

19 HAZARDOUS MATERIALS

19.1 INTRODUCTION

This chapter provides information relevant to hazardous materials impacts under NEPA and CEQA in connection with the Proposed Action and alternatives. This chapter includes: introduction, environmental and regulatory setting, impact analysis methods and assumptions, significance criteria, environmental effects of the action and alternatives, and mitigation measures to address effects that are identified as significant. Water quality is discussed in Chapter 9, *Hydrology and Water Quality*, of this document. Chapter 15, *Air Quality*, includes an analysis of potential health risks associated with toxic air contaminants other than naturally-occurring asbestos (NOA). NOA is discussed in this chapter

19.1.1 Data Sources

The following key sources of information were reviewed to prepare the hazardous materials chapter.

- ▲ *The Yolo County 2030 Countywide General Plan* (Yolo County 2009a);
- ▲ *The Yolo County 2030 Countywide General Plan EIR* (Yolo County 2009b); and
- ▲ Databases maintained by the California Department of Toxic Substances Control (DTSC) and the State Water Resources Control Board (SWRCB).

19.1.2 Definitions

Hazardous materials are those substances that, because of their physical, chemical, or other characteristics, may pose a significant present or potential hazard to human health and safety or to the environment, if released. Although often treated separately from hazardous materials, petroleum products (including crude oil and refined products such as fuels and lubricants) and natural gas are considered in this analysis because they might pose a potential hazard to human health and safety if released into the environment, including through accident or upset conditions involving rail operations.

An *Airport influence area* (AIA) is usually defined by the Airport Land Use Commission (ALUC) as the area in which current or future airport-related noise, over flight, safety, and/or airspace protection factors may significantly affect land uses or necessitate restrictions on those land uses.

Wildland fire is defined by the National Wildfire Coordinating Group as “any non-structure fire that occurs in vegetation or natural fuels” (National Wildfire Coordinating Group 2014).

A *vector* is an organism that transmits a disease to other living organisms (such as animals or humans). Examples of animal vectors include mosquitoes, ticks, mites, and fleas.

19.2 AFFECTED ENVIRONMENT

19.2.1 Environmental Setting

HAZARDOUS WASTE RELEASE SITES

Hazardous materials are routinely used, stored, and transported by businesses (including industrial and commercial/retail businesses), public and private institutions (such as educational facilities and hospitals), and households. Due to lack of awareness, accidental occurrences, intentional actions, and historical business practices that pre-date current regulatory standards, there are sites in the Plan Area where hazardous wastes were released to soil or groundwater during storage, use, transfer, and disposal. These include sites that were historically contaminated but have been remediated and sites that are known, or believed, to be contaminated that are currently being characterized or cleaned-up. Releases can be localized, or may migrate and contaminate nearby areas.

The State of California maintains the linked EnviroStor and Geotracker databases of known contamination sites pursuant to Government Code Section 65962.5. Based on the information gathered from these databases, there are 70 sites in Yolo County that are actively under evaluation, remediation, or verification monitoring. Geotracker lists sites for which the SWRCB is the lead oversight agency, which are generally, sites where surface or groundwater are the primarily effected media. Geotracker lists 64 active, open sites, including 27 leaking underground storage tank (LUST) cases, 35 cleanup program sites, a military cleanup sites, and the Yolo County Central Landfill. EnviroStor lists 89 sites in Yolo County for which DTSC has primary oversight, including four active sites in the Voluntary Cleanup Program, one active Superfund site, and one backlog site. See Appendix F for a summary of active sites.

Superfund Sites

Frontier Fertilizer is the only Superfund site in the Plan Area. The site was placed on the US Environmental Protection Agency's (EPA) Superfund list on May 31, 1994. It was first developed in the 1950s to store agricultural equipment. In the 1970s, business practices were to store, mix, and distribute pesticides and fertilizers for local agriculture. Pesticide handling ceased in 1983 when it was discovered that pesticides in waste water disposed into an unlined disposal pit were resulting in the contamination of soils and the migration of these chemicals into shallow groundwater (DTSC 2015). EPA has been operating a groundwater extraction and treatment system since 1995. Quarterly groundwater monitoring data indicates that there are still areas with residual contamination (EPA 2015). Soil gas and groundwater sampling is ongoing. There are land use restrictions in place.

Underground Storage Tanks

Flammable liquids, such as gasoline, have historically been stored in underground storage tanks (USTs), which tend to leak over time, resulting in potential risks for the general public and the environment. LUSTs are common in Yolo County, and are often associated with airports, farms, and abandoned railroad lines (Yolo County 2009a). There are currently 291 LUST sites listed in Yolo County; 262 of which have been remediated to regulatory standards and are no longer active. There are an additional 114 permitted UST facilities in Yolo County (SWRCB 2016). The LUST sites identified in the Geotracker database above are a subset of this total number of LUST sites identified here.

HAZARDOUS MATERIALS ASSOCIATED WITH AGRICULTURE

Agricultural enterprises have historically stored, handled, and applied pesticides and herbicides throughout Yolo County. Agricultural chemicals used before the 1970s often included highly persistent compounds such as dichlorodiphenyltrichloroethane (DDT). Inorganic compounds containing heavy metals such as arsenic, lead, and mercury were commonly used before the 1950s. Chemicals commonly used in the past have the potential to leave residual inorganic or organic components in shallow soils that could persist for many

decades. If present in elevated concentrations, these residues could pose a potential health risk to persons who may come in direct contact with surface soils (Yolo County 2009b).

Modern agricultural chemicals are generally less persistent, organic compounds. Routine application of these materials does not typically result in accumulation to levels sufficient to cause concern because of product testing by the EPA before commercial use and regulation related to product application. Areas that are typically of concern include (1) pesticide-handling areas that lack concrete pads, berms, or cribs to contain spills or leaks during handling and storage, and (2) rinse water from washout facilities for pesticide-application equipment that has not been properly collected and treated before discharge. Equipment-repair and petroleum-storage areas might also be of concern.

ROAD AND RAILWAY HAZARDS

Transportation corridors present potential health and safety hazards related to contamination in the rights-of-way, accidental release of materials being transported, and air emissions generated by vehicles. The potential for existing contamination and accidental release of hazardous materials is discussed further below.

Potential for Existing Contamination

Leaded gasoline was used as a vehicle fuel in the United States from the 1920s until the late 1980s. Although lead is no longer used in gasoline formulations, lead emissions from automobiles are a recognized source of contamination in soils along roadways (i.e., aerially-deposited lead). Surface and near-surface soils along heavily-used roadways have the potential to contain elevated concentrations of lead. Studies by the California Department of Transportation suggest that hazardous waste levels of lead, if present, are generally found in soils within 30 feet of the edge of the pavement (DTSC 2009).

Contaminants common in railway corridors include wood preservatives (e.g., creosote and arsenic) and heavy metals in ballast rock. Ballast rock and soils associated with railroad tracks may also contain NOA. In addition, soils in and adjacent to these corridors might contain herbicide residues as a result of historical and ongoing weed-abatement practices.

Accidental Release of Hazardous Materials

The transportation of hazardous materials by truck and rail is regulated by the US Department of Transportation (USDOT). The California Department of Public Health regulates the haulers of hazardous waste. USDOT also provides grants to local agencies for preparation and training relating to hazardous materials incidents through its Hazardous Materials Emergency Preparedness Program administered by the Office of Emergency Services.

Hazardous materials, hazardous wastes, and petroleum products are a subset of the tremendous volume of goods routinely shipped along the transportation corridors in the Plan Area. Three agencies maintain searchable databases that track hazardous material releases in reportable quantities: EPA maintains the Hazardous Materials Incident Report System that contains data on hazardous material spill incidents reported to USDOT; the California Office of Emergency Services maintains the California Hazardous Materials Incident Report System that contains information on reported hazardous material accidental releases or spills; and SWRCB's Site Cleanup Program maintains information on reported hazardous material accidental releases or spills.

Freight Transport of Oil and Gas and Potential for Accidents

According to data published by the Federal Railroad Administration (FRA), there were 14 freight train accidents between 2005 and 2014 in Yolo County, eight of which were derailments. An average of 7,698 cars carrying hazardous materials traveled through the county annually, resulting in an annual average of 26 hazardous materials releases. Two fatalities were reported as a result of freight train accidents and other incidents, including crossing incidents, in this 10-year period (FRA 2014). Union Pacific Railroad (UPRR) has decreased derailments 23 percent in the last 10 years through employment of technology (e.g., lasers and ultrasound) to

identify rail imperfections, forecasting potential failures before they happen by tracking acoustic wheel vibrations, performing real-time analysis of rail cars, and conducting safety training programs on a regular basis (UPRR 2014). Railroads make technical information on shipments available to local officials and first responders along routes so that they are aware of what is moving through their area.

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 (AAR 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 USDOT and the Association of American Railroads, railroads have developed an inventory of emergency response resources and provided the USDOT with information on the deployment of those resources. This information is available upon request to appropriate emergency responders (AAR 2015). The Pipeline and Hazardous Materials Safety Administration's (PHMSA) 2012 Emergency Response Guidebook establishes an initial evacuation zone within 0.5 mile of rail corridors for train derailments involving flammable liquids and gases.

HAZARDOUS WASTE GENERATION IN YOLO COUNTY

Approximately 800 Yolo County businesses generated hazardous waste in 2008. Generators of hazardous waste in Yolo County are required to submit a Hazardous Materials Business Plan to Yolo County Environmental Health Services (YCEHS), and are inspected for compliance with federal and state hazardous waste storage, handling, and disposal regulations at least once every three years. There are currently 12 facilities classified as large-quantity generators that participate in the California Accidental Release Prevention (CalARP) program in Yolo County, indicating that they generate at least 1,000 kilograms (kg) of hazardous waste per month (YCEHS 2015).

NATURALLY-OCCURRING ASBESTOS

NOA includes fibrous minerals found in serpentine and other certain types of rock formations. As described further in Chapter 17, *Geology, Soils, and Mineral Resources*, serpentine rocks are mapped in the northwest corner of the Plan Area. Natural weathering or human disturbance can break NOA down to microscopic fibers that are suspended easily in air. When airborne asbestos is inhaled, these thin fibers irritate tissues and resist the body's natural defenses.

AIRPORT HAZARDS

Yolo County has four public use airports: Yolo County Airport, Borges-Clarksburg Airport, Watts-Woodland Airport, and University Airport (see Exhibit 13-1). The Yolo County Airport is located in south-central Yolo County, just to the north and west of the City of Davis and southwest of the City of Woodland. The Borges-Clarksburg Airport is located in eastern Yolo County, approximately 1-mile northeast of the town of Clarksburg. The Watts-Woodland Airport is located approximately 5 miles west of the City of Woodland. University Airport is located approximately 2 miles west of the City of Davis. In addition, Sacramento International Airport is located immediately east of the county boundary and there are a number of private airstrips and heliports in the Plan Area, including: the California Highway Patrol (CHP) Academy in Bryte (West Sacramento), G3 Ranch in Capay, Medlock Field between Woodland and Davis, KOVR television stations helistop in West Sacramento, and Joe Heidrick in Woodland (Yolo County 2009b).

The Sacramento Area Council of Governments is the ALUC for Sacramento, Sutter, Yolo, and Yuba counties, with the exception of the University of California (UC) Davis airport, which is self-regulated by the University of California. ALUCs may request that all or selected land use actions (e.g., General Plan, Specific Plan, Zoning Ordinance, building regulation, public land acquisition, annexation, large development project) within the

airport influence area be submitted for review for consistency with the comprehensive land use plans (CLUP). All of the public airports in the Plan Area have AIAs defined in their ALUCPs (SACOG 2015).

WILDFIRE HAZARDS

In accordance with California Public Resource Code Section 4201-4204 and Government Code Section 51175-51189, the California Department of Forestry and Fire Protection (CAL FIRE) has mapped areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), represent the risks associated with wildland fires. The western third of Yolo County (west of Esparto and Winters) has been classified as having Moderate to Very High wildfire risk, with the Very High risk areas concentrated in the northwest portion of the County bordering Napa, Lake, and Colusa counties (Exhibit 19-1). Most of the remaining areas of the county are unzoned, representing minimal to moderate wildfire risk (Yolo County 2009b).

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 (FRAs). 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 (SRAs), which are managed by CAL FIRE. All incorporated areas and other unincorporated lands are classified as Local Responsibility Areas (LRAs). Most of the western third of Yolo County has been classified as SRAs, with FRAs near the northwest and west county boundaries. 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 (Yolo County 2009b).

VECTORS

The Sacramento-Yolo Mosquito Vector Control District implements an integrated pest management plan throughout Sacramento and Yolo counties that includes public education, surveillance, and control activities. The District has prepared a Mosquito Reduction Best Management Practices Manual that provides specific information regarding District policies, mosquito biology, and various best management practices (BMPs) that can be useful in reducing mosquito populations. Land-use specific sections provide guidance for landowners and land-managers who deal with programs such as: managed wetlands, stormwater and wastewater systems, irrigated agriculture, rice production, dairies, swimming pools, cemeteries, and tire storage facilities. The District's Ecological Management Department provides detailed guidance to property owners on how to best implement the BMPs (Sacramento-Yolo Mosquito Vector Control District 2014).

The District meets annually with wetland managers to develop annual management plans and to coordinate all irrigation and flooding activities. In addition to implementing BMPs, the Department administers a tiered fall flooding cost share program designed to discourage early flooding prior to October 1st of each year to reduce potential vector habitat. In 2014, eight wetland properties were billed for mosquito control costs under the cost share program (Sacramento-Yolo Mosquito Vector Control District 2014).

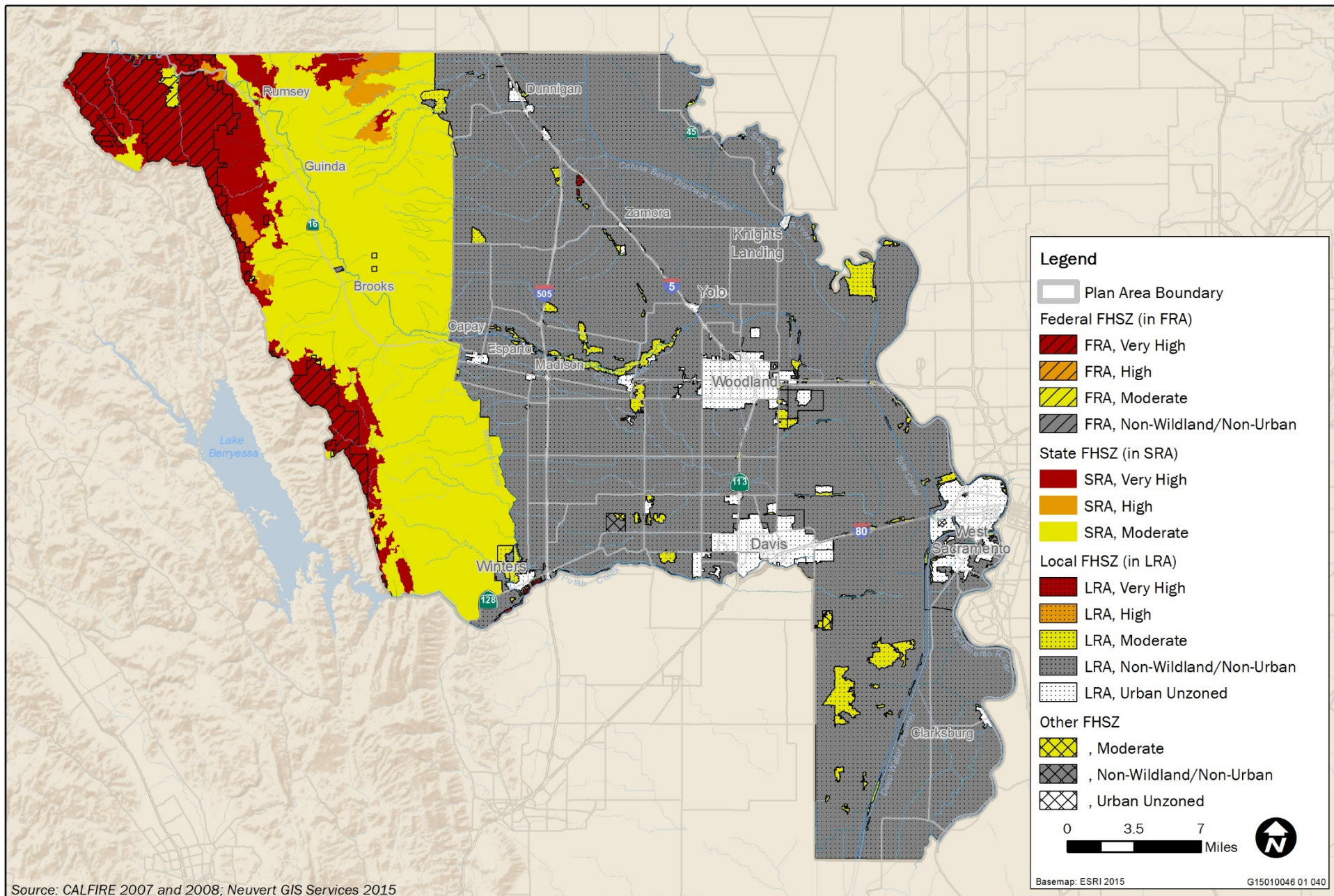
19.2.2 Regulatory Setting

FEDERAL LAWS AND REGULATIONS

The principal federal regulatory agency responsible for the safe use and handling of hazardous materials is the EPA. Key federal regulations pertaining to hazardous wastes are described below.

Toxic Substances Control Act

The Toxic Substances Control Act regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials.



Source: CALFIRE 2007 and 2008; Neuvert GIS Services 2015

Exhibit 19-1

Fire Hazards



Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act (EPCRA) was passed in response to concerns regarding the environmental and safety hazards posed by the storage and handling of toxic chemicals. EPCRA establishes requirements regarding emergency planning and “community right-to-know” reporting on hazardous and toxic chemicals. EPCRA requires states and local emergency planning groups to develop community emergency response plans for protection from a list of extremely hazardous substances (40 Code of Federal Regulations [CFR] 355 Appendix A). The community right-to-know provisions help increase the public’s knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment. In California, EPCRA is implemented through the CalARP Program.

Resource Conservation and Recovery Act

Under the Resource Conservation and Recovery Act, DTSC has the authority to implement permitting, inspection, compliance, and corrective action programs to ensure that people who manage hazardous waste follow requirements designed to protect human health and the environment, reduce or eliminate the generation of hazardous waste, and conserve energy and natural resources. Requirements place “cradle-to-grave” responsibility for hazardous waste disposal on the shoulders of hazardous waste generators. Generators must ensure that their wastes are disposed of properly.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act regulates former and newly discovered uncontrolled waste disposal and spill sites. This act established the National Priorities List of contaminated sites and the “Superfund” cleanup program.

Federal Insecticide, Fungicide, and Rodenticide Act

Pesticides are regulated under the Federal Insecticide, Fungicide and Rodenticide Act by EPA. This includes labeling and registration of pesticides as to how they may be used. EPA delegates pesticide enforcement activities in California to the California Department of Pesticide Regulation (DPR), under Title 3 of the California Code of Regulations (CCR) and the California Food and Agriculture Code. The DPR registers pesticides for use in California, and licenses pesticide applicators and pilots, advisors, dealers, brokers, and businesses. In turn, the Yolo County Agricultural Commissioner (YCAC) acts as the local enforcement for DPR. The YCAC registers licensed pest control businesses; requires permits and advanced notification for buying or using California restricted-use pesticides; and requires the completion of pesticide use reports for pesticides applied in the County. In addition, the YCAC investigates pesticide-related injury and illnesses, and oversees enforcement of worker training in pesticide management.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act is administered by various agencies, including the Pipeline and Hazardous Materials Safety Administration, Federal Highway Administration, and FRA, depending on the mode of transportation and material being transported. The act provides the USDOT with a broad mandate to regulate the transport of hazardous materials, with the purpose of adequately protecting the nation against risk to life and property that is inherent in the commercial transportation of hazardous materials.

The Federal Motor Carrier Safety Administration (FMCSA) maintains a Hazmat Route Registry that describes the highway routes that must be utilized for the transport of certain classes of hazardous materials. In California, this is monitored and regulated by the CHP and the California FMCSA Field Office. Within the Plan Area, Interstate (I-) 80 and I-5 are CHP-designated routes for hazardous materials transport.

Federal Railroad Administration Office of Railroad Safety

FRA’s Office of Railroad Safety promotes and regulates safety throughout the Nation’s railroad industry. The regional offices enforce compliance with regulations related to hazardous materials, motive power equipment, operating practices, signal and train control, and tracks. California is in Region 7, which is headquartered in Sacramento, California (FRA 2015).

Federal Occupational Safety and Health Act

The US Department of Labor regulates worker health and safety at the federal level. The Federal Occupational Safety and Health Act of 1970 authorizes states (including California) to establish their own safety and health programs with the federal Occupational Safety and Health Administration (OSHA) approval.

STATE LAWS AND REGULATIONS

California regulations are equal to, or more stringent than, federal regulations. The EPA has granted the State of California primary oversight responsibility to administer and enforce hazardous waste management programs. State regulations require planning and management to ensure that hazardous wastes are handled, stored, and disposed of properly to reduce risks to human and environmental health. Several key laws pertaining to hazardous wastes are discussed below.

California Occupational Safety and Health Regulations

The California Department of Industrial Relations regulates implementation of worker health and safety in California. The Department of Industrial Relations includes the Division of Occupational Safety and Health, which acts to protect workers from safety hazards through its California OSHA (Cal/OSHA) program and provides consultative assistance to employers. California standards for workers dealing with hazardous materials are contained in Title 8 of the CCR and include practices for all industries (General Industrial Safety Orders), and specific practices for construction and other industries. Workers at hazardous waste sites (or working with hazardous wastes, as might be encountered during excavation of contaminated soil) must receive specialized training and medical supervision according to the Hazardous Waste Operations and Emergency Response regulations. Additional regulations have been developed for construction workers potentially exposed to lead and asbestos. Cal/OSHA enforcement units conduct on-site evaluations and issue notices of violation to enforce necessary improvements to health and safety practices.

Hazardous Materials Release Response Plans and Inventory Act

The Hazardous Materials Release Response Plans and Inventory Act, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs.

Hazardous Waste Control Act

These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act and Title 26 of the CCR, the generator of hazardous waste must complete a manifest that accompanies the waste from generator to transporter to the ultimate disposal location. Copies of the manifest must be filed with the DTSC.

Hazardous Waste and Substances Sites List

The Hazardous Waste and Substances Sites List, a key source of the Cortese List, is a planning document used by the State of California and its various local agencies to comply with the CEQA requirements to provide information about the location of hazardous materials release sites. California Government Code Section 65962.5 requires that the California Environmental Protection Agency update the list annually. The list is maintained via DTSC's Brownfields and Environmental Restoration Program (Cleanup Program), and is accessible through the EnviroStor online database. Frontier Fertilizer and Capitol Plating Corporation are on the Cortese List (see Appendix F).

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act regulates water quality through the SWRCB and regional water quality control boards, including oversight of water monitoring and contamination cleanup and abatement.

California Public Utilities Commission Railroad Safety Regulations

The California Public Utilities Commission (CPUC) is the State regulatory agency with legal authority for rail safety within California. The Railroad Operations and Safety Branch is responsible for enforcing State and federal laws, regulations, Commission General Orders, and directives relating to the transportation of persons and commodities by rail. Several California Public Utilities Code Sections prescribe CPUC responsibilities. In particular, under Section 309.7, CPUC is responsible for inspection, surveillance, and investigation of the rights-of-way, facilities, equipment, and operations of railroads. Public Utilities Code Sections 309.7 and 765.5(d) require the CPUC to employ a sufficient number of federally-certified Inspectors to ensure that all main and branch line tracks are inspected at least every 12 months.

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 CPUC, 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,
- ▲ a description of sabotage-terrorism countermeasures,
- ▲ employee training programs,
- ▲ emergency response procedures, and
- ▲ emergency response communication protocols.

California State Aeronautics Act

At the State level, the California Department of Transportation's Division of Aeronautics administers FAA regulations. The Division issues permits for hospital heliports and public-use airports, reviews potential and future school sites proposed within 2 miles of an airport, and authorizes helicopter landing sites at or near schools. In addition, the Division of Aeronautics administers noise regulation and land use planning laws, which regulate the operational activities and provides for the integration of aviation planning on a regional basis.

CAL FIRE Regulations

Title 14 of the CCR establishes regulations for CAL FIRE in areas where CAL FIRE is responsible for wildfire protection. These regulations constitute the basic wildland fire protection standards of the California Board of Forestry and Fire Protection. They have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction, and development in State recreation areas. Additionally, Title 14 sets forth the minimum standards for emergency access, fuel modification, setback, signage, and water supply.

Emergency Services Act

Under the Emergency Services Act, the State developed an emergency response plan to coordinate emergency services provided by federal, State, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an important part of the plan, which is administered by the California Office of Emergency Services. The office coordinates the responses of other agencies, including EPA, the CHP, regional water quality control boards, air quality management districts, and county disaster response offices.

LOCAL LAWS AND REGULATIONS

Certified Uniform Program Agency

The California Environmental Protection Agency designates specific local agencies as Certified Unified Program Agencies (CUPAs). YCEHS is the CUPA designated for Yolo County and the Cities of Davis, West Sacramento, Winters, and Woodland and is responsible for the implementation of six statewide programs within its jurisdiction. These programs include:

- ▲ underground storage of hazardous substances,
- ▲ hazardous materials business plan requirements,
- ▲ hazardous waste generator requirements,
- ▲ CalARP program,
- ▲ Uniform Fire Code hazardous materials management plan, and
- ▲ aboveground storage tanks (Spill Prevention Control and Countermeasures Plan only).

Implementation of these programs involves:

- ▲ permitting and inspection of regulated facilities,
- ▲ providing educational guidance and notice of changing requirements stipulated in state or federal laws and regulations,
- ▲ investigations of complaints regarding spills or unauthorized releases, and
- ▲ administrative enforcement actions levied against facilities that have violated applicable laws and regulations.

The hazardous materials programs administered under the CUPA program are described below.

Hazardous Materials Management Plan

Businesses that store hazardous materials in excess of specified quantities must report their chemical inventories to YCEHS by preparing a Hazardous Materials Management Plan, also known as a business plan. This information informs the community on chemical use, storage, handling, and disposal practices. It is also intended to provide essential information to fire fighters, health officials, planners, elected officials, workers, and their representatives so that they can plan for, and respond to, potential exposures to hazardous materials.

California Accidental Release Prevention Program

Under the CalARP Program, businesses that use large quantities of acutely hazardous materials must prepare a detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential.

Underground Storage Tank Programs

Current regulations require that USTs be installed, monitored, operated, and maintained in a manner that protects public health and the environment. Tanks must be constructed with primary and secondary levels of containment and be designed to protect public health and the environment for the lifetime of the installation. The USTs must be monitored for leaks and built such that a leak from the primary container into the secondary container will be detected. When an UST tank is proposed to be removed, a detailed permit application must be submitted to YCEHD, which oversees removal activities to identify evidence of leakage.

The YCEHS regulates the construction, operation, repair and removal of UST systems throughout Yolo County to ensure that hazardous materials are not released into the environment. Tanks and associated piping systems are required to meet stringent construction standards designed to reduce the potential for product loss. All tanks installed or upgraded must be continuously monitored (YCEHS 2015).

Aboveground Storage Tank Programs

Inspections and permits are required for facilities storing hazardous materials in aboveground storage tanks by YCEHD. In addition, any facility operating aboveground storage tanks with an aggregate tank capacity of 1,320 gallons or more must: 1) complete a Spill Prevention Control and Countermeasure plan to provide a detailed engineering analysis of the potential for release from aboveground storage tanks present at a facility and the measures, such as secondary containment and emergency response that can be implemented to reduce the release potential and 2) file a storage statement, as required by the SWRCB. There are approximately 175 aboveground storage tank sites in Yolo County (Yolo County 2009b).

Hazardous Waste Generation and Disposal

Once a hazardous material has been used or processed, what remains may be considered a hazardous waste. Many items routinely used by residents and businesses, such as paints and thinners, cleaning products, and motor oil, are considered hazardous waste once they are ready for disposal. Nearly all businesses and residences in the Plan Area are expected to generate some amount of hazardous wastes (including household hazardous wastes). Hazardous waste generation and disposal regulations are administered and enforced by YCEHS. Businesses that generate more than 100 kg of hazardous waste per month, or more than 1 kg of acutely hazardous waste, must be registered with EPA's Resource Conservation and Recovery Act program and are subject to extensive regulations regarding storage and disposal.

Emergency Response

Natural disasters, events resulting in the release of hazardous materials into the environment, or an accident resulting from a hazard, all necessitate an emergency response or evacuation plan. These plans facilitate coordination between government agencies to provide central management for effective response in an emergency situation within a given area. Various levels of government are responsible for applying resources and emergency relief to those in the emergency area to minimize the effects of the hazards or hazardous materials. Emergency plans outline the critical factors necessary during an emergency, including communications, transportation, a command station, control, and shelter. Emergency plans also often identify designated evacuation routes and procedures.

Yolo County maintains an Emergency Operation Center, which is the central location used to manage a disaster or other large-scale emergency in the county. Emergency response is governed by two plans: the Yolo County Emergency Operations Plan, which describes overall responsibilities, and the Yolo Operational Area Multi-Hazard Mitigation Plan, which was developed in response to a Federal Emergency Management Agency mandate to describe specific disasters and possible responses. A third plan, Yolo Operational Area Hazardous Materials Environmental Response Plan is implemented by YCEHS and addresses response to hazardous materials emergencies. This plan establishes a Hazardous Materials Response Team, which becomes active when deemed necessary by a fire department officer, and combines the forces of the UC Davis; the City of Davis, the City of West Sacramento, and the City of Woodland fire departments; and the YCEHS (Yolo County 2009b).

2030 Yolo County Countywide General Plan

The Health and Safety Element of the Yolo County General Plan establishes a goal, policies, and, as part of the implementation program, actions to ensure safety from hazardous materials in and around the county. Potentially relevant policies are as follows:

- ▲ **Policy HS-4.1:** Minimize exposure to the harmful effects of hazardous materials and waste. Protect the community and the environment from hazardous materials and waste.
- ▲ **Policy HS-4.2:** Inspect businesses regularly for compliance with their Hazardous Materials Inventory and Hazardous Materials Business Emergency Response Plan.
- ▲ **Policy HS-4.3:** Encourage the reduction of solid and hazardous wastes generated in the county.

Action times related to these policies include providing adequate separation between areas where hazardous materials are present and sensitive uses (HS-A46) and requiring new development and redevelopment in areas previously used for agricultural, commercial, or industrial uses to ensure that soils, groundwater, and buildings affected by hazardous material releases from prior land uses, as well as lead paint and/or asbestos potentially present in building materials, will not have the potential to affect the environment or health and safety of future property owners or users (HS-A47).

City of Davis General Plan

The City of Davis' General Plan contains the following policies related to hazards and hazardous materials and potentially relevant to the Plan:

- ▲ **Policy HAZ 3.1:** Provide for disaster planning.
- ▲ **Policy HAZ 4.1:** Reduce and manage toxics within the planning area.
- ▲ **Policy HAZ 4.2:** Provide for the proper disposal of hazardous materials in Davis.
- ▲ **Policy HAZ 4.3:** Reduce the potential for pesticide exposure for people, wildlife, and the environment.
- ▲ **Policy HAZ 4.5:** Minimize impacts of hazardous materials on wildlife inhabiting or visiting the Davis area.
- ▲ **Policy HAZ 4.7:** Ensure that remediation of hazardous waste sites is conducted in the most timely and environmentally responsible manner possible.
- ▲ **Policy HAZ 5.1:** Reduce the combined load of pollutants generated in the City's wastewater, stormwater, and solid waste streams. Such pollutants include, but are not limited to, toxic and hazardous substances.

City of West Sacramento General Plan

The City of West Sacramento General Plan contains the following goal and policies that relate to hazards and hazardous materials that may be applicable to the analysis of the HCP/NCCP:

Goal PFS-9. To prevent loss of life, injury, and property damage due to wildland and structural fires, while ensuring an adequate level of fire protection services is maintained for all.

- ▲ **Policy PFS-9.12. Removal of Fire Hazards.** The City shall require property owners to remove fire hazards, including excessive/overgrown vegetation, hazardous structures and materials, and debris.

Goal S-1: To ensure that City emergency response procedures are adequate in the event of natural or man-made disaster.

- ▲ **Policy S-1.1. Emergency Response Plans.** The City shall maintain the Emergency Operations Plan and Standard Emergency Management System (SEMS).
- ▲ **Policy S-1.2. Multi-Hazard Mitigation Plan.** The City shall coordinate with jurisdictions in Yolo County, as necessary, to maintain the Yolo Operational Area Standard Multi-Hazard Mitigation Plan.
- ▲ **Policy S-1.13. Comprehensive Flood Management, Emergency, and Evacuation Plans.** The City shall maintain, implement, update, and make available to the public the local Comprehensive Flood Management Plan, Emergency Plans, and Evacuation Plans, which address emergency preparedness, evacuation, hazardous materials, and protection of critical facilities, development guidelines, and flood insurance outreach to better protect citizens in the event of a major flood event.

- ▲ **Policy S-1.14. Environmental Resources Impacted By Natural Disasters.** The City shall account for environmental resources impacted by natural disasters including but not limited to tribal cultural resources, archaeological sites, and sensitive habitat areas.

Goal S-6. To minimize exposure to the potentially harmful effects of hazardous materials and waste on West Sacramento residents.

- ▲ **Policy S-6.1. Hazardous Materials.** The City shall regulate the use, storage, manufacture, transport, and disposal of hazardous materials and waste in accordance with Federal, State, and local regulations. The City shall maintain additional standards addressing the transport of hazardous materials within the city, which can include restricting transport to designated routes.
- ▲ **Policy S-6.6. Inventory.** The City shall continue to maintain an inventory of businesses that manufacture or store hazardous materials on the premises.

City of Winters General Plan

The City of Winters' General Plan contains the following policies related to hazards and hazardous materials and potentially relevant to the Plan:

- ▲ **Policy VII.C.8:** The City shall promote the abandonment of gas wells consistent with requirements of state law and regulations.
- ▲ **Policy VII.D.1:** The City shall adopt, maintain, periodically update, and test the effectiveness of its Emergency Response Plan. As part of the periodic update, the City shall review county and state emergency response plans and procedures to ensure coordination with the City's plan.

City of Woodland General Plan

The City of Woodland's General Plan contains the following policies related to hazards and hazardous materials and potentially relevant to the Plan:

- ▲ **Policy 8.E.1: Coordination.** Coordinate with Yolo County and other relevant agencies to ensure that the manufacture, purchase, use, storage, transportation, and disposal of hazardous materials in the city is conducted in a responsible manner that complies with local, State, and federal safety standards.
- ▲ **Policy 8.E.2: Disposal and Storage Plan.** Require that applications for discretionary development projects that will generate hazardous wastes or utilize hazardous materials include a detailed plan for hazardous waste reduction, recycling, and storage.
- ▲ **Policy 8.E.3: Buffer Zone.** Require that new development for industries that store and process hazardous materials provide a buffer zone between the installation and the property boundaries sufficient to protect public safety.
- ▲ **Policy 8.E.4: Emergency Response.** Coordinate with Yolo County to provide for safe and efficient hazardous waste emergency response and plan for contaminated site cleanup.
- ▲ **Policy 8.E.5: Hazardous Materials Database.** Coordinate with Yolo County to develop a database and maintain complete and accurate information on the types, quantities, sources, and management of all hazardous materials and wastes generated in Woodland to aid in management planning and emergency response.
- ▲ **Policy 8.E.6: Education.** Collaborate with Yolo County to educate residents and businesses about household hazardous wastes, less toxic materials that can be used in place of toxic materials, and proper household and business waste disposal methods.

- ▲ **Policy 8.F.1:** Emergency Operations Plan. Ensure the maintenance of the Emergency Operations Plan to effectively prepare for, respond to, recover from, and mitigate the effects of natural disasters, technological incidents and national security emergencies. Update as necessary to address potential flooding hazards.
- ▲ **Policy 8.F.2:** Coordination. Continue to coordinate emergency preparedness, response, recovery, and mitigation activities with Yolo County, special districts, service agencies, voluntary organizations, other cities within the county, surrounding cities and counties, and State and federal agencies. Upon the next update of the Yolo County Operational Area Multi-Jurisdictional Hazard Mitigation Plan, participate in the effort to address topics related to climate change vulnerability, as required by SB 379.
- ▲ **Policy 8.F.3:** Public Information. Provide periodic public information programs that explain the City's emergency preparedness programs.
- ▲ **Policy 8.F.4:** Siting of Critical Facilities. Ensure that the siting of critical emergency response facilities and communications facilities such as the Emergency Operations Center, hospitals, fire stations, police offices and substations, dispatch centers, and other emergency service facilities and utilities have minimal exposure to flooding, seismic and geological effects, fire, and explosions.
- ▲ **Policy 8.F.5:** Emergency Access and Evacuation. Require areas subject to fires, flooding, and other hazards to have emergency access and evacuation routes that are clearly marked with consistent signage. Make evacuation and rescue maps available to the public.

Airport Plans

The Sacramento Area Council of Governments is the designated ALUC for the counties of Yolo, Sacramento, Sutter, and Yuba. There are four general aviation airports in Yolo County. Three of these airports –Yolo County Airport, Watts-Woodland Airport, and Borges-Clarksburg Airport – are subject to the respective airport CLUPs prepared by the ALUC. A fourth airport, University Airport, is subject to an Airport Layout Plan prepared by UC Davis.

19.3 ENVIRONMENTAL CONSEQUENCES

19.3.1 Methodology and Significance Criteria

METHODS AND ASSUMPTIONS

The evaluation of potential effects related to hazards and hazardous materials is based on a review of documents and publicly available information about hazardous and potentially hazardous conditions on or near the Plan Area to determine the potential for project implementation to result in an increased health or safety hazard to people or the environment. This includes County and City planning documents, and SWRCB and DTSC hazardous materials database information.

As described in Section 3.3, the issuance of ITPs by the Wildlife Agencies for take of 12 covered species associated with five categories of covered activities—together with subsequent adoption and implementation of the Plan by the Applicants consistent with the Permits—is the Proposed Action considered in this EIS/EIR. Issuance of permits by the Wildlife Agencies only provides compliance with the FESA and NCCPA.

All covered activities are subject to the approval authority of one or more of the Applicants with jurisdiction over such projects, and HCP/NCCP approval and permit issuance for take of covered species does not confer or imply approval from any entity other than the U.S. Fish and Wildlife Service (USFWS) or California Department of Fish and Wildlife (CDFW) to implement the covered activities. Rather, as part of the standard approval process, individual projects will be considered for further environmental analysis and generally will

receive separate, project-level environmental analysis review under CEQA and, in some cases, NEPA for those projects involving federal Agencies.

The assessment of potential effects related to hazards and hazardous materials in the Plan Area is based on the anticipated changes in land cover and land uses over 50 years, corresponding to the permit term under the Proposed Action Alternative.

Anticipated changes in land cover/land use for each alternative are described in Chapter 2, Proposed Action and Alternatives. See Chapter 3, Approach to the Analysis, for a description of the methodology used across all resource chapters for the analysis of cumulative effects.

As described in Chapter 2, *Proposed Action and Alternatives*, the Conservancy has proposed a number of changes to the HCP/NCCP since the release of the Draft on June 1, 2017. These changes are described and Characterized in Section 2.3.2, *Alternative B – Proposed Action Alternative (Permit Issuance/Plan Implementation)*, of Chapter 2.

These proposed changes fall into several categories;

- ▲ Copy edits such as correction of spelling errors,
- ▲ Minor text clarifications and corrections such as providing or correcting cross references to other parts of the document,
- ▲ Minor numeric corrections, such as small adjustments to acreages of particular land cover types,
- ▲ Providing updated information since publication of the Draft HCP/NCCP such as including information from the City of Woodland General Plan Update 2035, which was adopted after the Draft HCP/NCCP was published,
- ▲ Clarifications or enhancements to particular plan elements such as new or updated Avoidance and Minimization Measures (AMMs),
- ▲ Increased details on plan implementation such as providing additional information on the content of the Implementation Handbook, and
- ▲ Changes in assumptions regarding costs and funding to reflect updated information.

These proposed changes have been analyzed to determine whether they would result in any changes to the impact analysis or conclusions reached in the Draft EIS/EIR. This analysis is provided in Section 24.2, *Evaluation of Proposed Modifications to the Draft HCP/NCCP*. The analysis substantiates that the proposed changes to the HCP/NCCP do not alter the analysis or impact conclusions provided in the Draft EIS/EIR for hazardous materials. Therefore, no changes to the analysis provided below are merited.

SIGNIFICANCE CRITERIA

Effects would be significant if an alternative would result in the following:

- ▲ create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- ▲ create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials to the environment;
- ▲ emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25- mile of an existing or proposed school;

- ▲ be located on a site that is on a list of hazardous materials sites compiled pursuant to California Government Code 65962.5, and as a result would create a significant hazard to the public or the environment;
- ▲ for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- ▲ for a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
- ▲ impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan;
- ▲ 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; or
- ▲ substantially affect public health because of increased presence of potential natural disease vectors.

Issues Not Evaluated Further

As described above, NOA includes fibrous minerals found in serpentine and other specific types of rock formations. As described in Chapter 17, *Geology, Soils, and Mineral Resources*, serpentine rocks are mapped in the northwest corner of the Plan Area. More specifically, a small area of ultramafic rocks, one of which may be serpentinite, occurs along Little Blue Ridge, west of Rumsey (USGS and CGS 2011). However, there are no covered activities proposed in this area (See Figure 2-2). There are also no reserve system priority acquisition areas in this portion of the Plan Area, although there is an existing piece of public lands that could be incorporated into the reserve system (Category 3 Baseline Public and Easement Lands; see Figure 2-5). It is highly unlikely that any activities associated with the Plan would result in ground disturbance in a location that contained serpentine rock or NOA. Even if some type of ground disturbing activity were to occur in an area that could contain NOA, existing regulatory requirements, such as those included in the California Occupational Safety and Health Regulations, would reduce or eliminate the mobilization of, or exposure to NOA. The Air Resources Board (ARB) has also adopted Airborne Toxic Control Measures (ATCMs) to control exposure to asbestos from construction, grading, quarrying, and surface mining operations (17 CCR 93105, 7/26/01). Compliance with regulatory requirements would avoid any potential adverse exposure to NOA. This issue is not discussed further.

19.3.2 Effects of Proposed Action and Alternatives

ALTERNATIVE A—NO ACTION ALTERNATIVE (NO PERMIT/NO PLAN IMPLEMENTATION)

Environmental Consequences/Environmental Effects

As described previously in Chapter 2, *Proposed Action and Alternatives*, under the No Action Alternative (Alternative A), take associated with development would occur over the 50-year study period consistent with the local general plans and other applicable planning documents (e.g., community plans, specific plans, recreation plans). As also described in Chapter 2, for purposes of this analysis, development and related activities (e.g., operations and maintenance) under the No Action Alternative are considered using the same organizational categories identified in the Yolo HCP/NCCP: urban projects and activities; rural projects and activities, which includes rural public services, infrastructure, and utilities, agricultural economic development, and open space; and public and private operations and maintenance. Under the No Action Alternative, the Plan would not be approved and implemented and no Endangered Species Act authorizations would be issued by the USFWS or CDFW related to the Plan. Endangered species permitting and mitigation would continue on an individual project-by-project basis.

Urban projects and activities would be concentrated within the Cities of Davis, West Sacramento, Winters, and Woodland. Rural projects and activities would primarily occur within and around the existing communities within the unincorporated county (primarily Elkhorn, Madison, Clarksburg, Dunnigan, Esparto, and Knights Landing). Activities associated with the rural public services, infrastructure, and utilities, and agricultural economic development and open space categories would occur in various locations in the unincorporated county. Public and private operations and maintenance activities would occur both in the incorporated cities and the unincorporated county.

Under the No Action Alternative, development in rural and urban areas within the Plan Area would occur as planned by the plan participants. Planned development would temporarily increase the regional transport, use, storage, and disposal of hazardous materials and petroleum products (such as diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic chemicals) that are commonly used at construction sites. In addition, because of the presence of documented contamination sites, historical land use within the Plan Area, and the presence of major roadways and railroad tracks, previously unknown hazardous materials could be encountered during construction. Hazardous waste generated during construction may consist of welding materials, fuel and lubricant containers, paint and solvent containers, and cement products containing strong basic or acidic chemicals. Although the transportation of hazardous materials could result in accidental spills, leaks, toxic releases, fire, or explosion, the USDOT Office of Hazardous Materials Safety prescribes strict regulations for the safe transportation of hazardous materials, as described in Title 49 of the CFR. 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 most likely incidents involving construction-related hazardous materials are generally associated with minor spills or drips. Small fuel or oil spills are likely, 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 any spills would be cleaned up in accordance with existing regulations. All 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 Governor's Office of Emergency Services 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 Section 25359.4 of the California Health and Safety Code and Title 40, Section 302.4 of the CFR. In addition, as described in Chapter 9, *Hydrology and Water Quality*, a stormwater pollution prevention plan would be prepared for each site covered by the permit. The stormwater pollution prevention plan would incorporate BMPs for the transport, storage, use, and disposal of hazardous materials to prevent the release of hazardous materials into the environment.

Operation of the anticipated projects could also involve the use of hazardous materials or petroleum products. Commercial uses in the Plan Area would prepare and implement hazardous materials plans, such as the following, to avoid occurrences, and minimize the effects of, hazardous materials spills and releases:

- ▲ California hazardous materials business plan (pursuant to California Health and Safety Code Section 25500), which specifies requirements for material inventory management, inspections, training, recordkeeping, and reporting.
- ▲ A spill prevention, containment, and countermeasures plan (pursuant to 40 CFR 112) or, for smaller quantities, a spill prevention and response plan, which identifies BMPs for spill and release prevention and provides procedures and responsibilities for rapidly, effectively, and safely cleaning up and disposing of any spills or releases.

Under the No Action Alternative, development is anticipated to occur near the Yolo County Airport. The Yolo County Airport is within a development area for rural public services, infrastructure, and utilities projects. Parcels in Monument Hills are located adjacent to the runway at the Watts-Woodland Airport, and planned

aggregate mining is identified immediately to the northeast. Planned infrastructure projects are also identified adjacent to the CHP Academy Airstrip and the KOVR helistop. City and county zoning and planning are required to conform to the CLUP unless the city or county governing body specifically overrides the CLUP by supermajority vote. Implementing agencies are responsible for analyzing compliance with CLUPs as a part of their land use approval authority. Discretionary land use actions in proximity of airports and related facilities would be reviewed for consistency with the CLUP. The Borges-Clarksburg Airport and Watts-Woodland Airport have safety overflight zone extending 5,000 feet from the runway. The Yolo County Airport has a safety overflight zone extending 10,000 feet from the runway (SACOG 2015).

Development could also occur near private airstrips, which are regulated by both local land use regulations and State and federal aviation guidelines. Although the regulatory environment for private airstrips is not as explicit as for public airstrips, adherence to State and local permits, existing regulations, and FAA requirements would reduce the potential for a safety hazard for people residing or working in the vicinity of private airstrips. In addition, general plan policies within the area ensure that development proximate to private airstrips addresses compatibility issues.

Under this alternative, there could also be increased urbanization along rail corridors. Construction and operation of planned projects would not increase the hazard associated with operation of the highway and railroad, but could increase the number of people potentially exposed to hazardous conditions. As noted above, FRA and PHMSA closely regulate the rail transport of crude oil and other hazardous materials. The transport of hazardous materials by rail is subject to requirements for handling, loading and unloading, and the placement of placards to alert emergency response teams as to the contents of each car. FRA routinely inspects the facilities of shippers and railroads to ensure that all regulatory requirements are being met.

Development that would occur under the No Action Alternative would be consistent with local planning documents. This is anticipated to reduce the potential for projects to be developed in a manner that would interfere with adopted emergency plans. Further, the amount and location of development would be consistent with the projections used to establish applicable emergency response and emergency evacuation plans, which would facilitate plan implementation. Once constructed, development would be required to comply with adopted emergency response plans, including the Yolo County Emergency Operations Plan and the Yolo County Operational Area Multi-Jurisdictional Hazard Mitigation Plan.

Development that proposes large concentrations of people or special needs individuals (such as stadiums or hospitals) in an area with increased hazards (such as a dam inundation area) could cause adverse effects related to the implementation of countywide and jurisdictional emergency plans. Further, certain tall structures can physically interfere with the implementation of emergency response if the height of the structure or tower interferes with the ability of emergency air support services to carry out missions associated with an emergency response. However, it is anticipated that environmental and planning reviews conducted of subsequent development projects under the No Project Alternative would require evaluation of potential hazards and land suitability, as well as the potential for emergency response plans to be impaired. These procedures would prevent construction of structures that would be hazardous to people working or residing in the area. The threat of wildfires from development of areas within CAL FIRE's responsibility is addressed through compliance with Title 14 of the California Code of Regulations, which sets forth the minimum development standards for emergency access, fuel modification, setback, signage, and water supply to damage to structures or people by reducing wildfire hazards. Standard construction mitigation includes notification of emergency responders where road closures are required. Where development is located near railroad tracks, emergency response plans may be amended to address the potential hazard.

Cumulative Effects

Planned development would proceed, and land use conversions would occur consistent with the general plans of Yolo County, West Sacramento, Davis, Winters, and Woodland, under the No Action Alternative. Although development that would occur under this alternative could require the use and transport of hazardous materials, compliance with existing regulations would limit the potential for any release of hazardous materials that would significantly contribute to a cumulative condition. Additional impacts could

occur as a result of construction if the authorities are not properly notified, or if multiple projects are constructed at the same time, and therefore result in concurrent blockage of multiple roadways used for emergency routes. However, it is anticipated that environmental and planning reviews conducted of subsequent development projects under the No Project Alternative would require evaluation of the cumulative condition and mitigation for potential cumulative impacts to traffic. Further, as development is proposed on sites with known contamination, existing regulation would require remediation, which would have a beneficial impact on the cumulative condition.

ALTERNATIVE B—PROPOSED ACTION (PERMIT ISSUANCE/PLAN IMPLEMENTATION)

Environmental Consequences/Environmental Effects

The Proposed Action Alternative (Alternative B) incorporates the same development-related activities identified for the No Action Alternative (urban projects and activities, rural projects and activities, and public and private operations and maintenance), with the HCP/NCCP providing a mechanism for the Wildlife Agencies to provide incidental take authorization for these lawfully undertaken covered activities. Hazardous materials effects as a result of these activities would be the same as those described under the No Action Alternative.

Where the Proposed Action Alternative differs from the No Action Alternative is in the implementation of the Yolo HCP/NCCP, including its conservation strategy and neighboring landowner protection program, as well as the required use of Avoidance and Minimization Measures (AMMs) during implementation of covered activities. Components of the conservation strategy include habitat assessment surveys and population surveys; habitat management; restoration, enhancement, and creation of habitats; conversion of agricultural lands to create habitat; construction of facilities necessary for management and maintenance; monitoring; and control of invasive nonnative species. These activities are not generally associated with use of substantial quantities of hazardous materials. As a result, the effects of activities included in the Proposed Action Alternative would be very similar to those described under the No Action Alternative. Further, while lands in the expanded Plan Area may be added to the reserve system, because no other activities related to the HCP/NCCP would occur in this corridor, the potential effect in this area would not differ from other reserves in the Plan Area.

The following impact discussions focus on the elements of the HCP/NCCP that differ from the No Action Alternative. From the perspective of potential effects related to use or discovery of hazardous materials, the primary result of the voluntary neighboring landowner protection program (as described in more detail in Chapter 2, *Proposed Action and Alternatives*), would be the general preservation of existing conditions on lands adjacent to reserve system lands. The program is not evaluated further in the impact discussions below because it would not change conditions related to potential hazards.

Effect HAZ-1: Create a significant hazard through the routine transport, use, or disposal of hazardous materials, including along existing transportation corridors and in proximity to school sites.

Development and operation of urban and rural projects and activities would result in transport, use, and disposal of hazardous materials. Adherence to existing regulations and compliance with safety standards would reduce any potential hazards associated with the routine use of such materials. The Proposed Action Alternative would result in use of the Plan Area (and expanded Plan Area) for agriculture and as managed open space. Pesticides and other chemicals are routinely used in the management of these areas. Use of pesticides is not a covered activity; therefore, authorization is not provided for pesticide use that would result in take of covered species.

Title 49 of the CFR, Hazardous Materials Regulations, includes requirements for the classification of materials, packaging, hazard communication, transportation, handling, hazardous materials employee training, and incident reporting. The California Department of Public Health regulates the haulers of hazardous waste. A valid registration issued by DTSC is required, unless specifically exempted, to transport hazardous wastes and DMV requires all hazardous materials transporters to possess a commercial driver's license with a hazardous materials endorsement. Vehicle Code Section 31303 outlines general routing and

parking restrictions for hazardous material and hazardous waste shipments and CHP publishes a list of restricted or prohibited highways. FMCSA also maintains a Hazmat Route Registry that describes the highway routes that must be utilized for the transport of certain classes of hazardous waste that is monitored and regulated by the FMCSA field office and CHP.

Schools are considered a particularly sensitive receptor relative to hazardous material exposure because there is a concentration of children that is repeatedly exposed to environmental conditions at the school site for extended periods of time. During construction, demolition, and excavation activities, the projects would potentially produce hazardous air emissions or involve the handling of extremely hazardous wastes. As discussed above, the all projects would comply with federal and State regulations that are designed to reduce the potential for the release of large quantities of hazardous materials and wastes into the environment to an acceptable level. Existing protective measures and regulations would be sufficient to ensure that hazardous materials stored, used, transported, and disposed of as part of projects covered under the HCP/NCCP would not pose a significant hazard to the public or the environment, including children at schools, under normal conditions.

It is not known if reserves established under the Proposed Action Alternative would be located near existing or proposed schools because the precise location of reserve lands would be determined during implementation of the Plan. However, the high priority reserve system acquisition areas identified for the Proposed Action Alternative (see Figure 2-5 in Chapter 2, *Proposed Action and Alternatives*) are generally outside of established communities, where most schools are located. In addition, hazardous materials used on reserve system properties would occur in a manner consistent with applicable regulations such that no take of protected species would occur. This is anticipated to substantially limit the potential for effect to students attending nearby schools.

Since the development and conservation actions associated with establishing and maintaining a reserve system under the Proposed Action Alternative would be subject to the same regulations as development and conservation under the No Action Alternative, the alternatives would likely result in similar land uses and would have similar effects relative to hazards.

NEPA Level of Significance: As compared to the No Action Alternative, this impact is **less than significant**.

Further, because establishing and operating the reserve system would not result in a significant adverse effect related to the routine transport, use, or disposal of hazardous materials.

CEQA Level of Significance: As compared to Existing Conditions, this impact is **less than significant**.

No mitigation is required.

Effect HAZ-2: Result in the release of hazardous materials from a site of known or potential contamination.

Known Sites of Contamination

The Plan Area includes over 70 sites that are actively under evaluation, remediation, or verification monitoring by DTSC or SWRCB; and many more that are waiting for evaluation and potential clean-up. Of the 70 active sites listed in Appendix F, 33 sites would be near covered activity areas and five would be within covered activity areas. Many of the road, levee, and other infrastructure improvements would occur in proximity of identified hazardous materials sites. In addition, other historical or undocumented sites could be within the covered activities areas and potentially effected by development that is reasonably anticipated to occur under the Proposed Action Alternative. All covered activities would be subject to established hazardous materials regulations and standards, and would undergo project-specific analysis to investigate the potential for contamination of nearby properties to effect conditions in the site.

Since the location of future reserve system lands is unknown, an evaluation of the potential for specific sites of known contamination within the Plan Area to be effected by reserve system activities cannot be conducted at this time. However, as evidenced in Appendix F, sites of known contamination are often

associated with development and historical use of the property. Since reserve system lands would be frequently located on land that is in a semi-natural condition, there is a greatly reduced potential for these sites to be located on properties with known contamination. Potential contamination associated with agricultural lands is addressed below.

Agricultural Chemicals

Due to historical use for agricultural purposes, it is anticipated that residue from pesticides, fertilizers, and other agricultural chemicals may be present in the Plan Area. As detailed in the setting section above, current agricultural practices do not generally employ toxic chemicals with long persistence; however, chemicals formerly used in agriculture included heavy metals and organic compounds, such as DDT, which may persist in soil for decades. These residues could potentially pose a health risk to persons coming into contact with those chemicals. The HCP/NCCP includes a requirement that a Phase I Environmental Site Assessment would be conducted in general accordance with the American Society for Testing and Materials Standard Practice E1527-05 prior to the Conservancy acquiring lands for conservation (see Section 7.5.5.2 of the HCP/NCCP). This assessment would identify potential environmental contamination and provide recommendation regarding the need for further evaluation of the property.

Common Road and Railway Contaminants

Properties located adjacent to roadways may contain elevated concentrations of lead in exposed surface soils, which could pose a health hazard to construction workers and users of the properties. Lead is a State-recognized carcinogen and reproductive toxicant. Exposure of construction workers or future site occupants to lead in soil could result in adverse health effects, depending on the duration and extent of exposure. Substantial quantities of aerially-deposited lead are understood to be generally confined to within 30 feet of a roadway. Other potential contaminants, including herbicides associated with weed abatement and contaminated ballast rock, are generally confined to the immediate transportation right-of-way. Conservation activities associated with the Proposed Action Alternative are unlikely to result in disturbance of ballast rock and soils in established transportation corridors that could result in the release of potentially hazardous materials.

Undocumented Contamination Sites

The disturbance of undocumented hazardous wastes could also result in hazards to the environment and human health. Grading and excavation activities may expose construction workers and the public to hazardous substances present in the soil or groundwater that are not anticipated based on information about existing conditions. If any previously unknown contamination is encountered during grading or excavation, the removal activities required could pose health and safety risks. Adverse impacts could result if reserve maintenance activities inadvertently disperse contaminated material into the environment. Potential hazards to human health include ignition of flammable liquids or vapors, inhalation of toxic vapors in confined spaces such as trenches, and skin contact with contaminated soil or water.

Many small sites that may have contained leaking underground storage tanks and similar types of contamination, and other sites (currently undiscovered) could be present. Disturbance of these sites could create a significant hazard to the public or the environment. Since the acquisition of sites with known or potential hazardous materials could influence the ability to conduct effective management, due diligence would be performed prior to acquisition so that the Conservancy understands the potential limitations before committing resources to the property (see Section 7.5.5.2 of the HCP/NCCP). In addition, minor remediation projects are included in the Proposed Action Alternative as part of the general urban and rural development operations and maintenance component (see Section 3.5.3.1 of the HCP/NCCP).

Summary

Standard consideration of potential site contamination would be necessary for projects considered covered activities under the Proposed Action Alternative. Implementation of this alternative would have no effect on the potential for reserve maintenance to encounter known or undocumented hazardous materials. As established in the HCP/NCCP, newly protected lands that would be included in the reserve system must not have hazardous materials or property encumbrances that conflict with HCP/NCCP goals and objectives (see Section 7.5.1 of the HCP/NCCP). In addition, as described in Appendix K of the HCP/NCCP, the conservation

template easement includes language that requires landowners to verify to the best of their knowledge that land entering into an easement is free of hazardous materials and that the landowner will comply with all environmental regulations regarding hazardous materials.

If an ITP is issued, this would not change the potential for activities included in the Proposed Action Alternative to result in the discovery of unknown hazardous materials. Since the conservation actions under the Proposed Action Alternative and those under the No Action Alternative would be subject to the same regulations and policies and likely result in similar land use, it is likely that they would have similar effects relative to the potential discovery of hazardous materials.

NEPA Level of Significance: As compared to the No Action Alternative, this impact is **less than significant**.

As indicated above, although the Proposed Action Alternative would result in land use that could expose people or the environment to existing contamination, established regulations and practices incorporated into the Plan would effectively reduce the potential for a significant adverse effect related to release of hazardous materials from a site of known or potential contamination.

CEQA Level of Significance: As compared to Existing Conditions, this impact is **less than significant**.

Effect HAZ-3: Result in a safety hazard for people residing or working in the project area because of proximity to public airports or private airstrips.

The Proposed Action Alternative would include incidental take authorization for rural public services, infrastructure, and utilities projects near the Yolo County Airport. Potential rural projects in Monument Hills that could obtain incidental take coverage under the Plan are located adjacent to the runway at the Watts-Woodland Airport, and planned aggregate mining is identified immediately to the northeast. Planned infrastructure projects are also identified adjacent to the CHP Academy Airstrip and the KOVR helistop. These planned land uses near airports would not change under the Proposed Action Alternative as compared to the No Action Alternative because the development is programmed in the applicable general plans and other planning documents.

The HCP/NCCP would result in a net gain of 44 acres of wetland natural community types, including 20 acres of riparian habitat and 24 acres of aquatic habitat for California tiger salamander (see Table 6-1(b) of the HCP/NCCP). The tiger salamander habitat, which would be in the Dunnigan Hills area, could attract waterfowl since they are attracted to open bodies of water. There are no public airports or private airstrips in that area, however. Therefore, this would have no effect on the potential for hazardous conditions associated with bird-aircraft collisions. Given the proposed creation of wetlands would not be located near an existing airport or airstrip, there is no potential increase in bird aircraft strike hazard.

Since the conservation actions under the Proposed Action Alternative and those under the No Action Alternative would be subject to the same regulations and policies and likely result in similar land use, it is likely that they would have similar effects relative to airspace hazards.

NEPA Level of Significance: As compared to the No Action Alternative, this impact is **less than significant**.

Potential effects from establishment and management of a reserve system under the Proposed Action Alternative would not result in significant adverse safety hazards associated with public airports or private airstrips.

CEQA Level of Significance: As compared to Existing Conditions, this impact is **less than significant**.

No mitigation is required.

Effect HAZ-4: Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

Establishing and operating a reserve system, as planned under the Proposed Action Alternative, is unlikely to impair implementation of emergency response or evacuation plans because such plans are typically geared towards urban areas. Although the Proposed Action Alternative would provide incidental take coverage for selected development activities, the amount and location of development anticipated to occur with implementation of the Proposed Action Alternative would be consistent with the projections used to establish applicable emergency response and emergency evacuation plans and would be required to comply with adopted emergency response plans, including the Yolo County Emergency Operations Plan and the Yolo County Operational Area Multi-Jurisdictional hazard Mitigation Plan. The reserve system is unlikely to affect implementation of emergency response plans and implementation of the Proposed Action Alternative is not anticipated to influence the quantity or character of development that would otherwise occur.

NEPA Level of Significance: As compared to the No Action Alternative, this impact is **less than significant**.

Potential effects from establishing and managing a reserve system under the Proposed Action Alternative would not result in significant interference with an adopted emergency response plan.

CEQA Level of Significance: As compared to Existing Conditions, this impact is **less than significant**.

No mitigation is required.

Effect HAZ-5: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

As discussed above for the No Action Alternative, existing regulations help prevent damage to structures and people by reducing wildfire hazards. Further, as part of the public and private operations and maintenance covered activities, the Proposed Action Alternative includes weed abatement to manage fire hazards outside the reserve system, including the removal of dead and dying wood, trees, and vegetation in agricultural areas; and fuel management activities, including the maintenance of fire management zones along existing infrastructure. The conservation strategy also includes fire management, including prescribed burning, mowing, and fuel-break establishment and maintenance. This would reduce the potential to expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

NEPA Level of Significance: As compared to the No Action Alternative, this impact is **less than significant**.

CEQA Level of Significance: As compared to Existing Conditions, this impact is **less than significant**.

No mitigation is required.

Effect HAZ-6: Substantially affect public health due to increased presence of potential natural disease vectors.

The practice of flooding previously dry land that can be part of restoration or creation of aquatic habitats can create favorable mosquito development habitat. High temperatures may promote rapid mosquito development, as well as amplification of some vector-borne viruses (e.g., West Nile Virus). In addition, dense emergent vegetation in aquatic habitats may also increase the numbers of mosquitoes produced, and impede the success of mosquito control practices such as the use of larvicides and mosquito fish.

The Plan Area is within the jurisdiction of the Sacramento-Yolo Mosquito Vector Control District. Control activities would be consistent with the BMPs in the District's Mosquito Reduction Best Management Practices Manual. The HCP/NCCP anticipates ongoing use of approved pesticides, herbicides, and other agro-chemicals in accordance with EPA labels on HCP/NCCP reserve lands. For rice land application, the recommended application shall not be harmful to mammals, reptiles, and amphibians (use of these chemicals is not a covered activity under the Yolo HCP/NCCP). Public health would not be adversely affected because the implementation of mosquito-reducing BMPs would prevent or reduce mosquito production in areas where standing water may occur.

Although implementation of the Proposed Action Alternative could result in more area preserved as open space and wetland habitat than the No Action Alternative, which could provide habitat for mosquitoes, the Proposed Action Alternative allows for mosquito abatement (Section 7.5.5.4) if it does not result in incidental take of listed or Covered Species and as long as the intended conservation benefits and conservation values of the reserve lands are not compromised. Although pesticide use would not be considered a covered activity (i.e., the Permittees may not cause take of a State or federally listed species as a result of pesticide use), Permittees may use pesticides in accordance with labeling instructions. Pesticide use must comply with applicable judicial orders related to the use of pesticides.

NEPA Level of Significance: As compared to the No Action Alternative, this impact is **less than significant**.

CEQA Level of Significance: As compared to Existing Conditions, this impact is **less than significant**.

No mitigation is required.

Cumulative Effects

The existing cumulative condition in the Plan Area resulting from past and present projects is described above for the No Action Alternative and remains the same for the Proposed Action Alternative. The contribution to cumulative effects from reasonably foreseeable future projects is also the same as described for the No Action Alternative. The potential impacts associated with the Proposed Action Alternative (e.g., acquiring lands containing hazardous materials, unearthing hazardous materials during restoration and other reserve system activities, and using hazardous materials as part of reserve system management) are site-specific in nature, and are expected to comply with applicable regulations, as described above. The cumulatively considerable contribution to cumulative effects from the Proposed Action Alternative would not be appreciably different from those identified for the No Action Alternative.

NEPA Level of Significance: As compared to the No Action Alternative, this impact is **less than significant**.

CEQA Level of Significance: As compared to Existing Conditions, this impact is **less than significant**.

ALTERNATIVE C - REDUCED TAKE ALTERNATIVE

Environmental Consequences/Environmental Effects

The Reduced Take Alternative (Alternative C) would include the same categories of development-related activities as the Proposed Action Alternative (Alternative B); however, under the Reduced Take Alternative there are eight areas designated for development under the Proposed Action Alternative in which activities that would result in take of covered species would not be permitted. See Chapter 2, Section 2.3.3, *Alternative C-Reduced Take Alternative* for more information on this alternative.

Effects related to hazardous materials as a result of implementation of the Reduced Take Alternative would be similar to those discussed above for the No Action and the Proposed Action Alternatives. The Reduced Take Alternative would have the same potential to disturb known sites of contamination (as identified in Appendix F) as the Proposed Action Alternative. The alternative would also be near, or include, the same airports as the Proposed Action Alternative. However, activities that could result in take (e.g., development) would not be allowed on approximately 1,335 acres within the Plan Area in general, and in specific areas in the vicinity of existing development (such as Clarksburg, West Sacramento, and the Woodland Elkhorn Specific Plan area). In these areas, it is less likely that land disturbing activities that could encounter undocumented hazardous materials would occur.

There is a potential that development would be displaced from the eight areas where activities that would result in take of covered species would not be permitted under the Reduced Take Alternative and could occur in other parts of the Plan Area. This displaced development would generally have similar potential to create a hazard because of routine use of hazardous materials, or result in the release of hazardous materials from a site of known or potential contamination as identified for the No Project Alternative.

Development would temporarily increase the regional transport, use, storage, and disposal of hazardous materials and petroleum products that are commonly used at construction sites. In addition, because of the presence of documented contamination sites, historical land use within the Plan Area, and the presence of major roadways and railroad tracks, previously unknown hazardous materials could be encountered during construction. It is anticipated that environmental and planning reviews conducted for such displaced development would require evaluation of potential hazards and land suitability, as well as the potential for emergency response plans to be impaired. These procedures would prevent construction of structures that would be hazardous to people working or residing in the area. Effects HAZ-1 through HAZ-5 would not be appreciably different from what is described for the Proposed Action Alternative.

NEPA Level of Significance: As compared to the No Action Alternative, this impact is similar and is **less than significant**.

CEQA Level of Significance: As compared to the Proposed Action Alternative, this impact is similar/greater/less and is **less than significant**.

Cumulative Effects

The existing cumulative condition in the Plan Area resulting from past and present projects is described above for the No Action Alternative and remains the same for the Reduced Take Alternative. The individual effects regarding hazards and hazardous materials under the Reduced Take Alternative are not appreciably different from those described for the Proposed Action and the No Action Alternatives. Therefore, implementation of the Reduced Take Alternative, like the Proposed Action Alternative, would not result in a cumulatively considerable contribution to significant cumulative effects.

NEPA Level of Significance: As compared to the No Action Alternative, this impact is similar and is **less than significant**.

CEQA Level of Significance: As compared to the Proposed Action Alternative, this impact is similar and is **less than significant**.

ALTERNATIVE D - REDUCED DEVELOPMENT ALTERNATIVE

Environmental Consequences/Environmental Effects

The Reduced Development Alternative (Alternative D) would include the same categories of development-related activities as the Proposed Action Alternative (Alternative B), but under the Reduced Development Alternative, development within a portion of the west side of the Dunnigan area, and the Elkhorn Specific Plan Area, would not be covered activities under the HCP/NCCP. Any development that results in take of listed species in these locations would be required to obtain authorization under the Federal and State Endangered Species Acts, as appropriate, on a project by project basis. (See Chapter 2, Section 2.3.4, *Alternative D-Reduced Development Alternative* for more information on this alternative.)

The Reduced Development Alternative would have the same potential to disturb known sites of contamination (as identified in Appendix F) as the Proposed Action Alternative and Reduced Term Alternative, and would be near, or include, the same airports. Effects related to hazardous materials that could result from implementation of the Reduced Development Alternative would be similar to those discussed above for the No Action Alternative, Proposed Action Alternative, and Reduced Term Alternative. To the extent that preclusion from the HCP/NCCP drives development that would occur in the Dunnigan and Elkhorn Specific Plan Areas under the Proposed Action Alternative to occur elsewhere, the effects would be as disclosed above for the Reduced Take Alternative.

NEPA Level of Significance: As compared to the No Action Alternative, this impact is similar and is **less than significant**.

CEQA Level of Significance: As compared to the Proposed Action Alternative, this impact is similar and is **less than significant**.

Cumulative Effects

The existing cumulative condition in the Plan Area resulting from past and present projects is described above for the No Action Alternative and remains the same for the Reduced Development Alternative. The individual effects regarding hazards and hazardous materials under the Reduced Development Alternative are not appreciably different from those described for the Proposed Action and the No Action Alternatives. Therefore, implementation of the Reduced Development Alternative, like the Proposed Action Alternative, would not result in a cumulatively considerable contribution to transportation significant cumulative effect.

NEPA Level of Significance: As compared to the No Action Alternative, this impact is similar and is **less than significant**.

CEQA Level of Significance: As compared to the Proposed Action Alternative, this impact is similar and is **less than significant**.