3 Affected Environment, Environmental Consequences, and Mitigation Measures

3.10 Hazardous Materials and Wastes

3.10.1 Introduction

Section 3.10, Hazardous Materials and Wastes, of the *Merced to Fresno Section: Central Valley Wye Final Supplemental Environmental Impact Report (EIR)/Environmental Impact Statement (EIS)* (Final Supplemental EIR/EIS) updates the *Merced to Fresno Section California High-Speed Train Final Project EIR/EIS* (Merced to Fresno Final EIR/EIS) (California High-Speed Rail Authority [Authority] and Federal Railroad Administration [FRA] 2012) with new and revised information relevant to hazardous materials and wastes, analyzes the potential impacts of the Central Valley Wye alternatives (and the No Project Alternative), describes impact avoidance and minimization features (IAMF) that would avoid, minimize, or reduce these impacts. Where applicable, mitigation measures are proposed to further reduce, compensate for, or offset impacts of the Central Valley Wye alternatives. This Section 3.10 also defines the resource study area (RSA) for hazardous materials and wastes and describes the affected environment in the RSA.

The analysis herein is consistent with the analysis conducted in the Merced to Fresno Final EIR/EIS. Both analyses examine potential impacts on human health and safety and the environment from the use, storage, transport, and disposal of hazardous materials and wastes and use the same methods for evaluating potential impacts within the RSAs. The analyses use similar information sources, including state and regional databases of known and significant hazardous waste/hazardous material sites. Where information has changed or new information has become available since the Merced to Fresno Final EIR/EIS was prepared in 2012, the analysis in this Final Supplemental EIR/EIS uses the updated versions of these sources or datasets. However, relevant portions of the Merced to Fresno Final EIR/EIS that remain unchanged are summarized and referenced in this section, but are not repeated in their entirety.

The *Merced to Fresno Section: Central Valley Wye Hazardous Materials and Wastes Technical Report* (Hazardous Materials and Wastes Technical Report) (Authority and FRA 2016) provides additional technical details on hazardous materials and wastes.[1] This technical report is available via the Authority's website: https://hsr.ca.gov/programs/environmental/eis_eir/draft_supplemental_merced_fresno.aspx.

Additional details on hazardous materials and wastes are provided in the following appendices in Volume II of this Final Supplemental EIR/EIS:

- Appendix 2-B, California High-Speed Rail: Impact Avoidance and Minimization Features, provides the list of all IAMFs incorporated into the Central Valley Wye alternatives.
- Appendix 2-C, Applicable Design Standards, provides the list of relevant design standards for the Central Valley Wye alternatives.

Hazardous materials and wastes, including the storage, use, transportation, and disposal in the San Joaquin Valley, are important considerations for human health and environmental quality.

[1] The Hazardous Materials and Wastes Technical Report was finalized in 2016; however, the content of the Draft Supplemental EIR/EIS continued to evolve to incorporate the most current data and other sources of information relevant to the environmental analyses, some of which were not available at the time that the technical report was prepared. As a result, some of the information presented in the Draft Supplemental EIR/EIS was more current than the information presented in the technical report. To provide clarity on any information and data differences between the Draft Supplemental EIR/EIS and the technical report and the location of the most current information, a Central Valley Wye Technical Report Memorandum of Updates had been produced and included in Appendix 3.1-D, Central Valley Wye Technical Report Memorandum of Updates. Further changes between the Draft and Final Supplemental EIR/EIS are not recorded in that memorandum.

Five other resource sections in this Final Supplemental EIR/EIS also provide additional information related to hazardous materials and wastes:

- **Section 3.5, Electromagnetic Fields and Electromagnetic Interference**—Impacts related to the potential for electromagnetic fields and interference or corrosion of underground pipelines and cables to the adjoining rail.
- **Section 3.6, Public Utilities and Energy**—Impacts related to construction and operations of the Central Valley Wye alternatives on existing pipelines.
- **Section 3.9, Geology, Soils, Seismicity, and Paleontological Resources**—Impacts of constructing the Central Valley Wye alternatives on soil erosion and stability that could affect hazardous materials and waste sites.
- **Section 3.11, Safety and Security**—Impacts of constructing the Central Valley Wye alternatives on emergency response preparedness in the event of leaks, spills, or accidents involving hazardous materials and wastes.
- **Section 3.13, Land Use and Development**—Impacts of constructing the Central Valley Wye alternatives on current land use.

Since publication of the Draft Supplemental EIR/EIS, there have been no substantive changes to this section beyond the global changes described at Section S.1.2, Global Changes in the Final Supplemental EIR/EIS, of the Summary.

Operations activities in proximity to landfills are not included in this Final Supplemental EIR/EIS because the likelihood of methane gas from landfills extending beyond the landfill property is low. One landfill, the Fairmead Solid Waste Disposal Site, is approximately 0.1 mile north of the Avenue 21 to Road 13 Wye Alternative's centerline. Another landfill occurs within 0.25 mile of the existing Site 7—Le Grand Junction/Sandy Mush Road, Warnerville–Wilson 230 kV Transmission Line–the Highway 59 Landfill, which is approximately, at its closest point, 0.13 mile from an existing self-supporting lattice steel structure on the alignment associated with the SR 152 (North) to Road 19 Wye Alternative. These landfills do not present any potential operations impacts because they have gas mitigation control systems and monitoring programs in place.

Naturally occurring asbestos (NOA) is not common in the area surrounding the Central Valley Wye alternatives. As explained in the Hazardous Materials and Wastes Technical Report, three NOA areas are located within Merced and Madera Counties, approximately 30 miles northeast of the Central Valley Wye alternatives (Van Gosen et al. 2011). The three NOA areas are the Baker Gold Mine, Savannah Gold Mine, and Deep Canyon Claim. Because these three NOA areas are distant from the Central Valley Wye alternatives, NOA is not considered a concern and is therefore not considered further in this analysis (Authority and FRA 2016).

Operations activities in proximity to oil and gas wells are included in Section 3.11. The Authority has prepared a *Consideration of Preliminary Hazard Analysis (PHA) Report — Oil and Gas Wells Adjacent to the CHSRP Right-of-Way PHA 1.1.4.13* to consider risks to high-speed rail (HSR) operations that may be posed by oil and gas wells adjacent to the HSR right-of-way (Authority 2014). Wells in the region are largely inactive and a review of oil and gas well blowouts in the region from 1991 to 2008 revealed a low number of blowouts. Inactive wells could be either idle or plugged. An idle well has not produced oil or gas or has not been used for fluid injection for 6 consecutive months during the last 5 years, and a plugged well is a well that has been abandoned (California Department of Conservation 2016). Because these wells have been inactive for at least 6 months, the occurrence of such an event has been characterized as highly unlikely per the preliminary hazard analysis (Authority 2014). Impacts from oil and gas wells that could occur during construction are addressed in Section 3.10.6, Environmental Consequences.

3.10.1.1 Definition of Resources

The following are definitions for hazardous materials and wastes analyzed in this Final Supplemental EIR/EIS. These definitions are the same as those used in the Merced to Fresno Final EIR/EIS (Authority and FRA 2012).

- **Hazardous Materials**—Hazardous materials include, but are not limited to, hazardous waste, hazardous substances, and extremely hazardous substances as defined in the following text, and any material that a handler or the administering agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment because of its quantity, concentration, or physical or chemical characteristics. This term includes petroleum products. Hazardous waste, hazardous substances, and extremely hazardous substances are defined below.
- **Hazardous Waste**—Solid waste is defined as a hazardous waste when it qualifies as a "waste" (i.e., is no longer of use and would be disposed of) and when it exhibits a hazardous waste characteristic (e.g., toxicity, ignitability, reactivity, or corrosivity), or when it has been specifically listed as hazardous in federal or state law or regulation. Hazardous waste is regulated by the U.S. Environmental Protection Agency (USEPA) under the Resource Conservation and Recovery Act (RCRA). Likewise, properties requiring environmental remediation or cleanup might fall under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) framework.
- **Hazardous Substance**—Hazardous substances are any substance or mixture of substances that are (1) toxic, (2) corrosive, (3) an irritant, (4) a strong sensitizer, (5) flammable or combustible, or (6) generate pressure through decomposition, heat, or other means (RCRA: 42 United States Code [U.S.C.] §1609 et seq.). Hazardous substances may cause substantial personal injury or substantial illness during or as a proximate result of any customary or reasonably foreseeable handling or use, including reasonably foreseeable ingestion by children. Hazardous substances include petroleum products, certain radioactive substances, asbestos-containing materials (ACMs), lead-based substances, and certain substances that present an electrical, mechanical, or thermal hazard. There is no single list of hazardous substances that can be referenced.
- **Extremely Hazardous Substance**—Extremely hazardous substances are subject to additional regulation if they exceed thresholds specified in Title 40 of the Code of Federal Regulations (C.F.R.) Part 355. Extremely hazardous substances are listed in Section 302 of the U.S. Emergency Planning and Community Right-to-Know Act (42 U.S.C § 11002)). The list can be found as an appendix to 40 C.F.R. Part 355, or in the California Code of Regulations, Title 8, Appendix A to Section 5189.

3.10.2 Laws, Regulations, and Orders

This section identifies laws, regulations, and orders that are relevant to the analysis of hazardous materials and wastes in this Final Supplemental EIR/EIS. Also provided are summaries of new or updated laws, regulations, and orders that have occurred since publication of the Merced to Fresno Final EIR/EIS.

3.10.2.1 Federal

The following federal laws, regulations, orders, and plans are the same as those described in Section 3.10.2, Laws, Regulations, and Orders, of the Merced to Fresno Final EIR/EIS (Authority and FRA 2012: pages 3.10-1 through 3.10-2):

- RCRA (42 U.S.C. § 6901 et seq.)
- CERCLA (42 U.S.C. § 9601 et seq.)
- Clean Water Act–National Pollutant Discharge Elimination System (§ 402[p])
- Clean Air Act (42 U.S.C. § 7401 et seq.)
- Safe Drinking Water Act (42 U.S.C. § 300(f) et seq.)
- Toxic Substances Control Act (15 U.S.C. § 2601 et seq.)
- Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. § 136 et seq. and 40 C.F.R. §§ 152.1–171)

- Hazardous Materials Transportation Act (49 U.S.C §§ 1801–1819 and 49 C.F.R §§ 101, 106, 107, and 171–180)
- Emergency Planning and Community Right-to-Know Act (40 C.F.R. §§ 350–372)
- Federal Compliance with Pollution Control (U.S. Presidential Executive Order [USEO] 12088)

3.10.2.2 State

The following state laws, regulations, orders, and plans are the same as those described in Section 3.10.2 of the Merced to Fresno Final EIR/EIS (Authority and FRA 2012: pages 3.10-2 through 3.10-3):

- California Code of Regulations, Title 27, Division 2, Chapter 3, Subchapter 4, Gas Monitoring and Control at Active and Closed Disposal Sites
- California Code of Regulations, Title 14, Section 1724.3, Well Safety Devices for Critical Wells
- California Code of Regulations, Title 27, Division 2, Chapter 3, Subchapter 5, Closure and Post-Closure Maintenance of Landfills
- California Public Resources Code Section 21151.4 (facilities within 0.25-mile of a school)
- Porter-Cologne Water Quality Control Act (Cal. Water Code § 13000 et seq.)
- Hazardous Materials Release Response Plans and Inventory Law (Cal. Health and Safety Code § 25500 et seq.)
- Safe Drinking Water and Toxic Enforcement Act (Proposition 65) (Cal. Health and Safety Code §§ 25180, 2518.7, 25192, 25249.5–25249.13)
- California Government Code Section 65962.5 (Cortese List)
- Hazardous Waste Control Act (Cal. Health and Safety Code § 25100 et seq.)

New, additional, or updated state laws, regulations, and orders follow.

Senate Bill 1082 (Cal. Health and Safety Code § 25404 et seq., Cal. Code Regs., tit. 27, § 15100 et seq.)

Senate Bill 1082 (Calderon), passed in 1993, created the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The Unified Program (Cal-EPA 2016) consolidates, coordinates, and makes consistent the administrative requirements, enforcement of hazardous materials business plans, California accidental release prevention plans or federal risk management plans; permits, inspections, and enforcement activities of six environmental and emergency response programs; the operation of underground storage tanks and aboveground storage tanks, universal waste and hazardous waste generators/handlers, onsite hazardous waste treatment; and Proposition 65 reporting. The California Environmental Protection Agency and other state agencies set the standards for their programs, while local governments implement the standards. These local implementing agencies are called Certified Unified Program Agencies (CUPA). Merced, Madera, Fresno, and Stanislaus Counties are the CUPAs relevant to the Central Valley Wye alternatives.

3.10.2.3 Regional and Local

The following county and local plans and policies are the same as those described in Section 3.10.2 of the Merced to Fresno Final EIR/EIS (Authority and FRA 2012: pages 3.10-3 through 3.10-5):

- *Madera County General Plan* (Madera County 1995)
- Madera County, California: *Local Hazard Mitigation Plan* (Madera County 2011)
- City of Chowchilla *Local Hazard Mitigation Plan* (City of Chowchilla 2011a)
- *Merced Vision 2030 General Plan* (City of Merced 2012)

Table 3.10-1 lists new, additional, or updated city and county plans relevant to the Central Valley Wye alternatives. Refer to Section 3.10.2 of the Merced to Fresno Final EIR/EIS for more information.

Table 3.10-1 Local Plans and Policies

Policy Title	Summary
Merced County	
2030 Merced County General Plan (2013a)	Merced County adopted the *2030 Merced County General Plan* on December 10, 2013, updating the previous version of the general plan that was included in Section 3.10.2.3 (page 3.10-4) of the Merced to Fresno Final EIR/EIS. The general plan includes the following goals and policies: ▪ Goal PFS-4: Ensure the safe and efficient disposal and recycling of solid and hazardous waste generated in Merced County. ▪ Policy PFS-4.5: Require all new development to adequately provide solid waste storage, handling, and collection through the development review and permitting process. ▪ Policy HS-5-1: Require new development and redevelopment proposals that have suspected or historic contamination to address hazards concerns and protect soils, surface water, and groundwater from hazardous materials contamination by conducting Phase I Environmental Site Assessments according to the American Society for Testing and Materials standards and applicable Department of Toxic Substances Control remediation guidelines. Also, complete additional Phase II Environmental Site Assessments and soil investigations, and any identified or needed remediation when preliminary studies determine such studies are recommended.
Merced County Multi-Jurisdictional Local Hazard Mitigation Plan (2014)	The *Merced County Multi-Jurisdictional Local Hazard Mitigation Plan* has been updated since the Merced to Fresno Final EIR/EIS. Prepared to comply with the federal Disaster Mitigation Act of 2000 (Public Law 106-390), this document identifies and profiles relevant hazards; assesses the exposure of lives, property, and infrastructure to these hazards; and estimates the potential losses from a hazard event. The plan also provides a framework for developing and prioritizing mitigation actions to reduce the risks from future hazard events in Merced County.
County of Merced Emergency Operations Plan (2013b)	The *County of Merced Emergency Operations Plan* has been updated since the Merced to Fresno Final EIR/EIS. This plan establishes an Emergency Management Organization, describes the role of the Emergency Response Center, and outlines the County's actions during a response to an emergency and during the recovery process.
Madera County	
Madera County General Plan (1995)	The Madera County General Plan Policy Document was adopted on October 24, 1995 and includes the following policies: ▪ Policy 6.G.1: The County shall ensure that the use and disposal of hazardous materials in the county complies with local, state, and federal safety standards.

Policy Title	Summary
	▪ Policy 6.G.3: The County shall discourage the development of residences or schools near known hazardous waste disposal or handling facilities. ▪ Policy 6.G.4: The County shall review all proposed development projects that manufacture, use, or transport hazardous materials for compliance with the County's Hazardous Waste Management Plan ▪ Policy 6.G.5: The County shall strictly regulate the storage of hazardous materials and wastes. ▪ Policy 6.G.6: The County shall ensure that industrial facilities are constructed and operated in accordance with current safety and environmental protection standards. ▪ Policy 6.G.7: The County shall require that applications for discretionary development projects that will generate hazardous wastes or utilize hazardous materials include detailed information on hazardous waste reduction, recycling, and storage. ▪ Policy 6.G.8: The County shall require that any business that handles a hazardous material prepare a plan for emergency response to a release or threatened release if a hazardous material. ▪ Policy 6.G.11: The County shall work with local fire protection and other agencies to ensure an adequate countywide response capability to hazardous materials emergencies.
Madera County Operational Area Emergency Operations Plan (2010)	This plan establishes an Emergency Management Organization, describes the role of the Emergency Response Center, and outlines the County's actions during a response to an emergency and during the recovery process.
City of Chowchilla	
City of Chowchilla 2040 General Plan (2011b)	The *City of Chowchilla 2040 General Plan* was adopted on May 2, 2011, and provides the framework for the management of the city's hazardous and solid waste. The plan includes the following objectives and policies: ▪ Objective PS 10: Protect the City of Chowchilla and its environment from harmful effects of hazardous materials. ▪ Policy PS 10.2: The City of Chowchilla shall require, as appropriate and as a component of the environmental review process, a hazardous materials inventory for project sites, including an assessment of materials and operations for any development applications. Particular attention shall be paid to land that previously contained agricultural uses. ▪ Policy PS 10.3: The City of Chowchilla shall ensure the proponents of new development projects address hazardous materials concerns through the preparation of a Phase I or Phase II hazardous materials studies for each identified site as part of the design and environmental review process. Recommendations required to satisfy local, state, or federal cleanup standards outlined in the studies shall be implemented as part of the construction phase for each project. ▪ Policy PS 10.5: The City of Chowchilla shall use the development review process to ensure compatibility between hazardous material users and surrounding land use.

Policy Title	Summary
	▪ Policy PS 10.10: Business practices using, storing, or producing hazardous materials shall be located at a safe distance from other uses that may be adversely affected by such activities. Sensitive receptors such as schools, hospitals, day care centers, convalescent homes, and other immobile populations shall be considered during the review process. ▪ Policy PS 10.11: Any risks involving the disposal, transport, manufacturing, storage, and handling of hazardous materials in the City of Chowchilla shall be evaluated in the project review and approval process. ▪ Objective PS 11: Minimize public exposure risks associated with the storage, transport, and disposal of hazardous materials. ▪ Policy PS 11.1: Ensure hazardous materials used in business and industry are used, stored, handled, and disposed of properly.
City of Waterford	
Waterford Vision 2025 General Plan (2006)	The Waterford City Council adopted the Waterford Vision 2025 General Plan on October 26, 2006 and includes the following policy in the Safety Chapter, Goal Area 6 Hazardous Materials: ▪ S-6.1 Prevent injuries and environmental contamination due to the uncontrolled release of hazardous materials.

Source: Merced County, 2013a, 2013b, 2014; Madera County, 2010; City of Chowchilla, 2011b; City of Waterford, 2006

3.10.3 Compatibility with Plans and Laws

As indicated in Section 3.1.5.3, Compatibility with Plans and Laws, the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) regulations[2] require a discussion of inconsistencies or conflicts between a proposed undertaking and federal, state, regional, or local plans and laws. As such, this Final Supplemental EIR/EIS describes the inconsistency of the Central Valley Wye alternatives with federal, state, regional, and local plans and laws to provide planning context.

There are a number of federal and state laws and implementing regulations, listed in Section 3.10.2.1, Federal, and Section 3.10.2.2, State, that govern the use, treatment, and disposal of hazardous wastes and materials; outline management and cleanup procedures for contaminated sites; regulate the use of hazardous materials near sensitive receptors and sites of Potential Environmental Concern (PEC), and outline regulatory procedures in the event of a release or spill. A summary of the federal and state requirements considered in this analysis follows:

- Federal and state acts and laws that regulate the contamination or release of hazardous substances into water and air resources.
- Federal and state acts and laws that provide for the cleanup and management of contaminated sites.
- Federal and state acts and laws that provide for the proper transport, management, and disposal of hazardous wastes and materials.
- Federal and state acts and laws that outline proper procedures in the event of a hazardous materials-related emergency, such as a hazardous materials spill or release.

[2] NEPA regulations refer to the regulations issued by the Council for Environmental Quality located at 40 C.F.R Part 1500.

- Federal and state acts and laws that regulate the use of hazardous materials within 0.25 mile of a school.
- Federal and state acts and laws that regulate activities related to disposal sites and landfills.
- Federal and state acts and laws that regulate pesticide application.

The Authority, as the NEPA and CEQA lead agency proposing to construct and operate the HSR system, is required to comply with all federal and state laws and regulations and to secure all applicable federal and state permits prior to initiating construction on the selected alternative. Therefore, there would be no inconsistencies between the Central Valley Wye alternatives and these federal and state laws and regulations.

The Authority is a state agency and therefore is not required to comply with local land use and zoning regulations; however, it has endeavored to design and construct the HSR project so that it is compatible with land use and zoning regulations. For example, the Central Valley Wye alternatives would incorporate IAMFs that include effective measures to protect the health and safety of the public and environment through compliance with regulations that control the transport, use, and storage of hazardous materials; proper permitting; and the implementation of a written hazard communication plan and spill prevention plan. Additionally, impacts from inadvertent disturbance of hazardous wastes and materials from undocumented sites would be minimized through such measures as the development of a construction management plan, conformance to hazardous materials and wastes regulations, and the establishment of a hazardous materials management business plan. A total of 12 plans and 30 policies were reviewed. The Central Valley Wye alternatives would be consistent with all reviewed plans and policies.

3.10.4 Methods for Evaluating Impacts

The evaluation of impacts from hazardous materials and wastes is a requirement of NEPA and CEQA. The following sections summarize the RSAs and methods used to analyze impacts from hazardous materials and wastes. As summarized in Section 3.10.1, Introduction, six other resource sections describe additional information related to hazardous materials and waste.

3.10.4.1 Definition of Resource Study Area

As defined in Section 3.1, RSAs are the geographic boundaries in which the environmental investigations specific to each resource topic were conducted. The general RSA for hazardous materials and wastes includes the project footprint for each of the Central Valley Wye alternatives plus a 150-foot buffer from the project footprints to account for hazardous material and waste issues on adjacent properties. The RSA for PEC sites extends 1 mile from the four Central Valley Wye alternatives' centerlines, consistent with American Society for Testing and Materials International (ASTM) database-search standard practice. There are three additional RSA boundaries for assessing impacts related to hazardous materials and wastes, depending on the presence and proximity of landfills, schools, recreational areas, and oil and gas wells to the Central Valley Wye alternatives. Table 3.10-2 describes the five hazardous materials and wastes RSAs and includes a general definition and boundary definition for each RSA within each Central Valley Wye alternative.

Table 3.10-2 Hazardous Materials and Wastes Resource Study Area Definitions

Source	General Definition	RSA Boundary Definition
General RSA for Hazardous Materials and Wastes		
Construction and Operations	This RSA incorporates hazardous materials and waste that may be transported, used, stored, disposed of, or encountered in the project footprints or within the buffer on adjacent properties during construction, maintenance, or other operations activities.	The project footprints for the HSR track alignment and associated facilities (e.g., radio towers, traction power substations, switching and paralleling stations, electrical lines) plus a 150-foot buffer from the project footprints to account for hazardous material and waste issues on adjacent properties. Footprints of EINU components (see detailed Project Description maps in Appendix 2-D)[1]
PEC Sites		
Construction and Operations	This RSA incorporates potential disturbance of regionally important PECs during construction.	1 mile on each side of the alternative alignments' centerlines and electrical components, consistent with ASTM database-search standard practice. PEC sites within the hazardous materials and wastes RSA, as well as large or regionally important PEC sites within the 1-mile buffer where the extent of the site or contamination could affect the RSA, were evaluated. Footprints of EINU components (see detailed Project Description maps in Appendix 2-D)[1]
Landfills		
Construction and Operations	This RSA includes landfills that occur near the Central Valley Wye alternatives that have the potential to release methane gas, which may present an explosion risk, consistent with California Code of Regulations Title 27, Subchapter 5.	0.25 mile on each side of the project footprints of the Central Valley Wye alternatives. Footprints of EINU components (see detailed Project Description maps in Appendix 2-D)[1]
Schools and Recreational Areas		
Construction and Operations	This RSA considers impacts on schools and recreational areas.	0.25 mile on each side of the project footprints of the Central Valley Wye alternatives. Footprints of EINU components (see detailed Project Description maps in Appendix 2-D)[1]
Oil and Gas Wells		
Construction and Operations	This RSA incorporates oil and gas wells that could be affected during construction or operations.	200 feet from the Central Valley Wye alternative alignments' centerlines. Footprints of EINU components (see detailed Project Description maps in Appendix 2-D)[1]

Source: Authority, 2019

[1]Given the site-specific and low-intensity construction activities involved with the EINU, as well as the minor extent of new, permanent features, the EINU RSAs are limited to the area of disturbance associated with construction and operation. Accordingly, figures in this section do not include the EINU. Detailed project description maps specific to the EINU are available in Appendix 2-D, Electrical Interconnections and Network Upgrades.

RSA = resource study area
EINU = electrical interconnections and network upgrades
ASTM = American Society for Testing and Materials
PEC = Potential Environmental Concern
HSR = high-speed rail

3.10.4.2 Impact Avoidance and Minimization Features

As noted in Section 2.2.3.7, Impact Avoidance and Minimization Features, the Central Valley Wye alternatives incorporate standardized IAMFs to avoid and minimize impacts. The Authority would incorporate IAMFs during project design and construction, and, as such, the analysis of effects of the Central Valley Wye alternatives in this section factors in all applicable IAMFs. Appendix 2-B, California High-Speed Rail: Impact Avoidance and Minimization Features, provides a detailed description of IAMFs that are included as part of the Central Valley Wye alternatives design. IAMFs applicable to hazardous materials and wastes include:

- HMW-IAMF#1, Transport of Materials
- HMW-IAMF#2, Permit Conditions
- HMW-IAMF#3, Environmental Management System
- HMW-IAMF#4, Spill Prevention
- HMW-IAMF#5, Undocumented Contamination
- HMW-IAMF#6, Demolition Plans
- HMW-IAMF#7, Property Acquisition Phase I and Phase II Environmental Site Assessments
- HMW-IAMF#8, Work Barriers
- HMW-IAMF#9, Landfill
- HMW-IAMF#10, Hazardous Materials Plans
- HMW-IAMF#11, Hazardous Minerals
- HMW-IAMF#12, Gas Monitoring
- GEO-IAMF#1, Geologic Hazards

3.10.4.3 Methods for NEPA and CEQA Impact Analysis

This section describes the sources and methods the Authority used to analyze potential impacts from implementing the Central Valley Wye alternatives on the public and environment from the potential release or disturbance of hazardous wastes and materials. These methods apply to both NEPA and CEQA unless otherwise indicated. Refer to Section 3.1.5.4, Methods for Evaluating Impacts, for a description of the general framework for evaluating impacts under NEPA and CEQA. As described in Section 3.10.1, and in the following discussions, the Authority has applied the same methods and many of the same data sources from the Merced to Fresno Final EIR/EIS to this Final Supplemental EIR/EIS. Refer to the Hazardous Materials and Wastes Technical Report (Authority and FRA 2016) for more information regarding the methods and data sources used in this analysis. Laws, regulations, and orders (see Section 3.10.2) that regulate hazardous materials and wastes were also considered in the evaluation of impacts from hazardous materials and wastes.

As defined in Section 3.10.1.1, Definition of Resources hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and extremely hazardous substances. 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 pose a potential hazard to human health and safety if released into the environment. Hazardous wastes include residues, discards, byproducts, contaminated products, or similar substances that exceed regulatory thresholds for properties of toxicity, ignitibility, corrosivity, or reactivity. Federal and state regulations identify by name specific hazardous wastes that the USEPA has determined are hazardous and has designated as “listed wastes.”

Three agencies maintain searchable databases that track hazardous material releases in reportable quantities:

- The USEPA maintains the Hazardous Materials Incident Report System, which contains hazardous material spill incidents reported to the U.S. Department of Transportation.
- The California Office of Emergency Services maintains the California Hazardous Materials Incident Report System, which contains information on reported hazardous material accidental releases or spills.
- The State Water Resources Control Board maintains the Spills, Leaks, Investigations, and Cleanup program, which contains information on reported hazardous material accidental releases or spills.

This analysis focuses on both the direct and indirect impacts of implementing the Central Valley Wye alternatives from the release of hazardous materials and wastes.

General Areas of Concern

Transport, Use, Storage, and Disposal of Hazardous Materials and Wastes

Hazardous materials could be released accidentally during construction or operation of the Central Valley Wye alternatives during transport, use, or disposal of the materials, or the demolition of buildings and roadways with potential ACMs or lead-containing materials. This analysis also considered potential impacts from the transport, use, storage and disposal of hazardous wastes and materials using a combination of environmental database record searches, analyses of historical topographic maps and aerial photography, site reconnaissance, and review and consultation of regulatory agency files. The Hazardous Materials and Wastes Technical Report (Authority and FRA 2016) details this analysis.

Potential Building Material Hazardous Substances

This section discusses chemicals and other hazardous substances commonly found in building materials such as lead-based paint and asbestos. The baseline assessment did not include a survey of lead or asbestos. However, industrial, commercial, and residential structures located along the Central Valley Wye alternatives were evaluated through historical aerial photographs and U.S. Geological Survey topographic maps to determine the potential for building material hazardous substances in the general RSA for hazardous materials and wastes. General types of activity and land use can often be discerned from the type and layout of structures visible in aerial photographs and topographic maps, although specific elements of a site operation cannot readily be determined from these sources. In addition, previous site assessments along the Central Valley Wye alternatives were reviewed and a site reconnaissance was conducted to further identify land uses and structure types in the general RSA for hazardous materials and wastes. The general RSA has varying types of land use, including agricultural land, existing transportation corridors, residential uses, and commercial uses. Because access to private property is limited, the assessors observed from public rights-of-way only. The Hazardous Materials and Wastes Technical Report (Authority and FRA 2016) details this analysis.

Potential Road and Railway Corridor Hazardous Substances

The methods used to evaluate potential road and railway corridor hazardous substances are the same as those described under Potential Building Materials Hazardous Substances. Hazardous substances potentially associated with roads include diesel, gasoline, motor oil, oil and grease, road base materials, aerially-deposited lead (ADL), hazardous materials accidentally released during transport, lead from the wood preservatives in utility poles, and pre-1979 lead-based lane-striping paint. Corridors associated with railroads can potentially contain lead (from wood preservatives), herbicides, polychlorinated biphenyl (PCB), asbestos (from disc brake pads on trains), creosote (from railroad ties), and petroleum hydrocarbons.

Potential Utility Corridor Hazardous Substances

The methods used to evaluate potential utility corridor hazardous substances are the same as those described under Potential Building Materials Hazardous Substances. Hazardous substances potentially associated with utility corridors include wood preservatives, PCB-containing equipment, and herbicide residues. Electrical transformers, hydraulic equipment, capacitors, and similar equipment may contain PCBs in hydraulic or dielectric insulating fluids within the units.

Potential Agricultural Operation Hazardous Substances

The methods used to evaluate potential agricultural operation hazardous substances are the same as those described under Potential Building Materials Hazardous Substances. In addition, analysts reviewed historical aerial photographs and topographic maps to document the existence of agricultural development near the Central Valley Wye alternatives dating back to at least 1885. Agricultural operations may have had pesticide and herbicide applications. Residual pesticides and herbicides may be persistent in soil within the hazardous materials and wastes RSA.

Potential Industrial Facility Hazardous Substances

The methods used to evaluate potential industrial facility hazardous substances, such as engine oil and medical wastes, are the same as those described under Potential Building Materials Hazardous Substances. In addition, analysts reviewed environmental database reports, online databases, and regulatory agency files. Industrial and commercial businesses often use hazardous materials, generate hazardous wastes, or use equipment that may contain hazardous substances. Accidents and/or poor housekeeping practices at these facilities may have affected the soil and groundwater in the hazardous materials and wastes RSA.

School Facilities

In order to evaluate potential impacts from hazardous materials and wastes on sensitive receptors near the Central Valley Wye alternatives, analysts identified school facilities within 0.25 mile of the Central Valley Wye alternatives' centerlines through Environmental Data Resources, Inc. (EDR) environmental database reports and school district websites.

Recreational Areas

Analysts collected information on parks, recreation, and open-space resources through review of the plans and policies referenced in Section 3.15.2.3, Regional and Local, written and telephone correspondence with local jurisdictions including school districts, and the use of geographic information system data sources to identify parks, recreation, and open-space resources in the RSA, as discussed in Section 3.15, Parks, Recreation, and Open Space.

Landfills

Analysts used EDR environmental database reports to identify landfills within 0.25 mile of the Central Valley Wye alternatives' centerlines. Landfills were identified because of their potential to release methane gas, which may present an explosion risk.

Oil and gas wells analysts plotted the locations of oil and gas wells (both active and abandoned) within 200 feet of the Central Valley Wye alternative's centerlines from data obtained from the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) database, accessed in February 2015 (Department of Conservation 2015).

Sites of Potential Environmental Concern

To identify PEC sites within the PEC sites RSA, analysts reviewed published databases containing lists of known and significant hazardous waste/hazardous material sites. This analysis used aspects of the methodology provided in the California Department of Transportation's (Caltrans) initial site assessment guidance document (Caltrans 2016a) and ASTM Standard Practice E 1528-06 (ASTM 2011). Sites are identified as PECs where there is the possible presence of any hazardous material or waste under conditions that indicate the possibility of an existing release, a past release, or a threat of a release of the hazardous material or waste into

structures on the property or into the ground, groundwater, or surface water of the property. This designation includes sites where hazardous materials or wastes are handled and stored in compliance with laws and regulations (ASTM 2011).

Records were evaluated from the EDR environmental database report (refer to Appendix B in the Hazardous Materials and Wastes Technical Report); the GeoTracker, Envirostor, Envirofacts, and Enforcement and Compliance History Online databases; regulatory agency file reviews; aerial photographs; topographic maps; and the site reconnaissance. PEC sites were then categorized according to the level of risk they are believed to present. This evaluation was conducted based on type(s) of contamination, severity of release, proximity to the project footprints of the Central Valley Wye alternatives, direction of groundwater flow, and case status. As a result, PEC sites were identified as *low-risk*, *medium-risk*, or *high-risk* based on the following criteria:

- **Low-Risk**—A low-risk site is within or adjacent to the project footprints of the Central Valley Wye alternatives, has no known documented releases, and is not identified on databases indicative of environmental concern. However, historical operations are indicative of potential release(s) to the environment.
- **Medium-Risk**—A medium-risk site is within or adjacent to the project footprints of the Central Valley Wye alternatives and may or may not have a known documented release. Its historical operations are indicative of potential release(s) to the environment or it is identified on databases indicative of release(s) to the environment.
- **High-Risk**—A high-risk site is within or adjacent to the project footprints of the Central Valley Wye alternatives, has a known documented release or residual contamination that is situated within or adjacent to the project footprints, and is identified on databases indicative of release(s) to the environment. A PEC site might also be considered high risk if limited information is available about the site, which creates greater uncertainty about the extent of contamination and the costs of remediation.

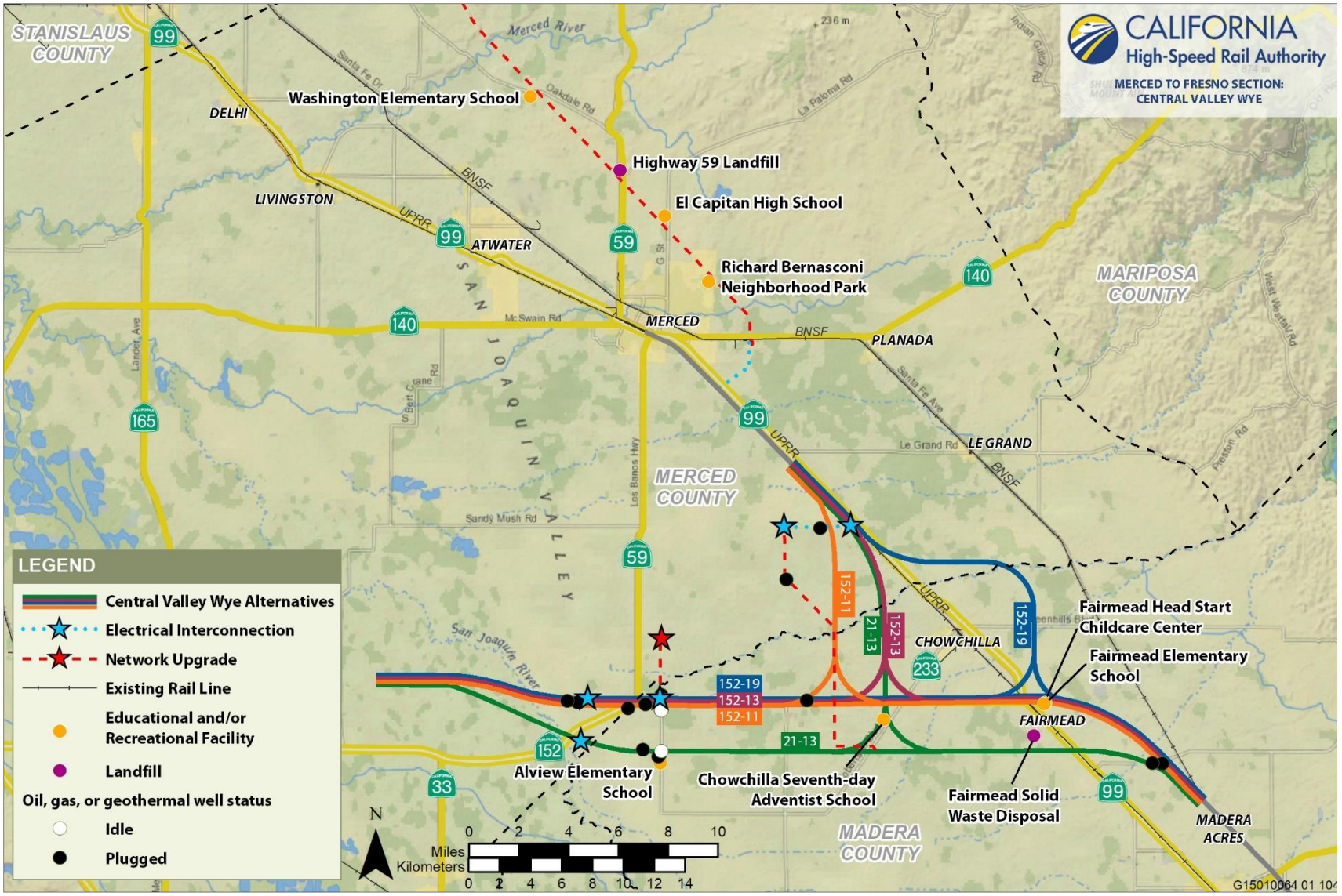
3.10.4.4 Determining Significance under CEQA

CEQA requires that an EIR identify the significant environmental impacts of a project (CEQA Guidelines § 15126). One of the primary differences between NEPA and CEQA is that CEQA requires a significance determination for each impact using a threshold-based analysis (see Section 3.1.5.4 for further information). By contrast, under NEPA, significance is used to determine whether an EIS would be required; NEPA requires that an EIS is prepared when the proposed federal action (project) as a whole has the potential to "significantly affect the quality of the human environment." Accordingly, Section 3.10.9, CEQA Significance Conclusions, summarizes the significance of the environmental impacts related to hazardous materials for each Central Valley Wye alternative. The Authority is using the following thresholds to determine if a significant impact on the public and environment would occur as a result of the potential release or disturbance of hazardous materials and wastes associated with the implementation or operation of the Central Valley Wye alternatives. A significant impact is one that would:

- Result in a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Result in significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions that involve the release of hazardous materials into the environment.
- Result in a significant hazard to the public or the environment caused by the release of hazardous materials or wastes from project activities occurring on or in proximity to a site that is on the Cortese List.
- Result in hazardous air emissions or handling of extremely hazardous substances or mixtures containing extremely hazardous substances within 0.25 mile of a school or recreational area, such that use would pose a health or safety hazard to students, employees, or the public.

3.10.5 Affected Environment

This section describes the affected environment for hazardous materials and wastes in the RSAs as shown in Figure 3.10-1, including general areas of concern such as transportation hazardous materials and wastes; potential building materials hazardous substances; potential road and railway corridor hazardous substances; potential utility corridor hazardous substances; landfills; potential agricultural operation hazardous substances; potential industrial facility hazardous substances; school facilities; recreational areas; oil and gas wells; and PEC sites. It also discusses changes to hazardous materials and wastes in the San Joaquin Valley since publication of the Merced to Fresno Final EIR/EIS, including general areas of concern and sites of potential concern in the San Joaquin Valley. Land uses surrounding the Central Valley Wye alternatives are predominantly agricultural and industrial with pockets of single-family residential and commercial uses (Authority and FRA 2012). Additional information related to regional setting, geology, hydrogeology, and water resources are presented in the Hazardous Materials and Wastes Technical Report (Authority and FRA 2016). This information provides the context for the environmental analysis and evaluation of impacts.



Source: DOC, 2015, 2016; CDE, 2016

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Figure 3.10-1 Sensitive Resources and General Environmental Concern Sites Resource Study Area

3.10.5.1 General Areas of Concern

The following section summarizes the specific areas of concern relevant to the implementation of the Central Valley Wye alternatives within the hazardous materials and waste RSA. The hazardous materials and wastes discussed in this section are likely to be present within the RSAs of all of the Central Valley Wye alternatives. The areas of concern include:

- ACMs and lead-based substances common to older structures and roadway systems
- Hazardous materials and wastes typically associated with roads, railway and utility corridors, agricultural areas, and industrial facilities

Although each of the Central Valley Wye alternatives cross similar land uses and contain similar activities, this section notes those distinctions and similarities relevant to the general areas of concern. Figure 3.10-1 identifies the location of sensitive resources and sites of concern within 0.25 mile of the Central Valley Wye alternatives' centerlines, which are also discussed in the following sections.

Transport, Use, Storage, and Disposal of Hazardous Materials and Wastes

State Route (SR) 152, SR 99, Union Pacific Railroad (UPRR) and BNSF Railway (BNSF) serve as major transportation corridors within the region. Hazardous materials, hazardous wastes, and petroleum products are a subset of the types of goods routinely shipped along these transportation corridors. In addition, hazardous material transport and temporary storage activity is assumed to occur at landfill and recycling facilities and industrial-type facilities.

Although most hazardous materials and wastes are transported without incident, spills and other accidental releases have been documented near the proposed Central Valley Wye alternatives. Hazardous materials spills and accidental releases that are cleaned up immediately and do not require further regulatory action are therefore not reported on the databases reviewed for this analysis. In other words, most of the incident reports in these databases are not classified as PEC sites and might not be reported through this database. Those that have been reported and have been determined to be PECs are summarized in Section 3.10.5.2, Sites of Potential Concern.

All four of the Central Valley Wye alternatives have proximity to both railways and highways, and would include transport of materials along these transportation corridors.

Potential Building Material Hazardous Substances

Industrial, commercial, and residential structures are located along the Central Valley Wye alternatives. Buildings within the general RSA for hazardous materials and wastes constructed before 1977 might be contaminated with lead and lead-based paint. Weathering and routine maintenance of painted structures could also contaminate nearby soils with lead (USEPA 2009a).

Some structures observed along the Central Valley Wye alternatives were potentially constructed prior to 1970 and could, therefore, contain lead-based paint (LBP). The risk of lead toxicity in LBP varies according to the condition of the paint and the year of its application. The U.S. Department of Housing and Urban Development has defined LBP as any paint that contains more than 0.5 percent lead by weight.

In addition, ACM might also be present in buildings, pipes, and other elements of the built environment. Asbestos is a mineral fiber. Prior to the 1980s, a variety of building construction materials commonly used asbestos for insulation and as a fire retardant. Some non-friable modern building materials, such as roofing felt, vinyl asbestos floor tile, ceiling tiles, and transite building materials still contain asbestos. There is no health threat if ACM remains undisturbed and does not become airborne. However, if ACM is damaged or disturbed by repair, remodeling, or demolition activities, microscopic fibers become airborne and can be inhaled. Asbestos is linked to cancers of the lung and the lining of internal organs, as well as to asbestosis and other diseases that inhibit lung function (USEPA 2009b). State and federal regulations typically require preparation of, and compliance with, ACM abatement plans before disturbing ACM.

Each of the four Central Valley Wye alternatives was found to likely include structures built prior to 1970 that are proposed for demolition. These structures could contain LBP and ACM. The types of structures proposed for demolition along the various alternatives include industrial, agricultural, and commercial facilities, as well as residential structures.

Potential Road and Railway Corridor Hazardous Substances

Specific to roadways, yellow paint and tape used for pavement marking before 1997 might exceed the hazardous waste criteria for lead under California Code of Regulations, Title 22 in the RSA of each of the Central Valley Wye alternatives. If so, such materials would need to be disposed of in a Class I disposal facility authorized to accept this type of waste. In addition to lead-containing materials, ACM might be found in roadway materials, such as material used before the 1980s for expansion joints in pavement.

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 (i.e., aerially deposited lead) are a recognized source of contamination in soils along roadways. Surface and near-surface soils along heavily used roadways have the potential to contain elevated concentrations of lead (USEPA 2009a).

Contaminants common in railway corridors include wood preservatives (e.g., creosote and arsenic) in ties and heavy metals in ballast rock. ACM might also occur in ballast rock and soils associated with railroad tracks. These materials might occur in the RSA for each of the Central Valley Wye alternatives, as portions of the wye alternative alignments are parallel to UPRR and BNSF tracks. In addition, soils in and adjacent to these rail corridors might contain herbicide residues as a result of historic and ongoing weed-abatement practices.

All four of the Central Valley Wye alternatives have proximity to both railways and highways. However, the Avenue 21 to Road 13 Wye Alternative does not follow SR 152, which includes a higher level of traffic than Avenue 21. Therefore, there would be less potential for aerial deposits of lead along the Avenue 21 to Road 13 Wye Alternative alignment. Other contaminants and material deposits would be similar among the four Central Valley Wye alternatives.

Potential Utility Corridor Hazardous Substances

The primary utility corridors in the vicinity of the Central Valley Wye alternatives are along the existing UPRR/SR 99 corridor, but scattered public utilities also connect to the residential communities in the region. Contaminants common to utility corridors include wood preservatives, herbicide residues, and PCB-containing equipment. Because of their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications. Equipment that might contain PCBs includes transformers, capacitors, and other electrical equipment; oil used in motors and hydraulic systems; and thermal insulation material (e.g., fiberglass, felt, foam, cork). In particular, older, pole-mounted electrical transformers typically contain PCBs.

The four Central Valley Wye alternatives run parallel to the UPRR and SR 99 corridor rights-of-way for the same distance. As a result, the potential to encounter utility corridor hazardous substances would exist for each alternative.

Potential Agricultural Operation Hazardous Substances

Before manufacturers can sell pesticides in the United States, the USEPA must evaluate the pesticides thoroughly to make sure that they meet federal safety standards to protect human health and the environment. The USEPA grants a “registration” or license that permits a pesticide’s distribution, sale, and use only after the company meets the scientific and regulatory requirements.

Within the region, agricultural enterprises have historically stored, handled, and applied pesticides and herbicides on row crops and orchards, and residual pesticides might persist in the soils. However, given the product testing performed by the USEPA prior to commercial use and the subsequent regulation of product application by various agencies, routine application of these

materials would not generally accumulate to levels sufficient to cause concern. Areas potentially located within the RSA that might be of concern include pesticide-handling areas that lack concrete pads, berms, or cribs to contain spills or leaks during handling and storage; and 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.

All four Central Valley Wye alternatives run through agricultural land. Historical storage and use of pesticides and herbicides may have occurred within this land, and these chemicals could be present in soils along each alignment.

Potential Industrial Facility Hazardous Substances

Scattered agriculture-related commercial and industrial uses are concentrated along the RSA. Such industrial areas often represent areas where businesses have used hazardous materials over long periods. Often, PEC sites are associated with these areas. PEC sites can also include small industrial facilities that demonstrate poor housekeeping practices and small-quantity generators of hazardous wastes that the CUPA regulates. Automobile service facilities that collect used engine oil and health care providers that produce medical wastes are examples of such small-quantity generators. In addition to the concentrated use of hazardous materials and the generation of hazardous wastes, it is assumed that hazardous material transport and storage activity is more intense in industrial areas than in other areas.

School Facilities

The locations of schools are important to consider because children are particularly sensitive to hazardous materials exposure. Additional protective regulations apply to projects that could use or disturb potentially hazardous products near or at schools. California Public Resources Code Section 21151.4 requires projects that would be located within 0.25 mile of a school and might be reasonably expected to emit or handle hazardous materials to consult with the school district regarding potential hazards. Table 3.10-3 identifies and Figure 3.10-1 depicts the names and locations of schools within 0.25 mile of the Central Valley Wye alternatives' centerlines. Fairmead Elementary School, Fairmead Head Start Childcare Center, and Chowchilla Seventh-day Adventist School are approximately 0.2 mile, 0.1 mile, and less than 0.1 mile, respectively, from the Central Valley Wye alternatives' centerline. Alview Elementary School is located beyond 0.25 mile from the centerline of the Avenue 21 to Road 13 Wye Alternative (0.4 mile), but is located within a permanent utility easement for the alternative. Washington Elementary School and El Capitan High School are located less than 0.1 mile from Site 7—Le Grand Junction/Sandy Mush Road, Warnerville–Wilson 230 kV Transmission Line of the SR 152 (North) to Road 19 Wye Alternative. No new schools are proposed within 0.25 mile of these alternatives.

Table 3.10-3 Educational Facilities within 0.25 Mile of the Central Valley Wye Alternatives

Facility	Approx. Distance from Centerline to Edge of Property (miles)	Direction from Alternative
Fairmead Elementary School	0.2	South of SR 152 (North) to Road 13 Wye
	0.2	South of SR 152 (North) to Road 19 Wye
	0.2	South of SR 152 (North) to Road 11 Wye
Fairmead Head Start Childcare Center	0.1	South of SR 152 (North) to Road 13 Wye
	0.1	South of SR 152 (North) to Road 19 Wye
	0.1	South of SR 152 (North) to Road 11 Wye
Alview Elementary School[1]	>0.25	Approximately 0.4 mile south of Avenue 21 to Road 13 Wye Alternative, but property is within project footprint (permanent utility easement)
Chowchilla Seventh-day Adventist School (private)	<0.1	East of Avenue 21 to Road 13 Wye, but within project footprint
Washington Elementary School	<0.1	West of Site 7—Le Grand Junction/Sandy Mush Road, Warnerville–Wilson 230 kV Transmission Line (SR 152 (North) to Road 19 Wye)
El Capitan High School	<0.1	East of Site 7—Le Grand Junction/Sandy Mush Road, Warnerville–Wilson 230 kV Transmission Line (SR 152 (North) to Road 19 Wye)

Source: CDE, 2016
SR = State Route
[1] Alview Elementary is located within a utility easement of the Avenue 21 to Road 13 Wye Alternative.

Recreational Areas

As described in Section 3.15, the following open space resources, including parks and recreational facilities, are currently present within 0.25 mile of the Central Valley Wye alternatives:

- Fairmead Elementary School play areas (all alternatives except Avenue 21 to Road 13 Wye)
- Washington Elementary School play areas (a transmission line associated with SR 152 (North) to Road 19 Wye)
- El Capitan High School play areas (a transmission line associated with SR 152 (North) to Road 19 Wye)
- Richard Bernasconi Park and picnic tables (a transmission line associated with SR 152 (North) to Road 19 Wye)

Landfills

The Fairmead Solid Waste Disposal Site and Highway 59 Landfill are the only active landfills within the landfill RSA. The Fairmead Solid Waste Disposal Site is located along Road 19 in unincorporated Madera County, approximately 0.1 mile north of the Avenue 21 to Road 13 Wye Alternative's centerline. This landfill is approximately 1.2 mile south of the other three alternatives, which run along SR 152. The facility is a Class III landfill that accepts nonhazardous solid wastes. The permitted disposal capacity is 1,100 tons per day; however, the actual daily disposal volume averages 302 tons. The Fairmead Solid Waste Disposal Site has a remaining capacity of 5.5 million cubic yards and the estimated closure date is December 31, 2028 (CalRecycle 2016a).

The Highway 59 Landfill in Merced County is located within 0.25 mile of the existing Site 7—Le Grand Junction/Sandy Mush Road, Warnerville–Wilson 230 kV Transmission Line associated with the SR 152 (North) to Road 19 Wye Alternative. The facility is a Class II/III landfill that accepts "designated" (i.e., treated wood (Central Valley RWQCB 2014) and nonhazardous solid wastes. The permitted disposal capacity is 1,500 tons per day. The Highway 59 Landfill has a remaining capacity of 28 million cubic yards and the estimated closure date is 2065 (CalRecycle 2016a).

Oil and Gas Wells

Oil and gas production is a potential source of environmental contamination. The Chowchilla Gas Field is within the Central Valley Wye alternatives' oil and gas wells RSA, near the SR 152 crossing of the Merced/Madera County boundary. Most of the wells within the Chowchilla Gas Field are dry or plugged and were abandoned between 1930 and 1986. Figure 3.10-1 shows the oil and gas wells within the oil and gas wells RSA. Section 3.9 presents additional information on oil and gas production as it relates to consumption of mineral resources.

The database results described in Section 3.10.4.3 identify 19 oil and gas wells within the oil and gas wells RSA.

- SR 152 (North) to Road 13 Wye Alternative—12 wells (1 idle, 11 plugged)
- SR 152 (North) to Road 19 Wye Alternative—14 wells (1 idle, 13 plugged)
- Avenue 21 to Road 13 Wye Alternative—5 wells (1 idle, 4 plugged)
- SR 152 (North) to Road 11 Wye Alternative—12 wells (1 idle, 11 plugged)

3.10.5.2 Sites of Potential Environmental Concern

The provisions in Government Code section 65962.5 are commonly referred to as the Cortese List. The list, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with CEQA. Under Cortese List provisions, the following Government Code sections apply:

- Government Code Section 65962.5(a) requires that the California Department of Toxic Substances Control (DTSC) "shall compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following: hazardous waste facilities subject to corrective action pursuant to section 25187.5 of the Health and Safety Code."
- Section 65962.5(a)(3) requires that DTSC "shall compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following: information received by the DTSC pursuant to section 25242 of the Health and Safety Code on hazardous waste disposals on public land."
- Section 65962.5(a)(4) requires that DTSC "shall compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following: sites listed pursuant to section 25356 of the Health and Safety Code."
- Section 65962.5(a)(5) requires that DTSC "shall compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following: sites included in the Abandoned Site Assessment Program (formerly identified in the CalSites database, now part of the Envirostor database)."

Based on the evaluation of records, analysts identified 13 specific sites within the PEC sites RSA that potentially have contamination from hazardous materials releases. The number of PEC sites varies by alternative; not all 13 sites occur in any one of the alternatives:

- SR 152 (North) to Road 13 Wye Alternative—Six PEC sites
- SR 152 (North) to Road 19 Wye Alternative—Nine PEC sites
- Avenue 21 to Road 13 Wye Alternative—Seven PEC sites
- SR 152 (North) to Road 11 Wye Alternative—Five PEC sites

These sites, the affected alternatives, and the rationale for designating the sites as PEC sites, are presented in Table 3.10-4, and their locations are depicted on Figure 3.10-2.

Table 3.10-4 Sites of Potential Environmental Concern within the PEC Sites RSA

Site Name and Location	Risk	Approx. Distance from Project Footprints	Chemicals of Concern	Rationale	Affected Alternative(s)
Hugh's Flying Service 14023 South Red Top Road, El Nido	Medium	Within the project footprints of three alternatives	Pesticides and herbicides	The site is listed as a land disposal site open since January 1, 1965. The site disposed of product wash water waste including photo reuse wastewater and vegetable wash water. Wastewater or solid wastes may pose a concern to water quality. The site is also listed on the Historical UST database as having had three 550-gallon regular gasoline tanks. Residual contamination in soil and groundwater may still exist.	SR 152 (North) to Road 13 Wye SR 152 (North) to Road 19 Wye SR 152 (North) to Road 11 Wye
PG&E's Dairyland Substation Avenue 21 and Railroad Avenue, Chowchilla	Low	Within the project footprint of two of the alternatives and Site 7—Le Grand Junction/Sandy Mush Road, Wilson–Dairyland (idle) 115 kV Power Line, respectively	PCBs and mineral oil	There are no reported releases in agency files or database listings for this site. However, the site is an active substation and equipment potentially containing PCBs may be on-site.	SR 152 (North) to Road 19 Wye Avenue 21 to Road 13 Wye

Site Name and Location	Risk	Approx. Distance from Project Footprints	Chemicals of Concern	Rationale	Affected Alternative(s)
CertainTeed Chowchilla Plant 17775 Avenue 23 1/2, Chowchilla	Medium	Adjacent (North)	Heavy metals, formaldehyde, phenol, and waste oil	The facility was a former hazardous waste generator facility, and manufactured fiberglass insulation. The facility provided a Closure Plan to DTSC, and ceased operations on March 1, 2009. The closure report for the site indicated no evidence of significant residual contamination at the two former hazardous waste management areas on-site. Although the facility achieved closure for its hazardous waste permit, it is currently an active facility with hazardous materials use and storage, as well as hazardous waste generation.	SR 152 (North) to Road 19 Wye
Minturn Huller Cooperative 9080 S. Minturn Road, Chowchilla	High	Adjacent to project footprint of one alternative	Mineral oil from transformer	A release of 200 gallons of mineral oil affected the soil and asphalt at the site in 2006 when a backhoe struck a transformer. Remedial action was conducted, with PG&E listed as the responsible party. No closure information was available for this release.	SR 152 (North) to Road 19 Wye

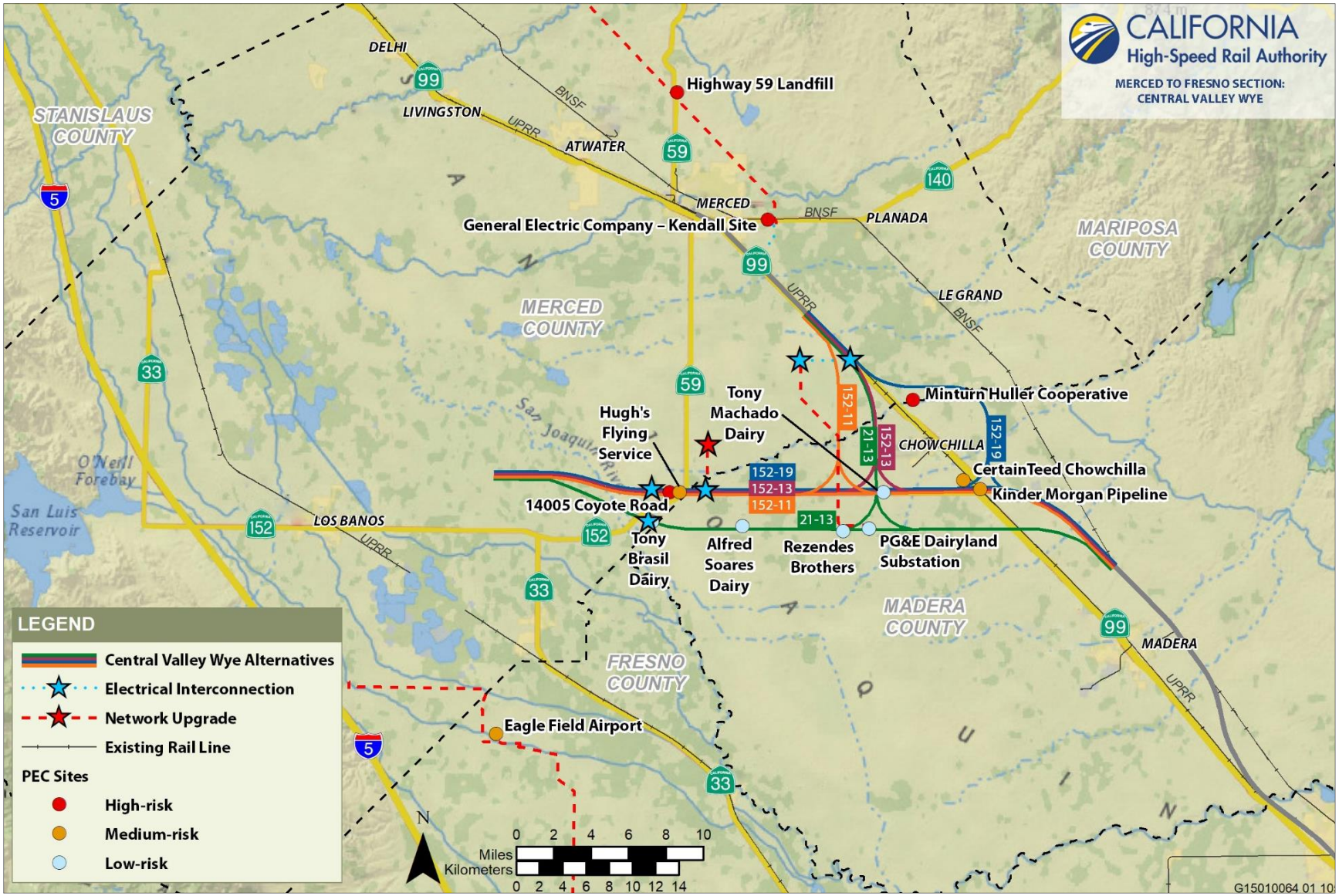
Site Name and Location	Risk	Approx. Distance from Project Footprints	Chemicals of Concern	Rationale	Affected Alternative(s)
Kinder Morgan High-Pressure Petroleum Pipeline UPRR/SR 99	Medium	Within and adjacent to the project footprint of one alternative	Petroleum products	A Kinder Morgan high-pressure petroleum pipeline was identified generally paralleling the UPRR corridor and SR 99. Potential chemicals of concern if the pipeline is ruptured or leaked include petroleum hydrocarbons. There are no documented releases or evidence of residual contamination within 150 feet of the footprint. There is also a potential safety, explosion, and fire hazard if the pipeline is ruptured.	SR 152 (North) to Road 13 Wye SR 152 (North) to Road 19 Wye Avenue 21 to Road 13 Wye SR 152 (North) to Road 11 Wye
Tony Brasil Dairy 15373 Flanagan Road, Dos Palos	Low	Within the project footprint of one alternative	Nitrates	The site is listed as a landfill for agricultural manure composting operations.	Avenue 21 to Road 13 Wye
Unnamed Facility 14005 Coyote Road, El Nido	High	Within the project footprints of three alternatives	Mineral oil, non-PCB-containing oil	In March 2014, it was reported a transformer fell to the ground resulting in the release of approximately 75 gallons of non-PCB mineral oil on the ground and onto two almond trees. The release was contained, cleanup is scheduled, and no waterways were affected.	SR 152 (North) to Road 13 Wye SR 152 (North) to Road 19 Wye SR 152 (North) to Road 11 Wye

Site Name and Location	Risk	Approx. Distance from Project Footprints	Chemicals of Concern	Rationale	Affected Alternative(s)
Tony Machado Dairy 13611 Avenue 23 Chowchilla	Low	Within the project footprint of one alternative	Feedlot wastewater including nitrates	The site has received multiple violations for waste discharge requirements for existing milk cow dairies. A notice of violation was issued for insufficient wastewater storage capacity and excessive solids in a wastewater separation pond. These violations are primarily for environmental compliance rather than releases to the soil and groundwater within the footprint.	SR 152 (North) to Road 13 Wye
Alfred Soares Dairy 21282 Road 6, Chowchilla	Low	Within the project footprint of one alternative	Feedlot wastewater including nitrates	The site received multiple violations for waste discharge requirements for existing milk cow dairies. A notice of violation was issued for not submitting the annual report and updated report of waste discharge. These violations are primarily for environmental compliance rather than releases to the soil and groundwater within the footprint.	Avenue 21 to Road 13 Wye

Site Name and Location	Risk	Approx. Distance from Project Footprints	Chemicals of Concern	Rationale	Affected Alternative(s)
Rezendes Bros 11270 Avenue 21, Chowchilla	Low	Within the project footprint of one alternative	Feedlot wastewater including nitrates	The site received multiple violations for waste discharge requirements for existing milk cow dairies. Violations were associated with what appeared to be insufficient cropland for the agronomic application of the dairy wastes generated and the inability to retain manured storm water runoff at the heifer lot. These violations are primarily for environmental compliance rather than releases to the soil and groundwater within the footprint.	Avenue 21 to Road 13 Wye
Eagle Field Airport 11100 West Eagle Ave, Firebaugh	Medium	Approximately 1,300 feet west of Site 6—El Nido, Oro Loma–Panoche Junction 115 kV Power Line	Pesticides, Diesel	The extent of contamination has not been fully characterized; however, the airport is separated from the power line by a canal, which limits the potential for contaminant migration and incidental disturbance of contaminated soils during reconductoring.	SR 152 (North) to Road 13 Wye SR 152 (North) to Road 19 Wye Avenue 21 to Road 13 Wye SR 152 (North) to Road 11 Wye
Highway 59 Landfill 7040 North Highway 59, Merced	High	Adjacent to Site 7—Le Grand Junction/Sandy Mush Road, Warnerville–Wilson 230 kV Transmission Line	Volatile Organic Compounds: PCE, Trichlorofluoromethane (Freon 11), and Dichlorodifluoromethane (Freon 12)	Release of landfill gas has resulted in contamination of groundwater. Extraction and remediation is ongoing. Four extraction wells are located at the southwest corner of the landfill property; adjacent to the access road and pole work area for an existing lattice steel pole.	SR 152 (North) to Road 19 Wye

Site Name and Location	Risk	Approx. Distance from Project Footprints	Chemicals of Concern	Rationale	Affected Alternative(s)
General Electric Company–Kendall Site Highway 140 and Kibby Road, Merced	High	Within project footprints of Site 7—Le Grand Junction/Sandy Mush Road, Warnerville–Wilson 230 kV Transmission Line and Site 7—Wilson, Wilson Substation	Volatile Organic Compounds: TCE	There is ongoing remediation of groundwater contamination at the Wilson Substation. Site was previously used for transformer manufacturing and cleaning facility. Rinse water containing TCE was discharged to an unlined pond.	SR 152 (North) to Road 13 Wye SR 152 (North) to Road 19 Wye Avenue 21 to Road 13 Wye SR 152 (North) to Road 11 Wye

Source: Authority and FRA, 2016; DTSC, 2016; SWRCB, 2016; MCRWMA, 2016; General Electric Company, 2016
SR = State Route
PG&E = Pacific Gas and Electric Company
PCB = polychlorinated biphenyl
UST = underground storage tanks
UPRR = Union Pacific Railroad
TCE = trichloroethylene
PCE= tetrachloroethene
DTSC = California Department of Toxic Substances Control



Source: Authority and FRA, 2016; DTSC, 2016

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Figure 3.10-2 Potential Environmental Concern Sites within the Hazardous Materials and Wastes Resource Study Area

3.10.6 Environmental Consequences

3.10.6.1 Overview

This section evaluates how the No Project Alternative and the Central Valley Wye alternatives could affect the public and environment from the use, storage, transport, and disposal of hazardous materials and wastes. The impacts of the Central Valley Wye alternatives are described and organized in Section 3.10.6.3, Central Valley Wye Alternatives, as follows:

Construction Impacts

- Impact HMW#1: Temporary Effects from the Transport, Use, Storage, and Disposal of Hazardous Materials and Wastes
- Impact HMW#2: Temporary Effects from Inadvertent Disturbance of Hazardous Materials and Wastes
- Impact HMW#3: Temporary Effects from Asbestos or Lead Exposure as a Result of Demolition
- Impact HMW#4: Temporary Effects from Construction on or near Potential Environmental Concern Sites
- Impact HMW#5: Temporary Effects from Hazardous Materials and Wastes Activities in Proximity to Schools and Recreational Areas
- Impact HMW#6: Temporary Effects Associated with Risks during Construction on or near Landfills and Oil and Gas Wells

Operations Impacts

- Impact HMW#7: Intermittent Effects from the Transport, Use, Storage, and Disposal of Hazardous Materials and Wastes
- Impact HMW#8: Intermittent Effects from Hazardous Materials and Wastes Activities in Proximity to Schools and Recreational Areas

3.10.6.2 No Project Alternative

The population in the San Joaquin Valley is expected to grow through 2040 (see Section 2.2.2.2, Planned Land Use). Development in the San Joaquin Valley to accommodate the population increase would continue under the No Project Alternative and result in associated direct and indirect impacts from hazardous materials and wastes. Such planned projects that are anticipated to be constructed by 2040 include residential, commercial, industrial, recreational, transportation, and agricultural projects.

Future development projects in Merced and Madera Counties include dairy farm expansions, implementation of airport development and land use plans, and implementation of general and specific plans throughout both counties. Planned projects under the No Project Alternative would also include transportation projects, such as the expansion of SR 99, and residential, commercial and industrial developments. A full list of anticipated future development projects is provided in Appendices 3.19-A, Cumulative Plans and Non-Transportation Projects List, and 3.19-B, Cumulative Transportation Projects List. These projects are anticipated to require types and quantities of hazardous materials for construction and operation that would be comparable to the Central Valley Wye alternatives, proportional to the magnitude of the improvements. Because many of the PEC sites identified in Section 3.10.5, Affected Environment, and listed in Table 3.10-4 are associated with the major highway and rail transportation corridors, utility corridors, landfills, agricultural areas, and industrial facilities in the vicinity of the Central Valley Wye alternatives, these same sites could result in impacts on future No Project Alternative improvements involving the same corridors. Potential impacts from ACMs and lead-based substances that are common to older structures and roadway systems also have the potential to result in impacts on the No Project Alternative. However, impacts from these substances are less

of a concern given that NOA found in rock formations, such as serpentine, is not common to the region. The No Project Alternative would also result in the use or disturbance of potentially hazardous products at or near schools and recreational areas and would have a similar impact on schools and recreational areas within 0.25 mile.

It is reasonable to assume that, by 2040, some of the existing PEC sites would be investigated further and, if necessary, remediated with appropriate regulatory agency oversight. However, it is likely that investigation and cleanup of all potentially hazardous materials in the general RSA for hazardous materials and wastes, including contaminated soil or groundwater, would not occur, and that the potential for impacts on transportation improvements would continue. Accidental spills or releases of hazardous materials and wastes could occur with continued operation of commercial and industrial facilities or during transport of these goods. Such accidents might result in new PEC sites that could affect future No Project Alternative improvements. Future developments planned under the No Project Alternative, including transportation projects such as the expansion of SR 99, or additional planned industrial and commercial developments could require separate environmental review, such as permits, and they would need to comply with regulatory requirements. Under the No Project Alternative, recent development trends are anticipated to continue, leading to impacts from hazardous materials and wastes. Existing land would be converted for residential, commercial, and industrial development, as well as for transportation infrastructure, to accommodate future growth, resulting in potential impacts on the general public and the environment from hazardous materials and wastes. Planned development and transportation projects that would occur as part of the No Project Alternative would likely include various forms of mitigation to address impacts from hazardous materials and wastes exposure.

3.10.6.3 Central Valley Wye Alternatives

Construction and operations of the Central Valley Wye alternatives would result in direct and indirect, temporary and permanent impacts from hazardous materials and wastes, including the temporary transport, use, storage, and disposal of hazardous materials and wastes; inadvertent disturbance of hazardous materials and wastes; asbestos exposure as a result of building demolition; construction on or near PEC sites; hazardous materials and wastes activities in proximity to schools and recreational areas; and construction or operations on or near landfills and oil and gas wells. Additionally, Section 3.9 includes further analysis related to oil and gas fields, specifically, safety risk to workers from working near a gas field, including oil or gas pipeline explosion and the potential loss of availability of mineral and energy resources.

Construction Impacts

Construction of the Central Valley Wye alternatives would involve, for example, demolition of existing structures; clearing and grubbing; handling, storing, hauling, excavating, and placing fill; possible pile driving; and construction of aerial structures, bridges, road modifications, utility upgrades and relocations, HSR electrical systems, and railbeds. Construction activities are further described in Chapter 2, Alternatives.

Impact HMW#1: Temporary Direct and Indirect Impacts from the Transport, Use, Storage, and Disposal of Hazardous Materials and Wastes

Construction of the Central Valley Wye alternatives would temporarily increase the regional transport, use, storage, and disposal of hazardous materials (such as diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic chemicals). These materials, which could present health and safety risks if improperly used or inadvertently spilled, are commonly used at construction sites for transport and equipment. An incident can result in the evacuation of a few people, a section of a construction operation, or an entire construction site. Hazardous waste generated during construction might consist of welding materials, fuel and lubricant containers, paint and solvent containers, and cement products containing strong basic or acidic chemicals. Waste generation may also include soil or groundwater contaminated by petroleum hydrocarbons, pesticides, herbicides, asbestos, heavy metals or other hazardous materials, and construction and demolition materials that contain asbestos or lead.

All four of the Central Valley Wye alternatives have proximity to both railways and highways, and all alternatives include transport of materials along these transportation corridors. The impacts related to the construction of the Central Valley Wye alternatives from the routine use, transport, storage, and disposal of hazardous materials and wastes would be similar for all alternatives. However, the three SR 152 (North) alternatives would be located in proximity to SR 152, which has higher truck volumes than the roads along the Avenue 21 to Road 13 Wye Alternative. As described in Section 3.2, Transportation, SR 152 is an east-west roadway that has been designated as a truck route, and operates as a four-lane divided expressway within the transportation RSA. The levels of traffic associated with each route are discussed in Section 3.2.

The Avenue 21 to Road 13 Wye Alternative is located farther south in a more rural area, thereby experiencing fewer vehicles and lower levels of traffic. Because the Avenue 21 to Road 13 Wye Alternative does not follow SR 152 like the other three alternatives, there could be less potential for incident, and therefore hazardous materials release, on this less populated freeway. As such, the potential for impacts associated with the routine use, transport, storage and disposal of hazardous materials and wastes would be nominally greater under the SR 152 (North) to Road 19 Wye Alternative. Potential impacts along SR 152 would likely be more pronounced during rush hour given the higher traffic volumes during these times.

In addition to accidents possibly occurring on job sites involving workers or observers, off-site accidents during hazardous materials and waste transport to or from the job sites could expose individuals and the environment to risks at some distance from the project footprints of the Central Valley Wye alternatives. Although transportation accidents are infrequent, accidents could occur during shipment of hazardous commodities (such as gasoline, diesel, or compressed gases) for construction. Accidents could also occur during the transportation of hazardous waste materials generated during construction or during the cleanup of existing contaminated sites prior to construction. The impacts would be temporary during construction activity.

In the event of an on-site or off-site accident, collision, or derailment, hazardous materials and wastes may be released into the environment. In the event of the release of certain chemicals, toxic fumes may be carried away from the accident site. There may also be risk of fire and explosion in such a scenario.

Common among wood treatments in the United States for wood utility poles are the chemicals pentachlorophenol, chromated copper arsenate, and creosote. Pentachlorophenol and creosote are known carcinogens, listed on California's Proposition 65 list. Proposition 65 is the Safe Drinking Water and Toxic Enforcement Act of 1986, which requires the State to publish a list of chemicals known to cause cancer, birth defects, or other reproductive harm. Anytime a wood pole is set deeper than usual (i.e., deeper than 16 feet), a 24-inch-wide "wrap" is installed around the base of the pole at ground-line. This wrap has copper naphthenate acting as a preservative. Wood poles proposed to be removed and replaced may be wrapped around the base with copper naphthenate paper. Per Pacific Gas & Electric's protocols for the management and disposal of treated wood, removed wood poles would be placed in bins and transported to an appropriate disposal facility in accordance with applicable regulations. If the copper naphthenate paper is in poor condition and there is the possibility that it would tear off during transport, the paper would be safely removed in the field before transporting and treated as hazardous waste. If the poles need to be cut prior to transport, plastic sheeting would be placed under the saw equipment area to gather all shavings. Shavings would also be placed in bins for transport to the appropriate disposal facility.

As part of the design of the Central Valley Wye alternatives (HMW-IAMF#1), the contractor would be required to comply with regulations that control the transport, use, and storage of hazardous materials and minimize the potential for an accidental release of hazardous materials during construction and transport of these hazardous wastes). The transport of hazardous materials and wastes is regulated by federal agencies through the 1975 Hazardous Materials Transportation Act (49 U.S.C §§ 1801–1819 and 49 C.F.R. §§ 101, 106, 107, and 171–180). This act regulates the transport of hazardous materials by establishing procedures and policies on the proper handling of hazardous materials, requiring material designations and labeling during transport,

establishing packaging requirements, and establishing operational rules that govern the transportation process from pick up to delivery. Caltrans and other state agencies enforce regulation through the Hazardous Waste Control Act (Cal. Health and Safety Code § 25100 et seq.), which regulates the identification, generation, transportation, storage, and disposal of materials deemed hazardous by the State of California. These regulations minimize the potential for accidental releases during transport of hazardous materials and wastes. Pursuant to Occupational Safety and Health Administration (29 C.F.R. § 1910.120), standard accident training for cleaning up small spills would be provided to all individuals prior to their work with hazardous substances, and the appropriate types and amounts of spill cleanup materials and personal protective equipment would be immediately available.

Enforcement of these federal and state hazardous materials transportation regulations and response to hazardous materials transportation emergencies is conducted by the California Highway Patrol and Caltrans. California Highway Patrol enforces hazardous material and hazardous waste labeling and packing regulations. These regulations prevent leakage and spills of material in transit and provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are the responsibility of California Highway Patrol, which conducts regular inspections of licensed transporters. Caltrans oversees emergency chemical spill identification teams at as many as 72 locations throughout the state that can respond quickly in the event of a spill. Additionally, the Merced County and Madera County CUPAs provide for the proper management of all hazardous waste in the respective counties. Facilities and construction sites that use, store, generate, or dispose of hazardous materials or wastes and hazardous material and waste transporters would be required to maintain plans for warning, notification, evacuation, and site security under regulations as described in Section 3.10.2. Furthermore, the Central Valley Wye alternatives would comply with the State Water Resources Control Board Construction General Permit conditions and requirements for transport, labeling, containment, and cover, and other best management practices (BMP) designed to minimize release of contaminants from construction sites (HMW-IAMF#2). Complying with these permit conditions that require the proper handling, use, and disposal of hazardous materials and wastes would minimize or avoid the release of contaminants from construction sites to the maximum extent feasible.

Waste management strategies that seek to prevent pollution by both reducing waste generation and avoiding spills at their source are considered the most desirable approach. This would be reflected in the goals of waste minimization for construction of the HSR system, thereby reducing the quantity of hazardous wastes that needs to be transported (HMW-IAMF#3).

Additionally, the Authority would require that construction contractors prepare a plan addressing spill prevention and response in the event of an inadvertent release of hazardous materials (HMW-IAMF#4). Further, BMPs that are part of this IAMF would require that containers used to store hazardous materials would be in good condition; would not contain leaks; would be kept closed, except when adding or removing hazardous materials; and would be located in hazardous materials storage and handling areas away from natural watercourses, storm drains, and other sensitive receptors. These BMPs would effectively minimize direct risk to workers and the public as well as indirect risk to off-site resources because they prevent or require quick response to any spills or accidental releases of hazardous materials during construction. The Authority would prepare and implement a written hazard communication program, make certain that all containers are labeled, and provide employees with access to material safety data sheets (HMW-IAMF#3). Hazardous material users would consult the material safety data sheet for the specific material they plan to work with and consider response options beforehand in case of a spill or release.

In the unlikely event that hazardous minerals, such as asbestos, are encountered during construction, HMW-IAMF#11 requires the contractor to prepare, submit to the Authority for review and approval, and implement a comprehensive construction management plan (CMP) addressing how the contractor would minimize or avoid impacts related to hazardous mineral encounters during construction. The CMP would include proper and proven provision for handling hazardous minerals including, but not limited to, dust control, solid erosion control, water runoff, and proper testing and disposal of excavated material. Preparation and implementation of the required CMP

would follow appropriate federal and state laws for correct handling, testing and disposal of hazardous minerals to reduce or eliminate related hazards.

Construction of the Central Valley Wye alternatives would increase the regional transport, use, storage, and disposal of hazardous materials and wastes, which could increase the probability of inadvertent spills. However, the Central Valley Wye alternatives include IAMFs to avoid creation of a hazard to the public or the environment. These measures would minimize impacts from inadvertent spills resulting from improper use through consistency with regulations that control the transport, use, and storage of hazardous materials; proper permitting; and the implementation of a written hazard communication plan and spill prevention plan. Potential impacts are anticipated to be greatest under the SR 152 (North) to Road 13 Wye, SR 152 (North) to Road 19 Wye, and SR 152 (North) to Road 11 Wye Alternatives given their position along the highly populated SR 152, and least under the more remote Avenue 21 to Road 13 Wye Alternative.

CEQA Conclusion

The impact under CEQA would be less than significant because, although construction activities would temporarily increase the regional transport, use, storage, and disposal of hazardous materials and wastes, which could increase the probability of inadvertent spills, the Central Valley Wye alternatives would incorporate IAMFs that include effective measures to avoid creation of a significant hazard to the public or the environment. These include compliance with regulations that control the transport, use, and storage of hazardous materials; proper permitting; and the implementation of a written hazard communication plan and spill prevention plan. Therefore, CEQA does not require any mitigation.

Impact HMW#2: Temporary Direct Impacts from Inadvertent Disturbance of Hazardous Materials and Wastes

Inadvertent disturbance of hazardous materials and wastes could occur during construction activities. Construction includes trenching and other ground-disturbing activities that may inadvertently disturb undocumented soil or groundwater contamination or inadvertently disperse hazardous materials and wastes into the environment. Dewatering activities at an undocumented contaminated site, for example, could result in the release of groundwater contamination into nearby waterways or farther in the groundwater table. Construction activities could also disturb ACMs resulting in airborne asbestos fibers.

The pathways through which the community or the environment (e.g., local air quality, biota) could be exposed to hazardous materials include skin contact, inhalation from air emissions, and dust; inadvertent transport of hazardous materials from the release site as a result of improper containment or decontamination procedures; lack of containment during inclement weather, including stormwater runoff; and percolation into the soil substrate.

Although there are distinctions in the proximity of each of the Central Valley Wye alternatives to PEC sites and oil wells, the potential to inadvertently encounter hazardous substances related to these sites is low. The four alternatives run an equal distance parallel to the UPRR and SR 99 corridor rights-of-way and the type of work proposed under the four alternatives is similar in nature. However, as explained under Impact HMW#1, the Avenue 21 to Road 13 Wye Alternative is the only alternative that does not follow SR 152 and therefore would have reduced proximity to traffic than the highly populated SR 152 (see Section 3.2 for analysis). As such, the potential for aerially deposited lead from automobile emissions or other impacts from rail and highway traffic is reduced, and the potential to disturb contaminated soils is also reduced along the Avenue 21 to Road 13 Wye Alternative. Consequently, the potential for inadvertent disturbance of hazardous materials and wastes associated with operations along the UPRR and SR 99 corridor rights-of-way are similar, with nominally less potential under the Avenue 21 to Road 13 Wye Alternative. Additionally, potential impacts along SR 152 would likely be more pronounced during rush hour given the higher traffic volumes during these times.

All of the Central Valley Wye alternatives also run through agricultural land. Historical storage and use of pesticides and herbicides may have occurred within this land, and these chemicals could be present in soils along each alignment. As discussed in Section 3.13 and summarized in

Table 3.10-5, the amount of agricultural land permanently converted by the Central Valley Wye alternatives would be comparable, with slightly higher amounts of agricultural conversion occurring under the SR 152 (North) to Road 19 Wye Alternative. The least amount of agricultural conversion would occur under the SR 152 (North) to Road 13 Wye Alternative. As such, there would be less potential to encounter agricultural hazardous substances such as pesticides and herbicides along the SR 152 (North) to Road 13 Wye Alternative during implementation.

Table 3.10-5 Maximum Amount of Agricultural Land Permanently Converted by Central Valley Wye Alternative (acres)

Land Use Category	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
Agricultural	2,209	2,490	2,277	2,220[1]

Sources: DOC, 2012; Merced County Assessor's Office, 2014; Madera County, 2015; City of Merced, 2015; City of Waterford, 2006; Fresno County Assessor's Office, 2015; Madera County, 1995; Merced County, 2013a; Stanislaus County, 2016

[1] This value has been updated to reflect refinements to the Site 6 electrical interconnection. Refer to Section 2.2.3, Description of the Central Valley Wye Alternatives.

The Authority would require construction contractors to develop a construction management plan prior to construction activities that includes requirements for responding to the disturbance of undocumented contamination (HMW-IAMF#5). These requirements would be designed to minimize impacts related to the health and safety of construction workers, the public, and the environment. Not all hazardous contamination is known and mapped. Responsibility for responding to the discovery of undocumented contamination is delegated to the Merced County Environmental Health Department and Madera Environmental Health Division under the state CUPA program. If soil, groundwater, or other environmental media with suspected contamination are encountered during construction activities (for example, identified by odor or visual staining, or by unearthing any underground storage tanks, abandoned drums, or other hazardous materials or wastes), work would cease in the vicinity of the suspect material; the area would be secured as necessary; and all appropriate measures would be taken to protect human health and the environment. Appropriate measures include notifying regulatory agencies and complying with the various agencies' laws, regulations, and policies. The Authority and its contractors would work with these agencies should undocumented contamination be encountered during construction (HMW-IAMF#5). These provisions would minimize the potential for hazardous materials to be released into the environment. The Authority would require consistency with hazardous material regulation and conformance to Occupational Safety and Health Administration regulations (HMW-IAMF#1). As such, the potential of impacts on the public and workers in the event of an inadvertent release of hazardous materials would be minimized.

In the event of an inadvertent release of hazardous waste and material, an immediate, informed response can reduce the potential impacts on human health and the environment. The Authority would prepare and maintain a hazardous materials management business plan, which provides emergency responders with emergency contact information, site-specific chemical inventories, and vicinity and facility maps (HMW-IAMF#3**)**. This information would allow emergency responders to more quickly and adequately respond in the event of an inadvertent release of hazardous materials and waste and minimize impacts from exposure to humans and the environment. The Authority would also implement measures for the safe dismantling and removal of building components and debris, and prevent the accidental release of lead and asbestos, thereby protecting workers and the public from potential exposure to hazardous materials and wastes during demolition (HMW-IAMF#6).

Trenching and other ground-disturbing activities have the potential to disturb undocumented soil or groundwater contamination. However, the Central Valley Wye alternatives include IAMFs that would avoid hazards to the public or the environment during construction associated with the inadvertent dispersal of hazardous materials or wastes into the environment. These include measures to minimize impacts from inadvertent disturbance of hazardous materials and wastes

from undocumented sites through such measures as the development of a construction management plan, conformance to hazardous materials and wastes regulations, and the establishment of a hazardous materials management business plan. There would be less potential for impact under the Avenue 21 to Road 13 Wye Alternative compared to the other three alternatives given that there is less traffic along this roadway compared to SR 152, and therefore less potential for incident and release of hazardous materials and wastes. Impacts are also anticipated to be less for the alternative with the least amount of agricultural conversion, which is the SR 152 (North) to Road 13 Wye Alternative (2,209 acres).

CEQA Conclusion

The impact under CEQA would be less than significant because the Central Valley Wye alternatives include effective measures to avoid creation of a significant hazard to the public or the environment. These include measures to prevent and minimize impacts from inadvertent disturbance of hazardous wastes and materials from undocumented sites through such measures as the development of a construction management plan, conformance to hazardous materials and wastes regulations, and the establishment of a hazardous materials management business plan. Therefore, CEQA does not require any mitigation.

Impact HMW#3: Temporary Direct Impacts from Asbestos or Lead Exposure as a Result of Demolition

Development of the Central Valley Wye alternatives would result in the demolition of roadways and structures that contain asbestos fibers or lead. Structures along the alignment, including concrete bridge abutments, may have been built with structural and building materials that contain asbestos. During the site reconnaissance, exterior building materials were observed that may include transite siding, roofing materials, and other building materials that may contain asbestos. Demolition of structures that contain asbestos could result in the potential release of asbestos fibers into the environment and potential health impacts on workers and community members. In addition, lead could be released from soils along roadways or from paint on buildings during demolition activities.

Each of the four Central Valley Wye alternatives would likely include structures built prior to 1970 that are proposed for demolition. These structures could contain LBP and ACM. The types of structures proposed for demolition along the various alternatives include industrial, agricultural, and commercial facilities, as well as residential structures. The SR 152 (North) to Road 13 Wye Alternative would require demolition of the greatest structure square footage, as shown in Table 3.10-6. The ages of the buildings proposed for demolition are unknown and the potential for release of asbestos or lead as a result of demolition and related activities is likewise unknown. Potential for impacts during demolition would be proportionally increased under the SR 152 (North) to Road 13 Wye Alternative given that a greater square footage of buildings would be removed under this alternative.

Table 3.10-6 Estimated Demolition Area per Alternative

Alternative	Square Footage to be Demolished
SR 152 (North) to Road 13 Wye	972,500
SR 152 (North) to Road 19 Wye	887,250
Avenue 21 to Road 13 Wye	504,750
SR 152 (North) to Road 11 Wye	702,750

Source: Authority, 2019

The Authority would require construction contractors to prepare demolition plans with specific provisions for asbestos and lead abatement for all buildings or roadways slated for demolition or renovation (HMW-IAMF#6), which would minimize the potential exposure of the public and construction workers to asbestos or lead during demolition. Prior to demolition activities, the

contractor would evaluate whether the structures proposed for demolition contain asbestos or lead, in accordance with 15 U.S.C. Section 2601 et seq., 40 C.F.R. Part 763, Subpart G, and 40 C.F.R. Part 745. If the structure contains friable (i.e., brittle) asbestos, a contractor who is state-certified for asbestos removal would comply with the Occupational Safety and Health Administration standards in 29 C.F.R. Part 1926.1101, acquire the appropriate permits, and remove the asbestos. Depending upon the amount and type of asbestos to be removed, advanced notification to the appropriate local agencies (i.e., the San Joaquin Valley Air Pollution Control District) and DTSC may be required before asbestos is disturbed or removed. Notification requirements may also include notifying local residents and construction workers in proximity to where asbestos work is occurring. Determining the existence of ACMs and lead and removing them safely is important to preserving the long-term health of construction workers that are potentially exposed to contaminated structures or sites. General personal protection practices would also be implemented.

Increased exposure to asbestos or lead because of building demolition would be temporary during construction. With incorporation of a hazardous materials and waste plan, including procedures for hazardous waste transport, containment, and storage (HMW-IAMF#1), the potential health impacts on workers and community members would be minimized.

Construction activities would include demolition of structures that contain asbestos or lead. The Central Valley Wye alternatives would include IAMFs that would avoid creation of a hazard to the public or the environment. These IAMFs include measures to minimize impacts from the release of hazardous materials and wastes from asbestos or lead exposure through the development of a demolition plan with specific asbestos and lead abatement procedures prior to construction activities. The SR 152 (North) to Road 13 Wye Alternative would require demolition of the greatest structure square footage (972,500 square feet) and would therefore have the greatest potential for impact.

CEQA Conclusion

The impact under CEQA would be less than significant because asbestos and lead exposure as a result of demolition would not result in a significant hazard to the public, including construction workers, or the environment. The Central Valley Wye alternatives incorporate IAMFs that would include effective measures to avoid creation of a significant hazard to the public or the environment. These include measures to minimize impacts from the release of hazardous materials and wastes from asbestos or lead exposure through the development of a demolition plan with specific asbestos and lead abatement procedures prior to construction activities. Therefore, CEQA does not require any mitigation.

Impact HMW#4: Temporary Direct Impacts from Construction on or near Potential Environmental Concern Sites

Construction of the Central Valley Wye alternatives could occur on or near PEC sites (some of which may have ongoing remediation activities), including sites identified pursuant to Government Code Section 65962.5 (Cortese List). The Authority would require construction contractors to develop a construction management plan that includes requirements for responding to the disturbance of undocumented contamination (HMW-IAMF#5), including unknown contamination near PEC sites. Institutional controls, such as land use covenants, established under agency oversight would preclude disturbance of final remedies constructed at remediation sites (i.e., soil containment structures or caps installed to prevent direct exposures or releases of underlying contaminated soils), without pre-notification and approval by the oversight agency. Similarly, the agency overseeing on-going cleanup activities at remediation sites would be consulted prior to undertaking construction that could damage or interfere with the operation of remediation facilities (e.g., extraction and monitoring wells, pumps, pipelines). In the event construction requires disturbance of soil or groundwater that is known to be contaminated, the contractor would be required to confer with the oversight agency for that site and to develop and implement procedures to handle and dispose of such materials in a manner protective of human health and the environment in accordance with applicable laws and regulations. The hazardous materials plan that would be prepared and incorporated under HMW-IAMF#10 would include procedures to

account for the temporary generation of additional waste materials from construction at sites with existing contamination. These sites would also be identified prior to construction activities during Property Acquisition Phase I Assessments and subsequent Phase II Assessments if needed (HMW-IAMF#7) and appropriate remediation would be applied. Temporary impacts, including potential localized spread of contamination and exposure of construction workers or the public to chemical compounds in soils, soil gases, and groundwater, would be minimized using work barriers (HMW-IAMF#8). Temporary impacts from the exposure of workers, the public, and the environment to airborne chemical compounds migrating from the demolition or construction areas would be minimized by incorporating procedures specified in demolition plans (HMW-IAMF#6). Impacts from potential accidents during transportation of contaminated soils or groundwater and potential accidents during remediation as a result of operational failure of treatment systems would be temporary and minimized through incorporation of procedures established in the spill prevention plan (HMW-IAMF#4) and environmental management system (HMW-IAMF#3). Table 3.10-7 provides a comparison of the impacts of the Central Valley Wye alternatives from construction on or near PEC sites.

Table 3.10-7 Comparison of the Central Valley Wye Alternatives Impacts from Construction on or near PEC Sites

Resource Category	Central Valley Wye Alternatives			
	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
Number of PEC Sites	6	9	7	5

Source: Authority, 2019, reviewed to reflect EINU.
EINU = electrical interconnections and network upgrades

There would be greater potential for impacts from alternatives that have more PEC sites because of the greater potential to encounter more hazardous materials and wastes during construction activities; therefore, the SR 152 (North) to Road 19 Wye Alternative would have the greatest potential for impacts from encountering hazardous materials and wastes.

The Cortese List provisions are a subset of PEC sites, discussed in Section 3.10.5.2, Sites of Potential Environmental Concern. An evaluation of the online DTSC-listed sites and facilities databases (i.e., Envirostor) indicated that no sites that fit the Section 65962.5(a) criteria were located within the hazardous materials and wastes PEC sites RSA for any of the Central Valley Wye alternatives. However, it is possible that currently unrecognized or unreported contamination and other affected sites that would meet DTSC criteria for sites identified pursuant to Government Code Section 65962.5(a) exist in the PEC sites RSA.

The impacts of hazardous waste containing chemical compounds would generally be limited to the immediate areas where the materials would be excavated, handled, and stored because exposure would be most likely in these areas. For this reason, the individuals most at risk would be the construction workers, operations personnel, or others in the immediate vicinity during excavation, transportation, or storage of hazardous waste, or during construction. The routes through which these individuals could be exposed include inhalation, ingestion, or skin contact.

Construction at known PEC sites would involve coordination with regulatory agencies before advancing in order to reduce risks associated with the release of contaminants and prevent interruption of cleanup activities. Preconstruction activities**,** such as a Phase I Environmental Site Assessment and subsequent Phase II Assessments if needed, would be conducted during the right-of-way acquisition phase, and appropriate remediation, including removal of contamination, *in-situ* treatment, or soil capping, would be conducted prior to acquisition (HMW-IAMF#7). Testing and appropriately remediation of acquired properties would minimize potential impacts from construction on or near PEC sites. Depending on proposed activities, such as subsurface ground disturbance, and the known extent and type of contamination, requirements for building at

contaminated sites could include further evaluation of the level of contamination and associated potential risks to human health and the environment as well as site remediation.

Federal and state regulations and policies, including CERCLA and the certified Unified Hazardous Waste and Hazardous Materials Management Regulatory Program administered by city and county agencies, would require environmental site assessment procedures (due diligence) for future development for parcels to be acquired or future development on or near a PEC site. There are three phases of environmental site assessments (ESA) that could be conducted:

- Phase I ESA: Parcel-level Phase I ESA would be conducted on all parcels and would include all standards for an All Appropriate Inquiry put forth by the USEPA (40 C.F.R. Part 312) and performed by an Environmental Professional[3] to ASTM standards (ASTM E 1527-13 [ASTM 2013]). A written report would present results, conclusions, and recommendations.
- Phase II ESA: If the Phase I ESA uncovers potential contaminated site conditions, a Phase II ESA sampling study would be conducted. Sampling may include soil, groundwater, or other media potentially containing hazardous materials. A written report would be prepared to describe the sampling work conducted, results, applicable regulations, and screening levels and recommendations.
- Phase III ESA. If the Phase II ESA concludes that the site is contaminated, a Phase III ESA would be conducted. A Phase III ESA would generally describe the design and implementation of any required mitigation or remediation measures. Remediation could include excavation, bioremediation, or cleanup of contamination within the construction limits. Appropriate environmental regulations would be complied with during the Phase III ESA process.

All necessary remediation would be conducted before construction. If necessary, regulatory approval for construction at contaminated sites would be sought during design.

Construction on or near PEC sites could encounter undocumented contamination. If this occurs, the Authority would work closely with local agencies to resolve any such encounters (HMW-IAMF#5). In lieu of remediating the identified sites, design and engineering controls would be incorporated to avoid contaminated sites if the extent of the contamination and the components or logistics of remediation are prohibitive (HMW-IAMF#8). Engineering controls to re-design structural features of the HSR system, such as aboveground spans that avoid contaminated locations, could be installed and would minimize the potential for exposure to undocumented contamination.

Construction of the Central Valley Wye alternatives on or near PEC sites could disturb hazardous materials and wastes, which have the potential to affect public health and the environment. The SR 152 (North) to Road 19 Wye Alternative would have the greatest potential for impacts from encountering hazardous materials and wastes given that it is in the vicinity of a greater number of PEC sites (9). However, the Central Valley Wye alternatives would include IAMFs that would avoid creation of a hazard to the public or the environment on or near a Cortese List site, including PEC sites. These IAMFs would include measures to minimize impacts from the release of hazardous materials and wastes during construction on or near PEC sites identified through Phase I ESAs that would be conducted during the acquisition phase, along with the implementation of an environmental management system and implementation of design and engineering controls.

CEQA Conclusion

The impact under CEQA would be less than significant because construction on or near PEC sites would not cause a significant hazard to the public or the environment from the release of hazardous materials and waste. The Central Valley Wye alternatives would incorporate IAMFs

[3] An Environmental Professional is defined in the ASTM E1527-13 (Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process) and would be a person meeting the education, training, and experience requirements as set forth in 40 C.F.R. §312.

that would be effective in avoiding creation of a significant hazard to the public or the environment on or near a Cortese List site, including PEC sites. These IAMFs would include measures to prevent or minimize the release of hazardous materials and wastes during construction on or near PEC sites through conducting Phase I ESAs during the acquisition phase, implementing an environmental management system, and implementing design and engineering controls. Therefore, CEQA does not require any mitigation.

Impact HMW#5: Temporary Direct Impacts from Hazardous Materials and Wastes Activities in Proximity to Schools and Recreational Areas

Potentially hazardous materials and items containing potentially hazardous materials would be temporarily used in railway construction and stored within the Central Valley Wye alternatives' rights-of-way, in some cases within 0.25 mile of schools and recreational areas, which are locations where sensitive receptors congregate. Additionally, hazardous wastes such as ACMs and lead-based paint could be encountered during construction activities as a result of the demolition of existing structures within the project footprints of the Central Valley Wye alternatives. This impact would be temporary during construction activities.

The impacts on schools from hazardous materials and wastes activities would vary by alternative. Fairmead Elementary School and Fairmead Head Start Childcare Center are located within the schools RSA for the SR 152 (North) to Road 13 Wye Alternative and SR 152 (North) to Road 11 Wye Alternative. Fairmead Elementary School, Fairmead Head Start Childcare Center, Washington Elementary School, and El Capitan High School are located within the SR 152 (North) to Road 19 Wye Alternative schools RSA. Chowchilla Seventh-day Adventist School and Alview Elementary School are located within the Avenue 21 to Road 13 Wye Alternative's schools RSA (see Table 3.10-3). Table 3.10-8 provides a comparison of the impacts of the Central Valley Wye alternatives from construction on or near schools and recreational areas.

Table 3.10-8 Comparison of the Central Valley Wye Alternatives Impacts from Construction on or near Schools and Recreational Areas

Resource Category	Central Valley Wye Alternatives			
	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
Number of Schools	2	4	2	2
Number of School Play Areas and Parks	1	4	0	1

Source: Authority, 2019

Fairmead Elementary School, Washington Elementary School, and El Capitan High School have play areas that are open to public use as noted in Section 3.15. In addition, Richard Bernasconi Park is located within 0.25 mile of the SR 152 (North) to Road 19 Wye Alternative.

The potential for impacts would be highest under the Avenue 21 to Road 13 Wye Alternative because the schools near this alternative are located within its utility easement, where excavations could occur. The SR 152 (North) to Road 19 Wye Alternative has a higher potential for impacts than the remaining two alternatives because of the greater number of schools and recreational areas near it.

Hazardous materials could be present within 0.25 mile of schools and recreational areas during the transport of materials during construction. Any hazardous material usage within the schools and recreational areas RSA would be subject to state and federal regulations, such as RCRA, CERCLA, the Hazardous Materials Release Response Plans and Inventory Law, and the Hazardous Waste Control Act (HMW-IAMF#1) to minimize the health or safety hazard to students or employees in the event of a release of hazardous materials or wastes. These regulations would apply equally near school sites and recreational areas to prevent accidental release of hazardous materials or wastes during transport, use, or disposal. In addition, prior to construction,

the Authority would require construction contractors to prepare a plan addressing spill prevention (HMW-IAMF#4). This plan would prescribe BMPs that must be followed to prevent spills and address spills if they were to occur. The BMPs would include measures such as making sure containers used to store hazardous materials would be in good condition and not leaking; keeping containers closed except when adding or removing hazardous materials; locating hazardous materials storage and handling areas away from natural watercourses, storm drains, and other sensitive receptors; and following policies for cleaning up accidental spills. These measures would avoid the potential for an inadvertent release of hazardous materials and wastes in proximity to schools and recreational areas and minimize the impacts should a release occur.

The Authority has coordinated with potentially affected school districts during the course of the preparation of the environmental document (see Chapter 9, Public and Agency Involvement). In addition, the California Air Resources Board and the San Joaquin Valley Air Pollution Control District specify air monitoring for large- and small-scale construction projects, contaminated soil and groundwater remediation projects, and demolition projects, which would benefit the air quality at any schools or recreational areas within the schools and recreational areas RSA for the Central Valley Wye alternatives. If air emissions action levels are exceeded during construction, the agencies could require implementation of engineering controls. Examples of engineering controls that would be applied to contain any off-site emissions that might affect an adjacent school or recreational area include emission control for diesel off-road equipment and diesel generators, dust control through wetting or covering, short- and long-term ambient air quality monitoring in neighborhoods near and downwind from the construction or maintenance sites, and field olfactometry measuring and quantification of odor strength in the ambient air.

Construction activities would require the handling of hazardous substances within 0.25 mile of schools and recreational areas. The Central Valley Wye alternatives would incorporate IAMFs that would establish conformance with all regulations associated with hazardous material and waste transport, use, disposal, and emissions, and would require the incorporation of a spill response plan prior to construction activities to minimize the health or safety hazard to students, employees, or the public in the event of a release of hazardous materials or wastes. These IAMFs would minimize but not avoid the potential of emissions or the release of hazardous materials and wastes in proximity to schools and recreational areas. The potential for impacts would be highest under the Avenue 21 to Road 13 Wye Alternative because the schools near this alternative are located within its utility easement, where excavations could occur.

CEQA Conclusion

The impact under CEQA would be significant because construction activities would require the handling of hazardous substances within 0.25 mile of schools and recreational areas that could pose a health or safety hazard to students or employees in the event of a release of hazardous materials or wastes. The Central Valley Wye alternatives would incorporate IAMFs that would establish conformance with all regulations associated with hazardous material and waste transport, use, disposal, and emissions, and would require the incorporation of a spill response plan prior to construction activities. The IAMFs would minimize but not completely avoid the potential of emissions or for the handling and release of hazardous substances near schools and recreational areas. The Authority would implement HMW-MM#1, which would limit the use of extremely hazardous materials near schools (including recreational play areas) during construction. With implementation of HMW-MM#1, the impact under CEQA would be less than significant because the contractor would be required to monitor all extremely hazardous substances and no extremely hazardous substances would be permitted within 0.25 mile of schools and recreational play areas.

Impact HMW#6: Temporary Direct Impacts Associated with Risks during Construction on or near Landfills and Oil and Gas Wells

As shown in Table 3.10-9, there are no active landfills within the SR 152 (North) to Road 13 Wye Alternative or SR 152 (North) to Road 11 Wye Alternative landfills RSA; therefore, no impacts from landfills would occur under these alternatives. There is one active landfill within 0.25 mile of the SR 152 (North) to Road 19 Wye Alternative and Avenue 21 to Road 13 Wye Alternative. The

Fairmead Solid Waste Disposal Site is located on the west side of SR 99 in Fairmead, approximately 0.1 mile north of the Avenue 21 to Road 13 Wye Alternative's project footprint. The Highway 59 Landfill is located approximately 0.13 mile east of the Site 7—Le Grand Junction/Sandy Mush Road, Warnerville–Wilson 230 kV Transmission Line.

Table 3.10-9 Comparison of Central Valley Wye Alternative Impacts Associated with Risks during Construction on or near Landfills and Oil and Gas Wells

Resource Category	Central Valley Wye Alternatives			
	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
Number of Landfills	0	1	1	0
Number of Oil and Gas Wells	12 wells (1 idle, 11 plugged)	14 wells (1 idle, 13 plugged)	5 wells (1 idle, 4 plugged)	12 wells (1 idle, 11 plugged)

Source: Authority, 2019

Impacts from landfills include their potential to release methane gas, which may present an explosion risk when exposed to flame or spark. An analysis of the potential for hazardous materials risks concluded that the likelihood of landfill methane gas affecting an area beyond the landfill properties is low because the landfills have existing gas mitigation control systems and monitoring programs. Prior to any ground-disturbing activities, the contractor would prepare a technical memorandum verifying to the Authority that methane protection measures would be implemented for all work within 1,000 feet of a landfill, including gas detection systems and personnel training, pursuant to Title 27, the hazardous materials contingency plan, and BMP plan (HMW-IAMF#9). This minimizes the potential that methane gas would be released from a landfill as a result of construction of the Central Valley Wye alternatives.

Within the oil and gas wells RSA, as discussed in Section 3.10.5, the Central Valley Wye alternatives alignments would pass close to numerous gas wells that were once part of the Chowchilla Gas Field. Under the SR 152 (North) to Road 13 Wye Alternative and SR 152 (North) to Road 11 Wye Alternative, one idle and 11 plugged wells lie within the oil and gas wells RSA. Under the SR 152 (North) to Road 19 Wye Alternative, one idle and 13 plugged wells lie within the oil and gas wells RSA. Under the Avenue 21 to Road 13 Wye Alternative, one idle well and four abandoned wells lie within the oil and gas wells RSA. Petroleum products, including crude oil and refined products such as fuels, lubricants, and natural gas, are considered in this analysis because they may pose a hazard to human health and safety or to the environment if released. Release could occur through spills during construction or rupture of a pipeline or well casing hit during construction, or through the disturbance of contaminated soil or groundwater. The potential for impacts would be nominally greater under the SR 152 (North) to Road 19 Wye Alternative given that there are a greater number of oil and gas wells and landfills in the vicinity of this route. Section 3.9 includes further analysis on the potential loss of availability of mineral and energy resources, as well as safety risk to workers from working near a gas field and oil or gas pipeline explosion.

Prior to construction, the Authority would require construction contractors to prepare a plan addressing spill prevention (HMW-IAMF#4). This plan would prescribe BMPs that must be followed to prevent spills and address spills if they were to occur. The BMPs include measures such as making sure containers used to store hazardous materials would be in good condition and not leaking; keeping containers closed except when adding or removing hazardous materials; locating hazardous materials storage and handling areas away from natural watercourses, storm drains, and other sensitive receptors; and following policies for cleaning up accidental spills. This avoids the potential for an inadvertent release of hazardous materials and wastes from oil and gas wells and minimizes the impacts should one occur.

In addition, active wells would be capped and abandoned or relocated (SS-IAMF#4 and HMW-IAMF#12). Appurtenant facilities such as pipelines potentially would need to be relocated if they fall within the oil and gas wells RSA. Abandonment and relocation of these facilities are regulated by the State of California. Any active wells identified would be abandoned or relocated in accordance with the California Department of Conservation DOGGR standards and in coordination with the well owners. All abandoned wells within 200 feet of the HSR tracks would be inspected and re-abandoned, where necessary, in accordance with California Department of Conservation DOGGR standards and in coordination with the well owner.

The Authority would implement measures to minimize the risk of accidents associated with encountering oil or gas wells, such as well fires or explosions that could compromise the safety of construction workers, passengers, and the public (SS-IAMF#4). HMW-IAMF#12 would contribute to effective gas monitoring because prior to construction, the contractor would prepare and develop an Authority-approved CMP addressing how gas monitoring would be incorporated into construction BMPs. Hazards related to potential migration of hazardous gases from the presence of oil fields, gas fields, or other subsurface sources can be minimized or eliminated by following strict federal and state Occupational Safety and Health Administration regulatory requirements for excavations. Consultation would occur with other agencies, as appropriate, such as the Department of Conservation, the California Environmental Protection Agency, and the Department of Toxic Substances Control regarding known areas of concern. Sample practices would include using safe and explosion-proof equipment during construction and regular gas testing. Passive or active gas venting and collection systems and monitoring and alarm systems would be required in underground construction areas.

The Authority would require construction contractors to use safe and explosion-proof equipment during construction in areas where explosion hazards exist, and would monitor for gaseous and solvent liquid wastes in accordance with the hazardous materials contingency plan and BMPs. In addition, a spill prevention, control, and countermeasure plan would be in place, and spill containment equipment would be at the site during removal or decommissioning of any wells.

The Central Valley Wye alternatives would implement IAMFs to avoid creation of a hazard to the public or the environment. These measures minimize the likelihood of a hazardous waste spill and prepare workers in the event that a spill does occur. These measures would prevent hazardous materials spills and releases that could temporarily result in impacts on the public and environment. The potential for impacts would be greatest under the SR 152 (North) to Road 19 Wye Alternative given that there are a greater number of oil and gas wells and landfills in the vicinity of this route (14 wells [1 idle, 13 plugged]).

CEQA Conclusion

The impact under CEQA would be less than significant because construction on or near landfills and oil and gas wells would not result in hazardous materials and wastes spills or releases that would create a significant hazard to the public or the environment. The Central Valley Wye alternatives would incorporate IAMFs that would include effective measures to avoid creation of a significant hazard to the public or the environment. These measures minimize the likelihood of a hazardous waste spill and prepare workers in the event that a spill does occur. Therefore, CEQA does not require any mitigation.

Operations Impacts

Operations of the Central Valley Wye alternatives would involve train activities along the HSR line through the Central Valley Wye alternatives. In addition, operations of the Central Valley Wye alternatives would include inspection and maintenance along the track and railroad right-of way, as well as on the structures, fencing, power system, positive train control, and communications. Operations and maintenance activities are described in Chapter 2.

Impact HMW#7: Intermittent Direct Impacts from the Transport, Use, Storage, and Disposal of Hazardous Materials and Wastes

Operations of the Central Valley Wye alternatives would require the use of hazardous materials. Examples include the periodic use of herbicides in the right-of-way to control weeds, the use of

greases to lubricate switching equipment along the trackway, and the use of wood preservatives for the new wood utility poles associated with Site 7—Le Grand Junction/Sandy Mush Road, 115 kV Tie-Line under the SR 152 (North) to Road 19 Wye Alternative. As discussed in Impact HMW#1, wood utility poles use wood preservatives, including pentachlorophenol, chromated copper arsenate, and creosote. All three chemicals are subject to leaching and may appear in stormwater runoff that has made contact with utility poles (USDHHS 2001; 2002; ATSDR 2011). Given the very small amount of rain in the region (about 12 inches per year), opportunities for leaching wood preservative chemicals into the environment are limited. Furthermore, any leaching that could occur would be located in the immediate vicinity of the wood pole and would not be expected to enter surface water, as the closest surface water body to the Site 7—Le Grand Junction/Sandy Mush Road, 115 kV Tie-Line is located 0.2 mile to the south.

The quantities of materials used and wastes generated by the Central Valley Wye alternatives would be small compared to wastes generated by other transportation services (such as conventional passenger automobiles or air travel, which use petroleum-based vehicle fuel as the primary means of power) and commercial or industrial production facilities. However, operations of the Central Valley Wye alternatives would require the intermittent transport, use, storage, handling, and disposal of hazardous materials and wastes. All four alternatives have proximity to both railways and highways where transport of hazardous waste or materials may occur. As discussed under Impact HMW#1, because the Avenue 21 to Road 13 Wye Alternative would be in proximity to less traveled routes than the three SR 152 alternatives, there would be less potential for incident under this alternative. Taken together, the use of wood utility poles and the higher risk of incidents associated with the routine use, transport, storage, and disposal of hazardous materials and wastes would result in a nominally greater potential for an impact under the SR 152 (North) to Road 19 Wye Alternative.

To minimize and avoid the potential for improper handling of hazardous materials and wastes, the Authority would require contractors to comply with applicable state and federal regulations, such as RCRA, CERCLA, the Hazardous Materials Release Response Plans and Inventory Law, and the Hazardous Waste Control Act during operations and maintenance activities (HMW-IAMF#1). These regulations would apply throughout the general RSA to avoid and prevent accidental release of hazardous materials or wastes during transport, use, or disposal.

In addition, prior to operations and maintenance activities, the Authority or contractors would prepare hazardous materials monitoring plans (HMW-IAMF#10). Preparation and compliance with these plans would minimize the potential for impacts from hazardous materials and wastes used during operation and maintenance of the Central Valley Wye alternatives.

Risks related to routine transport, use, or disposal of hazardous materials and hazardous waste during operations would be intermittent. Incorporation of HMW-IAMF#1 would establish conformance with established policies, which would minimize the potential for improper handling of materials and wastes that could result in routine and accidental releases.

The Central Valley Wye alternatives would include IAMFs that would avoid creation of a hazard to the public or the environment. These measures allow for proper management of hazardous materials and wastes routinely used during operations, which would prevent hazardous wastes and materials spills and releases that could result in impacts on the public and environment. Effects are anticipated to be least for the alternative with the least amount of traffic along its route, namely the Avenue 21 to Road 13 Wye Alternative.

CEQA Conclusion

The impact under CEQA would be less than significant because the limited potential for release of hazardous materials and wastes during the transport, use, and storage of such substances used during operations would not result in a significant hazard to the public or the environment. The Central Valley Wye alternatives would incorporate IAMFs that would include effective measures to avoid creation of a significant hazard to the public or the environment. These measures allow for proper management of hazardous materials and wastes routinely used during operations. Therefore, CEQA does not require any mitigation.

Impact HMW#8: Intermittent Direct Impacts from Hazardous Materials and Wastes Activities in Proximity to Schools and Recreational Areas

During operation of the Central Valley Wye alternatives, there would be no use of hazardous materials within proximity to schools or recreational areas. The generation of hazardous wastes would primarily be associated with train maintenance and repair at the Heavy Maintenance Facility, which is not located within the Central Valley Wye alternatives. The trains would operate on electric power. Therefore, powering the trains would have none of the emissions associated with the use of diesel fuel, natural gas, or other fuels. No hazardous materials would be required to operate the passenger rail service under the Central Valley Wye alternatives. The HSR system would have no at-grade crossings, so there would be no potential for accidents between the train and vehicles transporting hazardous materials. Moreover, operation and maintenance activities associated with the existing Site 7—Le Grand Junction/Sandy Mush Road, Warnerville–Wilson 230 kV Transmission Line would not change from baseline conditions. As a result, Central Valley Wye alternatives operation would have no impact on the health or safety of students, employees, or the public as a result of the use of hazardous substances within 0.25 mile of a school or recreational area. Additional discussion for the potential of train accidents and derailments to affect schools is provided in Section 3.11. Hazardous materials and wastes activities would not occur within 0.25 mile of the nearest school or recreational area during operations under any of the Central Valley Wye alternatives.

CEQA Conclusion

There would be no impact under CEQA because hazardous materials and wastes activities would not occur within 0.25 mile of the nearest school or recreational area during operations. Therefore, CEQA does not require any mitigation.

3.10.7 Mitigation Measures

This section presents an updated mitigation approach that is generally consistent with the mitigation required under the Merced to Fresno Final EIR/EIS. The mitigation measure discussed in this section would be applied to all four Central Valley Wye alternatives to reduce potential impacts from hazardous wastes and materials on schools during construction of the Central Valley Wye alternatives.

HMW-MM#1: Limit Use of Extremely Hazardous Materials near Schools during Construction. Prior to construction, the contractor shall prepare a memorandum regarding hazardous materials BMPs related to construction activity for approval by the Authority. The memorandum shall confirm that the contractor shall not handle or store an extremely hazardous substance (as defined in California Public Resources Code § 21151.4) or a mixture containing extremely hazardous substances in a quantity equal to or greater than the state threshold quantity specified pursuant to subdivision (j) of Section 25532 of the Health and Safety Code within 0.25 mile of a school. The memorandum shall acknowledge that prior to construction activities, signage will be installed to delimit all work areas within 0.25 mile of a school, informing the contractor not to bring extremely hazardous substances into the area. The contractor would be required to monitor all use of extremely hazardous substances. The above construction mitigation measure for hazardous materials and wastes is consistent with California Public Resources Code Section 21151.4, and would be effective in reducing the impact to a less-than-significant level. The memorandum shall be submitted to the Authority prior to any construction involving an extremely hazardous substance.

HMW-MM#1 would be effective because it would eliminate the use of extremely hazardous materials from use within at least 0.25 mile of nearby schools, thereby reducing the potential impacts from accidental dispersal of these materials. This mitigation measure would not expand the scope, scale, or duration of construction activities, and therefore there would be no secondary impacts related to the implementation of this mitigation measure.

3.10.8 Impacts Summary for NEPA Comparison of Alternatives

This section summarizes and compares the impacts of the Central Valley Wye alternatives and the No Project Alternative. The Merced to Fresno Final EIR/EIS concluded that development of the HSR system would result in potential impacts associated with hazardous materials and wastes. Implementing the Central Valley Wye alternatives could also result in impacts associated with hazardous materials and wastes from construction and operation activities.

As discussed in Chapter 2, under the No Project Alternative, population growth in Merced and Madera Counties would result in continued development and associated direct and indirect impacts from hazardous materials and wastes. Planned projects anticipated to be constructed by 2040 include residential, commercial, industrial, recreational, transportation, and agricultural projects. The No Project Alternative is anticipated to result in a continuation of recent development trends that have led to an increase in PECs along major highway and rail transportation corridors, utility corridors, landfills, agricultural areas, and industrial facilities. Accidental spills or releases of hazardous materials and wastes could occur with continued operation of commercial and industrial facilities or during transport of contaminated media during cleanup activities within the general RSA. Such accidents might result in new PEC sites that could affect future No Project Alternative improvements. ACM and lead-based substances have the potential to affect the No Project Alternative as demolition and rehabilitation of structures occurs to accommodate growth. NOA is not common to the region and, therefore, the potential for disturbance of this material is low. The No Project Alternative would also result in the use or disturbance of potentially hazardous materials at or near schools and recreational areas and would have a similar impact on schools and recreational areas within 0.25 mile.

Developments are anticipated to require types and quantities of hazardous materials for construction and operation that would be comparable to the proposed Central Valley Wye alternatives, proportional to the magnitude of the developments. Development under the No Project Alternative would result in similar types of impacts associated with hazardous materials and wastes as the Central Valley Wye alternatives. Planned commercial, residential, recreational, transportation, and agricultural projects would lead to impacts associated with hazardous materials and wastes from temporary and permanent activities that could lead to increases in hazardous material and waste use and handling in Merced and Madera Counties. In some instances, existing land would be converted for residential, commercial, and industrial development, as well as for transportation infrastructure, to accommodate future growth, which could also result in potential impacts on the general public and the environment from hazardous materials and wastes. However, planned development and transportation projects under the No Project Alternative would likely include the implementation of mitigation to address impacts from hazardous materials and wastes exposure. Further, planned industrial and commercial developments under the No Project Alternative, such as the expansion of SR 99, would require proper permitting and would need to comply with regulatory requirements.

The Merced to Fresno Final EIR/EIS concluded that development of the HSR system would result in impacts to children from the handling of hazardous materials and wastes within 0.25 mile of a school during construction, but that the project design elements and implementation of mitigation measures would minimize and reduce effects. All other effects during construction and operation, including those from the transport, use, storage, and disposal of hazardous materials and wastes; the inadvertent disturbance of hazardous materials and wastes; and activities in proximity to PEC sites, landfills, oil and gas wells, and schools, would be minimized or avoided with the incorporation of project design elements. The Merced to Fresno Final EIR/EIS also noted potential beneficial effects to children in nearby schools during operation because they are less likely to be exposed to hazardous materials as a result of an accidental release. Implementing the Central Valley Wye alternatives would also result in impacts to children during handling of hazardous materials and wastes in the proximity of schools during construction activities; however, impacts would be reduced with the implementation of HMW-MM#1.

As discussed in Section 3.10.4.2, Impact Avoidance and Minimization Features, the Central Valley Wye alternatives would incorporate IAMFs to minimize or avoid impacts from hazardous

wastes and materials. The IAMFs would include property acquisition Phase I ESAs and appropriate remediation; incorporation of methane protection measures and gas monitoring; use of work barriers; creation and utilization of an environmental management system; and preparation and implementation of plans for construction management, demolition, spill prevention, hazardous materials and wastes, undocumented contamination, hazardous materials transportation, and construction and operations near landfills. Additionally, implementation of HMW-MM#1, which limits the use of extremely hazardous materials near schools during construction, would minimize impacts from hazardous materials use near schools.

Table 3.10-10 provides a comparison of the potential impacts of the Central Valley Wye alternatives from hazardous materials and wastes. Data from this table and the information in this summary are described in detail in Section 3.10.6.

Table 3.10-10 Comparison of Central Valley Wye Alternative Impacts

Impacts	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
Construction				
Impact HMW#1: Temporary Effects from the Transport, Use, Storage, and Disposal of Hazardous Materials and Wastes				
Risk of upset related to proximity to high traffic volume roadways	Greater, because of location along SR 152	Greater, because of location along SR 152	Located along lower traffic volume routes	Greater, because of location along SR 152
Impact HMW#2: Temporary Effects from Inadvertent Disturbance of Hazardous Materials and Wastes				
Potential for aerially deposited lead in soils related to proximity to high traffic volume roadways	Greater, because of location along SR 152	Greater, because of location along SR 152	Located along lower traffic volume routes	Greater, because of location along SR 152
Effects related to agricultural land permanently converted by Central Valley Wye Alternative (acres)	2,209	2,490	2,277	2,220
Impact HMW#3: Temporary Effects from Asbestos or Lead Exposure as a Result of Demolition				
Effects related to estimated demolition area per alternative (square feet)	972,500	887,250	504,750	702,750
Impact HMW#4: Temporary Effects from Construction on or near PEC Sites				
Effects related to number of PEC sites in the vicinity of each alternative	6	9	7	5
Impact HMW#5: Temporary Effects from Hazardous Materials and Wastes Activities in Proximity to Schools				
Effects related to number of schools in the vicinity of each alternative	2	4	2	2
Effects related to number of recreational areas (school play areas and parks) in the vicinity of each alternative	1	4	0	1

Impacts	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
Impact HMW#6: Temporary Effects Associated with Risks during Construction on or near Landfills and Oil and Gas Wells				
Effects related to the number of landfills in the vicinity of each alternative	0	1	1	0
Effects related to the number of oil and gas wells in the vicinity of each alternative	12 wells (1 idle, 11 plugged)	14 wells (1 idle, 13 plugged)	5 wells (1 idle, 4 plugged)	12 wells (1 idle, 11 plugged)
Operations				
Impact HMW#7: Intermittent Effects from the Transport, Use, Storage, and Disposal of Hazardous Materials and Wastes				
Risk of upset related to proximity to high traffic volume roadways	Greater, because of location along SR 152	Greater, because of location along SR 152	Located along lower traffic volume routes	Greater, because of location along SR 152
Impact HMW#8: Intermittent Effects from Hazardous Materials and Wastes Activities in Proximity to Schools and Recreational Areas				
Effects related to operations within 0.25 mile of the nearest school or recreational area.	No anticipated impacts from operations within 0.25 mile of the nearest school or recreational area under any of the Central Valley Wye alternatives			

Source: Authority, 2019
SR = state route
PEC = Potential Environmental Concern

The Central Valley Wye alternatives could result in construction-related impacts associated with hazardous materials and wastes as a result of temporary and permanent increases in the regional transport, use, storage, and disposal of hazardous materials (such as diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic chemicals). If improperly used or inadvertently spilled, these hazardous materials and wastes could present health and safety risks to the public and construction workers. These impacts are anticipated to be greatest for those alternatives located along SR 152 given the higher traffic volumes along this route, namely the SR 152 (North) to Road 13 Wye, SR 152 (North) to Road 19 Wye, and SR 152 (North) to Road 11 Wye Alternatives.

Construction could result in the inadvertent disturbance of hazardous materials and wastes, such as the disturbance of undocumented soil or groundwater contamination, through trenching and other ground-disturbing activities. Given the pesticides and other hazardous substances commonly used on agricultural properties, impacts are anticipated to be greatest for the alternative with the most agricultural conversion, which is the SR 152 (North) to Road 19 Wye Alternative (2,490 acres). Impacts from the inadvertent disturbance of hazardous materials and wastes would also be greatest among those alternatives located along the more highly populated SR 152, which are the SR 152 (North) to Road 13 Wye, SR 152 (North) to Road 19 Wye, and SR 152 (North) to Road 11 Wye Alternatives.

The risk of exposure to asbestos and lead has the potential to occur during the demolition of roadways and structures. Lead could also be released from soils along roadways or paint from demolished buildings. The increased exposure to asbestos or lead as a result of building demolition would be temporary during construction. Of the four Central Valley Wye alternatives, the SR 152 (North) to Road 13 Wye Alternative would have the greatest potential for impacts from lead and asbestos exposure given that the greatest square footage of structure demolition would be required under this alternative (972,500 square feet).

Construction of the Central Valley Wye alternatives could occur on or near PEC sites. Construction activities could encounter contaminants or interfere with ongoing remediation efforts. Temporary impacts from construction on or near PEC sites could include potential localized spread of contamination; exposure of construction workers or the public to chemical compounds in soils, soil gases, and groundwater; exposure of workers, the public, and the environment to airborne chemical compounds migrating from the demolition construction areas; potential accidents during the transport of contaminated soils or groundwater; potential accidents during remediation as a result of operational failure or treatment systems; and potential interference with ongoing remediation activities. In addition to on-site or off-site accidents, the potential exists for chemicals or toxic fumes to be carried away from the accident site. Impacts would be greatest under the 152 (North) to Road 19 Wye Alternative given that there are the most PEC sites near this alternative (9).

The use of potentially hazardous materials and wastes during construction would sometimes occur in proximity to schools (which are considered sensitive receptors) and recreational areas. Impacts on schools and recreational areas from hazardous materials and wastes activities during construction would be reduced with implementation of HMW-MM#1 because the contractor would be required to monitor all extremely hazardous substances and no extremely hazardous substances would be permitted within 0.25 mile of schools and recreational play areas. Impacts would be highest under the Avenue 21 to Road 13 Wye Alternative because excavations would be required within the property limits of one school to accommodate a permanent utility easement.

Finally, there would be temporary and direct impacts associated with risks during construction on or near landfills and oil and gas wells. Impacts from landfills include their potential to release methane gas, which may present an explosion risk when exposed to flame or spark. The likelihood for this, however, is low because the landfills have existing gas mitigation control systems and monitoring programs. Oil and gas wells can result in the release of oil or gas during construction, rupture of a pipeline, through a well casing being hit during construction, or through the disturbance of contaminated soil or groundwater. Regulatory controls would minimize the potential for a spill from a well or pipeline. Impacts would be greatest under the alternative nearest the most landfills and oil and gas wells—the SR 152 (North) to Road 19 Wye Alternative (1 landfill, 14 wells [1 idle, 13 plugged]).

Operations of the Central Valley Wye alternatives could result in intermittent direct impacts through the transport, use, storage, and disposal of hazardous materials and wastes. Impacts would be minimal through conformance with established policies, which would reduce the potential for improper handling of materials and wastes that could result in routine and accidental releases. Impacts would be greatest under those alternatives located along the more highly trafficked SR 152—the SR 152 (North) to Road 13 Wye, SR 152 (North) to Road 19 Wye, and SR 152 (North) to Road 11 Wye Alternatives.

Intermittent direct impacts from HSR operation in proximity to schools and recreational areas also has the potential to occur. However, hazardous materials and wastes activities would not occur within 0.25 mile of the nearest school or recreational area during operation.

3.10.9 CEQA Significance Conclusions

Table 3.10-11 provides a summary of the CEQA determination of significance for all construction and operations impacts discussed in Section 3.10.6. The CEQA level of significance before and after mitigation for each impact in this table is the same for all Central Valley Wye alternatives.

Table 3.10-11 CEQA Significance Conclusions for Hazardous Materials and Wastes for the Central Valley Wye Alternatives

Impact	CEQA Level of Significance before Mitigation	Mitigation Measures	CEQA Level of Significance after Mitigation
Construction			
Impact HMW#1: Temporary Direct and Indirect Impacts from the Transport, Use, Storage, and Disposal of Hazardous Materials and Wastes	Less than significant for all alternatives	No mitigation measures are required	Not applicable
Impact HMW#2: Temporary Direct Impacts from Inadvertent Disturbance of Hazardous Materials and Wastes	Less than significant for all alternatives	No mitigation measures are required	Not applicable
Impact HMW#3: Temporary Direct Impacts from Asbestos or Lead Exposure as a Result of Building Demolition	Less than significant for all alternatives	No mitigation measures are required	Not applicable
Impact HMW#4: Temporary Direct Impacts from Construction on or near Potential Environmental Concern Sites	Less than significant for all alternatives	No mitigation measures are required	Not applicable
Impact HMW#5: Temporary Direct Impacts from Hazardous Materials and Wastes Activities in Proximity to Schools and Recreational Areas	Significant for all alternatives	HMW-MM#1: Limit Use of Extremely Hazardous Materials near Schools during Construction	Less than significant
Impact HMW#6: Temporary Direct Impacts from Construction on or near Landfill, Oil and Gas Wells	Less than significant for all alternatives	No mitigation measures are required	Not applicable
Operations			
Impact HMW#7: Intermittent Direct Impacts from the Transport, Use, Storage, and Disposal of Hazardous Materials and Wastes	Less than significant for all alternatives	No mitigation measures are required	Not applicable
Impact HMW#8: Intermittent Direct Impacts from Hazardous Materials and Wastes Activities in Proximity to Schools and Recreational Areas	No impact for all alternatives	No mitigation measures are required	Not applicable

Source: Authority, 2019