects included in the 2018 RTP/SCS may be located at or near a public use airport or a private airstrip. 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 2018 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 2018 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 impacts of the 2018 RTP/SCS would be less than significant.

Mitigation Measures

No Mitigation Measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 7:	Impair implementation 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 2018 RTP/SCS COULD INTERFERE WITH EXISTING EMERGENCY AND EVACUATION. HOWEVER, REQUIRED REGULAR UPDATES TO EMERGENCY RESPONSE AND EVACUATION PLANS WOULD ACCOUNT FOR DEVELOPMENT AND PROJECTS. 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 development and transportation projects included in the 2018 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 2018 RTP/SCS emphasize infill and transit-oriented development, which would generally focus growth in existing urbanized areas of San Joaquin County. 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 2018 RTP/SCS would be reflected in the regular updates of emergency and evacuation plans applicable to San Joaquin County.

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. Overall, congestion for the region is projected to increase between the baseline 2017 conditions and 2042, as discussed in Section 4.14, *Transportation and Circulation*. 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.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 8:	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands

IMPACT HAZ-6 THE 2018 RTP/SCS INCLUDES TRANSPORTATION PROJECTS WITHIN AREAS OF MODERATE FIRE HAZARD. INFILL DEVELOPMENT EMPHASIZED IN THE 2018 RTP/SCS AND EXISTING REGULATIONS AND PROGRAMS WOULD REDUCE THE VULNERABILITY OF PEOPLE AND STRUCTURES TO WILDLAND FIRE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

As described above, CAL FIRE has mapped areas in the northeast and southwest portions of the San Joaquin County as having moderate or high fire hazard. The 2018 RTP/SCS focuses on infill development, which would concentrate people and structures in existing urbanized areas where the risk of wildland fire is less than in more rural areas where fuels are more abundant. However, not all projects and development included in the 2018 RTP/SCS would be infill projects in urbanized areas, and some projects would inevitably be located in areas at risk of wildland fires.

New construction would be subject to the California Fire Code, which includes safety measures to minimize the threat of fire, including ignition-resistant construction with exterior walls of noncombustible or ignition resistant material from the surface of the ground to the roof system and sealing any gaps around doors, windows, eaves and vents to prevent intrusion by flame or embers. Title 14 of the CCR sets forth the minimum development standards for emergency access, fuel

modification, setback, signage, and water supply, which help prevent loss of structures or people by reducing wildfire hazards. The codes and regulations would reduce the risk of loss, injury or death from wildland fire, but not entirely. The 2018 RTP/SCS does not direct growth into areas of high fire hazard and with the required adherence to the identified codes and regulations, impacts would be less than significant.

Mitigation Measures

No Mitigation Measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

c. Specific 2018 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 2018 RTP/SCS. The projects within the 2018 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 2018 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 San Joaquin County. A comprehensive list of specific projects that could increase the transport, use, storage, and disposal of hazardous materials and waste within San Joaquin County 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, 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). Land use development would also locate structures and people in areas susceptible to wildland fire hazards. However, there are no specific projects that can be listed in this section because the specific timing of land use development projects is undetermined.

As described above, some transportation projects would be located within areas that CAL FIRE has mapped as moderate fire hazard. Additionally, catastrophic fires could occur anywhere in San Joaquin County. Thus, any number of the projects included in the 2018 RTP/SCS could be susceptible to risk of wildland fire impacts, but with adherence to California Fire Code and required construction safety standards, these impacts would be less than significant

d. Cumulative Impacts

Impacts associated with hazards and hazardous materials related to implementation of the 2018 RTP/SCS are analyzed above. Hazards and hazardous materials impacts may be related to: the transport, use, or disposal of hazardous materials; reasonably foreseeable upset or accidental conditions involving the release of hazardous materials; emission of hazardous materials within 0.25 mile of a school; location on an unknown or known hazardous materials site; conflicts with

emergency response plans; and wildland fires. These effects occur independently of one another, related to site-specific and project-specific characteristics and conditions. Thus, the analysis of hazards and hazardous materials impacts presented above is a cumulative analysis compliant with the requirements of CEQA.

As described above, with implementation of Mitigation Measure HAZ-3, Site Remediation, and mandatory compliance with existing regulations that must occur during project development and operation, including transport, use, disposal of hazardous materials, impacts of the 2018 RTP/SCS would not be cumulatively considerable with regard to hazardous materials and wastes and emergency and evacuation plans.

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