

## 4.10 HAZARDS

This section addresses hazards and hazardous materials issues. The information below is summarized from a Phase 1 Investigation/Initial Site Assessment Report (Phase 1/ISA) prepared by BASELINE Environmental Consulting in March 2004 and subsequently updated in December 2007. The Phase 1/ISA and update is available for public review the Solano Transportation Authority (STA), One Harbor Center, Suite 130, Suisun City, CA 94585 during normal business hours.

The following tasks were performed for this assessment:

- a review of historical land use information;
- interviews;
- a visual site reconnaissance;
- a review of regulatory lists and databases; and
- the development of recommendations for further actions to evaluate whether current or historical releases of hazardous materials may have the potential to affect the proposed Project.

### **Methodology**

All Phase 1/ISA activities were performed in accordance with the Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, established by the American Society for Testing and Materials in Method E1527-00, and in accordance with Appendix DD of the Caltrans Project Development Procedures Manual, "Preparation Guidelines for Initial Site Assessment (ISA) Checklist for Hazardous Waste."

### **EXISTING CONDITIONS**

The North Connector Project (Project) area and vicinity was primarily used for agriculture until the 1920s, when U.S. Highway 40, (US40, now designated as Interstate 80 [I-80]) was constructed. Since that time, commercial, residential, and light industrial land uses have been introduced. As a result, there may be the potential for agricultural chemical residues to be present in shallow soils within the Project area. Other historical land uses that could potentially have involved hazardous materials use include railroad tracks near the West End of the Project, and light industrial land uses near Russell Road in the East End.

No bare spots or stunted vegetation that might be indicative of a hazardous material release were identified within the Project area during the reconnaissance. No staining, odors, or other evidence of hazardous materials releases were noted.

### **Historic and Current Land Uses**

#### West End

In 1902 Jameson Canyon Road (now designated State Route 12 [SR12]) and Southern Pacific Railroad (now Union Pacific) tracks were located near their current position. Approximately eight small rural residences were located in this portion of the Project area.

By 1937, the date of the first available aerial photograph, US40 had been constructed along the current SR12/I-80 alignment. A quarry operation consisting of unimproved roads, a pond, and small structures was present north of SR12. Properties north and south of the Project area were used for agriculture, with crop patterns suggesting pastures and/or field crops in this area.

Small buildings in the Project vicinity appear to have been rural residences, barns, and agricultural outbuildings. No significant land use changes were noted in resources from 1947 to 1957.

Between 1957 and 1965, US40 was redesignated I-80, and widened. The quarry operations north of the SR12/Red Top Road Interchange appeared to have expanded and the pond had increased in area. The 1980 topographic map shows a water pipeline and pump station north of SR12 near the Project area.

Current land uses potentially associated with hazardous materials in the West End of the Project area include a dairy farm, railroad tracks, a pump station, and an agricultural outbuilding. Of these land uses, only the railroad tracks, which are located near the Red Top Road/SR12 Interchange, are adjacent to proposed Project improvements.

### East End

In 1937, the date of the first available aerial photograph, US40 had been constructed along the current SR12/I-80 alignment. Russell Road was present in its current location but did not appear to be paved. Parcels north and south of the Project area were under agricultural cultivation with row crops and orchards. Buildings in this area appeared to be farmhouses, barns, and agricultural outbuildings. These outbuildings may potentially be associated with hazardous material use. Agricultural chemicals may have been stored and/or mixed, equipment repair may have been conducted, and/or aboveground or underground storage tanks (USTs) could potentially have been used. In addition, a concrete pipe distributor, tractor company, and vineyard are located in this portion of the Project area.

By 1947, the topographic map showed that the town of Russell was present near the intersection of US40 and Russell Road, and approximately 12 small buildings were located in the town. By 1957, light industrial buildings, including the buildings currently used by a tractor company and a cement pipe distributor, had been constructed in this area.

South of the Project site, a large industrial building (Fairfield STP facility) was constructed approximately 0.25-miles south of the Project area, near Busch Drive, between 1970 and 1980.

Current land uses potentially associated with hazardous materials within the East End include cultivated fields, a concrete pipe distributor company, and a tractor company. Agricultural fields and scattered trees were present in this area to the north of I-80 between Suisun Creek and Russell Road. Near the eastern terminus of the Project area at the intersection of Russell Road/Abernathy Road, several commercial buildings were present in the Project area, including the concrete pipe distributor company and the tractor company.

### **Hazardous Materials Sites**

Twenty-five sites associated with hazardous materials were identified within a ½-mile radius of the proposed Project. See Table 4.10-1 for a complete list. According to the Phase 1/ISA, none of federal or state listed hazardous waste sites would likely affect the Project site.

### **Federal Hazardous Waste Sites**

One site within ½-mile of the proposed Project was listed on the U.S. EPA's Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) database of known or suspected hazardous waste sites. The Fairfield STP site was identified on the database and is described below.

#### The Fairfield STP Site

The Fairfield STP site is located south of I-80 and Busch Lane. It was investigated under the CERCLIS program in 1980. However, no record of hazardous material releases or remedial activities was noted in the database record. Information regarding this site was archived by the EPA in 1989.

### **State and County Hazardous Waste Sites**

Twenty-two sites in the Project vicinity were listed on State and County hazardous material site databases. They include the Mangels Ranch site at 287 Suisun Valley Road (described below).

#### The Mangels Ranch Site

The Mangels Ranch site is located north of I-80 and south of Rockville Hills Community Park. Mangels Ranch is a vacant ranch formerly occupied by a homestead where both vineyard and orchard crops were historically cultivated. Three USTs were removed from the site in March 1987 under Solano County (County) oversight; no releases from the tanks were identified during removal activities. In June 1998, additional soil samples were collected at the site. Based on analytical results, significant concentrations of toxaphene were reported in the former cattle handling area located near the center of the property. The property owner entered into a Voluntary Cleanup Agreement (VCA) with the DTSC in September 1998, but was determined to be non-compliant with that order in March 2002. The DTSC took over cleanup of the site and approved the Final Removal Action Workplan (RAW) in June 2002. The RAW proposes that approximately 1,800 cubic yards of soil contaminated with toxaphene above the residential cleanup level of 360 micrograms per kilogram (mg/kg) be excavated and disposed of off site. Removal work was expected to be completed prior to the 2003 wet winter weather season, but no information regarding the completion of the removal action was available in DTSC databases.

#### Other State Hazardous Waste Sites

There are 51 additional sites where a release of hazardous materials was reported, where USTs, leaking or otherwise, are present: and generators of hazardous materials, such as PCBs and solvents. Of the 51 sites, there are 29 sites where hazardous materials were released into the environment, one of which also contained a UST; eight sites that contain USTs, three of which are leaking; and eight sites that are generators of hazardous materials. Six sites were on the regulatory list although no hazardous waste violations were reported.

### **Leaking Underground Tank Sites**

Eight sites within ½-mile of the proposed Project appeared on state and county lists of leaking underground storage tank (LUST) cases and the State list of hazardous materials releases (CORTESE). Six of these sites have been closed by regulatory authorities, indicating that the releases have been investigated and remediation has been completed or was not necessary. Post remedial monitoring is actively being performed at the remaining two LUST sites.

### **Hazardous Material Incident Reports**

Six sites within ½-mile of the Project area were reported on the California Hazardous Materials Incident Reporting System (CHMIRS) database of incidents involving hazardous materials.

Releases of chemical vapors, motor vehicle fuels, and ammonia gas have been reported at these sites. None of the reported hazardous materials incident sites were referred for further regulatory agency oversight.

### **Review of County Hazardous Materials Files**

A review of the available Solano County Environmental Health Services files for two sites that could potentially impact subsurface conditions at the East End of the Project was performed on January 8, 2004. The two sites included the Valine Ranch (Site 17) and Concrete Pipe Distributors (Site 18). The review was performed to obtain additional information regarding these sites and their potential to affect development of the Project. Details from the file review are presented below.

#### Valine Ranch, 4000 Russell Road (Site 17)

This site was a gasoline station from 1946 until 1972, when improvements to I-80/SR12 eliminated highway access to and from the station. In November 2000, five USTs were removed from the site: two 1,000-gallon gasoline USTs, two 6,000-gallon gasoline USTs, and one 10,000-gallon diesel UST. Stained soil and hydrocarbon odors were noted during the UST removal activities. Groundwater that collected in the tank excavation pit had an oily sheen. Approximately 250 cubic yards of contaminated soils and 20,000 gallons of contaminated groundwater were removed from the tank area and stored at the site.

Samples from the tank excavation identified elevated concentrations of total petroleum hydrocarbons (TPH) as gasoline, TPH as diesel, and benzene, toluene, ethylbenzene, and xylenes (BTEX) in soil and groundwater. After reviewing the results, the County ordered that additional investigation should be performed to determine the extent of TPH-affected soils and groundwater.

In August 2003, a workplan was submitted for further investigation at the site. The plan proposed to install 10 soil borings at the site and collect soil samples each five feet, to determine the horizontal and vertical extent of contaminated soils. Three of the soil borings would be converted into groundwater monitoring wells, and quarterly groundwater monitoring would be performed to determine the extent and magnitude of groundwater contamination at the site. According to State LUST information reported for the site, the pollution was characterized in 2005 and the site is actively being monitored.

#### Concrete Pipe Distributors, 4974 Abernathy Road (Site 18)

A Solano County inspection in May 1994 identified a number of code violations at this property, including several unpermitted businesses operating from the property, numerous inoperable vehicles, inadequate sanitation facilities, improper storage of construction debris, and several 55-gallon drums containing unknown products. The owner was given 30 days to correct the issues and renovate or demolish unsafe structures.

An additional inspection and inventory of the 55-gallon drums was performed one week following the inspection. It was determined that the drums were the property of Moore Tractor Company (Site 15). A total of 16 drums were identified at the site: 12 were empty and in poor condition, one contained waste oil, and three contained an undetermined, watery waste. The watery waste was determined to be non-flammable in the field, but no other testing of the waste was reported. The owner of the drums indicated that the drums would be removed within 30 days.

No later correspondence regarding this site was present in County files. No evidence of a hazardous materials release was noted at the concrete pipe distributor company or the Moore Tractor Company during the site reconnaissance. However, based on the 1994 violations, which include poor sanitation and improper storage of petroleum products at these sites, there may be a potential for historical releases of hazardous materials to have affected soils and/or groundwater at these site.

## **Lead and Asbestos**

### Lead-Based Paint and Asbestos-Containing Materials

Lead oxide and lead chromate were commonly used in paints until 1978, when regulations limited the allowable lead content in paint. Therefore, interior and/or exterior painted surfaces at buildings constructed prior to 1978 have the potential to contain lead-based paint. Yellow thermoplastic and yellow paint, used for traffic striping and pavement marking throughout the Project area, may also contain elevated concentrations of lead, regardless of manufacture date. Therefore, pavement markings and interior and/or exterior painted surfaces at buildings constructed prior to 1978 likely contain lead-based paint. Potential lead-based paint could be found on the existing structures of the concrete pipe distribution site.

Asbestos was commonly used in construction materials until the 1980s, when its use was phased out. Therefore, building materials manufactured prior to the 1980s have the potential to contain asbestos fibers, which could be released during demolition activities. Airborne asbestos is a known human carcinogen. Asbestos-containing materials could also be found within the existing buildings of the concrete pipe distribution center,

California Department of Mines and Geology mapping does not show any naturally-occurring asbestos hazards within the vicinity of the Project area.

### Aerially Deposited Lead

Aerially deposited lead occurs in roadside soils and is the result of lead deposition from vehicle exhaust during the era of lead additives in fuel. This lead is attributed to the use of lead in gasoline, which was phased out beginning in the mid-1970s.

Historical maps and aerial photographs (discussed under Historical Land Uses, above) show that I-80 (then designated US40) and other roadways in the Project area were constructed in the 1940s and 1950s, prior to the phase-out of lead in gasoline. As a result, it is likely that soils near or at the Project area may contain total lead above the Total Threshold Limit Concentration (TTLC), which is 1,000 mg/kg. Soils which exceed the TTLC would be classified as a hazardous waste, once excavated, and would require special handling and disposal procedures. Caltrans' experience is that soils within 30 feet of a roadway may potentially be affected by aerially-deposited lead. All lead-affected soils with a pH less than 5.0 must be covered with pavement or similar impervious surface.

Therefore, it is Caltrans policy that all shallow soils near highways may potentially contain elevated concentrations of aerially-deposited lead, and soils within Caltrans rights-of-way that will be disturbed during construction are routinely tested for total and/or soluble lead to properly classify the soils and ensure that all necessary soil management and disposal procedures are followed. This would apply to shallow soils adjacent to and near the SR12/Red Top Road, the SR12/Chadbourne Road, and the I-80/Abernathy Road intersections and within any Caltrans right-of-way that may be affected by the Project.

**Table 4.10-1. Listed Sites of Potential Concern within Study Area**

No.	Firm Name/Address	List	Status
1	Super Store 3675 Green Valley Road	CHMIRS; HAZNET; SWEEPS UST; UST	Release of chemical vapor in September 2000 when a contractor cut a pipeline. Incident was over in 20 minutes, and no soil or water contamination was reported. Inactive UST site. No hazardous violations reported.
2	Red Top Mini Market 151 Red Top Road	LUST; UST; CORTESE; SWEEPS UST	Release of gasoline affecting groundwater reported in January 1988 during tank closure. Case closed in November 1996. Inactive UST site.
3	Unocal #5702/Kayo Oil #2705702 199 Red Top Road	LUST; UST; HAZNET; SWEEPS UST; CA FID UST	Release of gasoline reported in September 1995. Case closed in August 1997. Active UST site. Site has been listed as generator of oil-containing waste and other organic hazardous wastes with no reported violations.
4	Interstate 80 West Overpass at Red Top Road	CHMIRS	Release of hazardous materials on freeway reported in February 1988.
5	Sequoia Supply/ Primesource Inc 250 Dittner Road	LUST; SWEEPS UST; HIST UST; CORTESE; HAZNET; UST	Release of diesel reported in December 1987. Post remedial monitoring actively being performed. Site has been listed as a generator of waste oil with no reported violations. Active UST site
6	4884 West Cordelia Road	CHMIRS	Release of hazardous materials reported in August 1989.
7	Costco 453/Price Club 153 5101 Business Center Drive	SQG; UST; HAZNET; FINDS; SWRCY	No hazardous waste violations reported. Site is active UST site. Site is reported as generator of metal sludge waste with no reported violations.
8	Green Valley Cleaners 5055 Business Center Drive	CLEANERS; HAZNET	Dry cleaning establishment. No hazardous waste violations.
9	Solano County Office of Education 5100 Business Center Drive	HAZNET	Site is reported as generator of solvents and other organic and inorganic wastes.
10	The Customer Company/Cheaper/Food & Liquor #56 3683 Green Valley Road	LUST; UST; SWEEPS UST; CORTESE	Release of vehicle fuels affecting groundwater reported in December 1986. Case closed in September 1998. Inactive UST site.
11	Johnson Herman Supply 3675 Green Valley Road	LUST; UST; SWEEPS UST	Inactive LUST site, no additional information available in County or RWQCB records. One 1,000-gallon gasoline UST formerly located at site.
12	Solano Community College 4000 Suisun Valley Road	LUST; SQG; UST; HAZNET	Release of gasoline affecting groundwater reported in May 1990. Case closed in January 2000. No hazardous waste violations reported. Active UST site. Site is listed as generator of cadmium containing waste, asbestos-containing waste, photochemicals and photoprocessing waste, and other organic and inorganic wastes.
13	Walmart Store 2048 300 Chadbourne Road	HAZNET	Site is listed as generator of oil-containing waste, waste oil and mixed oil, and organic solid waste.
14	Fairfield STP South of Highway 80 and Busch Lane	CERCLIS	Site was investigated under CERCLIS in 1980; no further investigation or remediation was recommended. Site was archived by US EPA in 1989; no additional information available in database records.
15	15 Moore Tractor Co	HAZNET	Site is listed as generator of oil-containing waste and organic liquid waste

	4088 Russell Road		
16	Caltrans Russell Road at I-80.	UST; SWEEPS UST; CA FID UST	A 350-gallon diesel storage tank was removed in 1986. No evidence of release was noted in laboratory analysis of a sample from the excavation, and the case was closed.
17	Valine Property 4000 Russell Road	LUST; UST; HAZNET; CORTESE	Release of gasoline reported in 2000, during tank removal. Pollution was characterized in 2005 and post remedial monitoring is actively being performed at the site. Site is listed as generator of oil-containing waste, empty containers, and surplus organic wastes.
18	Concrete Pipe Distributors 4974 Abernathy Road	County	A number of violations were noted in a May 1994 County inspection. The violations included several unpermitted businesses operating from the property, storage of inoperable vehicles and mobile homes, improper sanitation, storage of several unlabeled 55-gallon drums, and storage of construction debris. An order was made to demolish or rehabilitate the buildings and remove wastes and vehicles. The drums were ultimately determined to have been generated by Moore Tractor Company.
19	3101 Busch Road	CHMIRS	Ammonia gas was released at this site in September 1998 due to failure of a pressure relief valve. The valve was open for two minutes.
20	I-80 Westbound Off-ramp at Abernathy Road	CHMIRS	Three separate releases of hazardous materials reported on the freeway in June 1988, October 1988, and April 1991.
21	Fairfield Mitsubishi 2595 Auto Mall Parkway	SQG	No hazardous waste violations reported.
22	Fairfield Dodge 2901 Auto Mall Parkway	SQG	No hazardous waste violations reported.
23	Beacon Ultra Mart 2390 Auto Mall Parkway	LUST; UST	Release of waste oil reported in June 1995. Case closed in April 1996. Inactive UST site.
24	Green Valley Tractor Co. 4135 Abernathy Road	County	Site disposes of approximately 500 gallons of waste oil, 24 gallons of solvents, and one 55-gallon container of waste filters per year. A warning notice was given to the facility during a September 2003 County inspection, as containers containing waste oil, filters, and antifreeze were not labeled, the facility had an extra EPA generator ID, and antifreeze was accumulated for longer than 180 days.
25	Rockville Road at Chadbourne Road	CHMIRS	Release of hazardous materials reported in March 1991 at agricultural property.

Source: EDR, 2003.

Notes:

- CA FID = California Facility Inventory Database for historic listings of UST sites.
- CERCLIS = US EPA list of known or suspected hazardous material release sites.
- CHMIRS = California Hazardous Materials Incident Reporting System database of hazardous materials spills.
- Cleaners = List of dry cleaning establishments.
- Cortese = State list of hazardous materials release sites.
- Deed = Cal EPA list of sites with deed restrictions.
- FINDS = Facility Index System
- HAZNET = Cal EPA list of hazardous waste generators based on manifest data..
- LUST = RWQCB/Solano County list of leaking underground storage tanks.
- REF = Cal EPA list of sites referred to another agency for follow-up action.
- SLIC = RWQCB Spills, Leaks, Investigations, and Cleanups list of non-UST groundwater contamination sites.

- County = Solano County hazardous materials case files.
- Sweeps = Statewide Environmental Evaluation and Planning System listed registered USTs in the 1980s.
- SWRCY = List of recycling facilities in California.
- SQG = US EPA RCRA-registered small-quantity hazardous waste generators, generating at least 100 kg, but less than 1,000 kg, of hazardous waste per month.

## **REGULATORY SETTING**

### **State, Regional, and Local Plans**

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as “Superfund,” is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for “cradle to grave” regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety & Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

In California, the U.S. EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (Cal EPA). In turn, a local agency, the Hazardous Materials Section of the Solano County Resource Management Department, has been granted responsibility for implementation and enforcement of many hazardous materials regulations in Solano County under the Certified Unified Program Agency (CUPA) Program (California Health and Safety Code Chapter 6.11).

In California, regional agencies are responsible for programs regulating emissions to the air, and discharge of waste and wastewater to land, surface waters, and groundwater. At the Project site, the Bay Area Air Quality Management District (BAAQMD) has oversight over air emissions, and the San Francisco Regional Water Quality Control Board (RWQCB) regulates discharges and releases to land, surface waters, and groundwater. The RWQCB provides regulatory oversight for leaking underground storage tank (UST) release sites and other sites with contaminated groundwater. At the Project site, the agency for oversight of leaking UST cases is the Solano County Environmental Health Department, Hazardous Materials Program.

## **HAZARDS IMPACTS ANALYSIS**

### **Significance Criteria**

#### **California Environmental Quality Act (CEQA)**

Appendix G of the CEQA Guidelines identifies environmental issues to be considered when determining whether the project could have a significant effect on the environment. STA has applied these standards of significance for evaluating impacts of the Project.

The Project would have a significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials,
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment,
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school,
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment,
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport public use airport, would the project result in a safety hazard for people residing or working in the project area,
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area,
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and
- Expose people or structures to a significant loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

#### **Issues Not Discussed Further**

##### **Be located on a site that is included on a list of hazardous materials sites.**

The Project area does not overlap with any active hazardous materials sites included on the California Environmental Protection HAZNET database (Government Code § 65962.5.). Nine sites were designated on the state regulatory list within the projected alignment. Table 4.10-1 demonstrates the nine sites designated on the HAZNET database. The first site was a release of chemical vapor in September 2000 when a contractor cut a pipeline. No soil or water contamination was reported. The second site was a release of gasoline reported in September 1995 and the case was closed in August 1997. The third site was a release of diesel reported in December 1987, with post remedial monitoring actively being performed. The fourth site was reported as a generator of metal sludge with no reported violations. The five remaining sites were reported for generating solvents, organic and inorganic wastes, oil-containing waste, and releasing gasoline affecting groundwater with subsequently closed cases. Therefore, there are

no impacts related to the Project being located on a site which is included on a list of hazardous materials sites.

*Be located within an airport land use plan, or within two miles of a public or private airport.*

The Project area is not located in the vicinity of a private or public airstrip, nor is it included in an airport land use plan. The closest known airport in the vicinity of the Project is Travis Air Force Base which is over five miles away. Therefore, the Project would not impact a public or private airport or conflict with an adopted airport land use plan.

*Interfere with an adopted emergency response plan or emergency evacuation plan.*

The Project would not impair implementation of or physically interfere with the Solano County Emergency Response Plan, Chapter 7 of Title 2 of the Government Code, Emergency Services Act. No other known emergency response or emergency evacuation plans apply to the Project area. Therefore, the Project would not impact an adopted emergency response plan or emergency evacuation plan.

*Be located adjacent to areas subject to wildland fires.*

According to the wildland fire map in the City General Plan, the West End of the Project is identified as having a high to moderate potential for wildland fires and the East End is identified as having a potential of low to none for wildland fires. The Project would not include the development of any structures or facilities that are particularly susceptible to wildland fires. Roadways can often act as a fire break for smaller wildland fires and improve access for emergency service personnel to areas in the event of a wildland fire. It is also acknowledged that a new roadway could introduce a new source of potential fire from automobiles and associated human activity.<sup>1</sup> Overall, the Project is anticipated to have no adverse effect on wildland fires. In the event that there were wildland fires in the West End, the proposed Project would provide an additional means of emergency evacuation and improve access for emergency response. Additional discussion of fire protections services is included in section 4.12, Public Services and Recreation.

## **ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

### **Less than Significant Impacts**

*Hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school.*

Land uses in the immediate vicinity of the Project include I-80, SR12, agricultural lands, and commercial development. The closest known schools in the vicinity of the Project are Nelda Mundy Elementary School and Solano Community College, which are both over one-quarter of a mile away. The West End of the alignment is west of the Nelda Mundy Elementary School and the East End is southeast of Solano Community College. The Project would not emit hazardous roadway emissions, therefore there are no impacts related to hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school are anticipated. The effect of the Project on air quality is discussed in section 4.3, Air Quality. Impacts from hazardous emissions would be less than significant.

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<sup>1</sup> Chief Jay Huyssoon, of the Cordelia Fire Protection District, personal phone communication, November 7, 2007.

## Significant and Potentially Significant Impacts and Mitigation Measures

- 4.10-1: The Project has the potential to expose the public to significant hazards through the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. This is considered a potentially significant adverse impact.**

### *Operation Period Activities*

#### West End and East End

Traffic using the new roadway constructed by the Project is not anticipated to routinely transport, use, or disposal of hazardous wastes. Therefore, hazard and hazardous materials impacts related to operation activities are considered less than significant. Impacts related to air quality are discussed in section 4.3, Air Quality.

### *Construction Period Activities*

#### West End

No buildings would be demolished in the West End. Soils near SR12 may contain aerially deposited lead from vehicle exhausts. Construction in the West End may require excavations to the depth of groundwater, and would be in an area historically used for agriculture where soils may have previously been exposed to hazardous materials.

#### East End

The Project would involve grading of land that has previously been under agricultural cultivation and has the potential to be contaminated with hazardous materials. In the East End, the Project would require the demolition of one or more businesses that appears to have been constructed prior to 1980. Demolition of buildings built prior to 1980 could result in exposure to asbestos-containing materials.

#### West End and East End

Yellow thermoplastic and yellow paint used for pavement markings throughout the Project area may contain lead in excess of hazardous waste thresholds. Lead and asbestos abatement must be performed in accordance with existing laws and regulations. Regulations pertaining to demolition of structures, including the agricultural outbuildings, with lead-based paint are promulgated by the U.S. EPA, DTSC, and Housing and Urban Development (HUD). For example, the U.S. EPA and DTSC require that lead-based paint equal to or greater than the HUD definition of lead-based paints (greater or equal to 1 mg/cm<sup>2</sup> or 0.5 percent lead by weight) be removed prior to demolition if the paint is loose and/or peeling. If the paint is securely adhering to the substrate, the entire material may be disposed of as demolition debris, which is a non-hazardous waste. Loose and peeling paint must be disposed of as a California and/or Federal hazardous waste if the concentration of lead exceeds applicable waste thresholds.

Federal, state, and local requirements also govern the removal of asbestos or suspected asbestos containing materials, including the demolition of structures where asbestos is present. These requirements are promulgated by the U.S. EPA, Federal and State OSHA, DTSC, and the Bay Area Air Quality Management District (BAAQMD). All friable asbestos containing materials (ACM), or non friable ACM subject to damage, must be abated prior to demolition in accordance with BAAQMD requirements. Friable ACM must be disposed of as an asbestos

waste at an approved facility. Non friable ACM may be disposed of as non hazardous waste at landfills that will accept such wastes.

Therefore, construction activities related to the Project could result in exposure to aerially deposited lead and asbestos-containing materials, and potential groundwater and soils contamination. Construction activities, such as grading and the unearthing of soils could disturb lead-affected soils, dispersing lead particles through the air where they may affect construction workers, the general public, and the environment. Exposure and potential contamination related to hazards and hazardous materials of this kind are considered to be potentially significant impacts. The following measures shall be implemented to mitigate construction related impacts:

**Mitigation Measure 4.10-1a:** Lead and asbestos shall either be abated if found during construction, or STA shall provide special construction worker health and safety procedures during demolition activities.

An asbestos and lead-based paint survey shall be performed for all structures constructed prior to 1980 that will be demolished during Project construction activities. If asbestos-containing materials are determine to be present, the materials shall be abated by a certified asbestos abatement contractor in accordance with BAAQMD Regulation 11, Rule 2 and DTSC hazardous materials laws and regulations. All work shall be conducted in accordance with applicable construction worker health and safety requirements, including CalOSHA Construction Safety Orders for lead (Title 8 CCR Section 1532.1) and asbestos (Title 8 CCR Section 1529). These requirements may include air monitoring during construction, worker training, and preparation of a Lead Compliance Plan prior to construction.

**Mitigation Measure 4.10-1b:** Soils within the existing right-of-way of SR12 or I-80 that would be disturbed during construction shall be tested prior to construction for total and/or soluble lead to properly classify the soils and ensure that all necessary soil management and disposal procedures are followed.

**Mitigation Measure 4.10-1c:** Prior to commencement of construction, a minimum of four soil samples from soils immediately beneath railroad tracks located in the West End shall be taken. These samples shall be analyzed for Title 22 metals, total petroleum hydrocarbons (TPH), semi-volatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs).

Concentrations of contaminants in the soils shall be compared to construction worker health and safety and hazardous waste thresholds, as defined by RWQCB Environmental Screening Levels (ESLs) for construction/trench worker direct contact. If the concentrations of contaminants exceed construction worker health and safety standards, additional site safety measures, such as use of personal protective equipment and/or dust control procedures may be required during some construction activities to minimize exposure to the contaminated soils. If the concentrations of contaminants exceed hazardous waste thresholds, then excavated soils must be managed during construction and may require off-site disposal. Depending on the extent of contamination identified, STA shall report concentrations that exceed hazardous waste thresholds to the Solano County Department of Environmental Management or other appropriate regulatory agency, conduct additional investigation and/or remediation under existing regulatory programs, such as those described in the Regulatory Setting section of this DEIR analysis.

**Mitigation Measure 4.10-1d:** An investigation of groundwater quality shall be required should excavation to the depth of groundwater (which may be located as shallow as 10 ft below ground surface (bgs) in portions of the Project area) be proposed near areas where groundwater may have been affected by reported releases of hazardous materials.

Concentrations of contaminants in groundwater shall be compared to construction worker health and safety thresholds and groundwater discharge permit thresholds. If the concentrations of contaminants exceed RWQCB ESLs, worker health and safety measures construction worker health and safety standards, additional site safety measures, such as use of personal protective equipment, may be required during some construction activities to minimize exposure to the contaminated groundwater. If the concentrations of contaminants exceed permit thresholds, then STA shall manage dewatered groundwater during construction and treat and/or dispose off-site. Depending on the extent of contamination identified, the discovery of groundwater contamination may require reporting to the Solano County Department of Environmental Management or other appropriate regulatory agency, and may trigger requirements for additional investigation and/or remediation under existing regulatory programs.

**Mitigation Measure 4.10-1e:** During detailed design and prior to construction, a minimum of eight four-point composite samples from areas historically under agricultural cultivation shall be collected and analyzed for Title 22 metals and organochlorine pesticides.

Concentrations of contaminants in the soils shall be compared to construction worker health and safety and hazardous waste thresholds. If the concentrations of contaminants exceed construction worker health and safety standards, additional site safety measures, such as use of personal protective equipment and/or dust control procedures, may be required during some construction activities to minimize exposure to the contaminated soils. If the concentrations of contaminants exceed hazardous waste thresholds, then excavated soils must be managed during construction and may require off-site disposal. Depending on the extent of contamination identified, concentrations that exceed hazardous waste thresholds may require reporting to the Solano County Department of Environmental Management or other appropriate regulatory agency, and may trigger requirements for additional investigation and/or remediation under existing regulatory programs.

**Mitigation Measure 4.10-1f:** Prior to construction a qualified environmental professional shall take a minimum of four soil samples from areas adjacent to each agricultural outbuilding affected by the Project. These samples shall be analyzed for Title 22 metals, organochlorine pesticides, and total petroleum hydrocarbons (TPH) as gasoline, diesel, and motor oil. If evidence of contaminated soil results from the sampling, further remediation shall be conducted.

Concentrations of contaminants in the soils shall be compared to construction worker health and safety and hazardous waste thresholds. If the concentrations of contaminants exceed construction worker health and safety standards, additional site safety measures, such as use of personal protective equipment and/or dust control procedures, may be required during some construction activities to minimize exposure to the contaminated soils. If the concentrations of contaminants exceed hazardous waste

thresholds, then excavated soils shall be managed during construction and may be disposed of off-site. Depending on the extent of contamination identified, STA shall report concentrations that exceed hazardous waste thresholds to the Solano County Department of Environmental Management or other appropriate regulatory agency, and may conduct additional investigation and/or remediation under the regulatory agency's direction.

**Significance after Mitigation:** Less than significant.

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