

5.8 HAZARDS AND HAZARDOUS MATERIALS

This section addresses the potential presence of hazardous materials and conditions within the Project area and analyzes the potential risk of such materials in proximity to proposed development and human activities. It describes the existing conditions in the Project area, identifies any hazardous materials that may impact public safety, and suggests mitigation measures to reduce the level of significance, if necessary. The reader is referred to Section 5.3, Air Quality, for information regarding air quality hazards, Section 5.6, Geology, Soils, and Seismicity, for geologic and seismic hazards, and Section 5.9, Hydrology and Water Quality, for information regarding impacts associated with water quality and flooding.

5.8.1 EXISTING SETTING

HAZARDOUS MATERIALS DEFINED

The term *hazardous substance* refers to both hazardous materials and hazardous wastes. A material is defined as hazardous if it appears on a list of hazardous materials prepared by a federal, state or local regulatory agency or if it has characteristics defined as hazardous by such an agency.

The California Environmental Protection Agency, Department of Toxic Substances Control defines hazardous waste, as found in the California Health and Safety Code Section 25141(b), as follows:

. . . its quantity, concentration, or physical, chemical, or infections characteristics: (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; (2) pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed.

Public health is potentially at risk whenever hazardous materials are or will be used. It is necessary to differentiate between the "hazard" of these materials and the acceptability of the "risk" they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The risk to health and public safety is determined by the probability of exposure, in addition to the inherent toxicity of a material. When the risk of an activity is judged acceptable by society, in relation to perceived benefits, then the activity is judged to be safe. For example, ammonia is a common household chemical that can be hazardous to health, irritating the eyes, respiratory tract, and skin, and causing bronchitis or pneumonia following severe exposures. However, the risk of such a severe exposure is believed to be low. Therefore, the use of household ammonia is thought to be a safe activity.

Factors that can influence the health effects of exposure to hazardous materials include the dose to which the person is exposed, the frequency of exposure, the duration of exposure, the exposure pathway (route by which a chemical enters a person's body), and the individual's unique biological susceptibility.

In addition to chemicals, which are most commonly associated with the term *hazardous materials*, other categories applicable to the definition are, for example:

- Radioactive materials, which contain atoms with unstable nuclei that spontaneously emit ionizing radiation to increase their stability.

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- Radioactive wastes, which are radioactive materials that are discarded (including wastes in storage) or abandoned.
- Biohazardous materials, including certain infectious agents (microorganisms, bacteria, molds, parasites, and viruses) that normally cause or significantly contribute to increased human mortality, and organisms capable of being communicated by invading and multiplying in body tissues.
- Medical waste, which includes both biohazardous wastes (byproducts of biohazardous materials) and sharps (devices capable of cutting or piercing, such as hypodermic needles, razor blades, and broken glass) resulting from the diagnosis, treatment, or immunization of patients, or from research pertaining to these activities.

Existing Hazardous Materials and Conditions

According to information provided by the State of California Hazardous Waste and Substances Site List (Envirostor), the Project area is not identified as a hazardous materials waste site and is not listed on the Hazardous Waste and Substances Site List (Cortese List) compiled pursuant to Government Code Section 65962.5(a) (DTSC 2013). No sites located in the City were on the Cortese List as of July 2013. The Envirostor database also contains the locations of other sites not on the Cortese List, such as sites of leaking underground and aboveground storage tanks and hazardous materials investigations for future school sites.

Hazardous Materials Database Queries

The Envirostor database lists 26 sites in the City, most of which are for school investigations, which are required for future school sites. Of these locations, five are for a hazardous materials cleanup effort or other type of investigation, such as a voluntary or military investigation. These five sites are listed in **Table 5.8-1**.

**TABLE 5.8-1
ENVIROSTOR DATABASE HAZARDOUS MATERIALS LOCATIONS**

Facility Name	Location/Address	Case Type	Status	Distance from Project Area
Georgia-Pacific Chemicals	10399 East Stockton Boulevard	Voluntary Cleanup – Soil, Surface Water	Active	0.5 mile
Pleasant Grove High School/Katherine Albiani Middle School	Bond Road and Bradshaw Road	School Cleanup	Certified	3 miles
Obie’s Dump	8437 Sheldon Road	Voluntary Cleanup	Active – Groundwater and Soil	3 miles
Kalwani Property	8151 Sheldon Road	Voluntary Cleanup	No Further Action – Soil	3 miles
Elk Grove (J09CA0797)	167.4 acres near Stonebrook Drive	Military Investigation	Inactive – Needs Evaluation	2.25 miles

Source: DTSC 2013a

As shown in the above table, only one known hazardous materials release site, Georgia-Pacific Chemicals, is located within 1 mile of the Project area. At this site, a former resin manufacturing facility that operated between 1967 and 2010, a voluntary cleanup effort was initiated in 2011 to clean up soil and surface water contamination that occurred due to past uses and the presence of aboveground storage tanks. Potential contaminants of concern at the site include lead, TPH-diesel, azobenzene, phenol, and xylenes (DTSC 2013a). As of July 2013, the status of the investigation is open, but cleanup activities have been completed and DTSC is awaiting final documentation of site cleanup (DTSC 2013b).

In addition to sites listed in the Envirostor database, the State Water Resources Control Board (SWRCB) maintains the Geotracker database, which maps the locations of sites with permitted underground storage tanks (USTs), which have the potential to leak hazardous materials and result in groundwater contamination. The Geotracker database mapped four permitted UST sites within one mile of the Project area and five investigation sites. Those sites are listed in **Table 5.8-2**.

**TABLE 5.8-2
UST SITES NEAR PROJECT AREA**

Facility Name	Location/Address	Case Type	Status	Distance from Project Area
Arco #5752	10466 Grant Line Road	Permitted UST and Leaking UST	Completed – Case Closed	0.65 mile
Chevron #207592	10500 West Stockton Boulevard	Permitted UST	n/a	0.6 mile
Elk Grove County Park	9950 Elk Grove-Florin Road	Permitted UST	n/a	0.5 mile
Flying “V” SS (Former)	10473 Stockton Boulevard	Leaking UST	Completed – Case Closed	0.5 mile
Georgia Pacific Resins	10399 East Stockton Boulevard	Other Cleanup Site	Completed – Case Closed	0.5 mile
Transcon Lines	10401 Grant Line Road	Leaking UST and Other Cleanup Site	Completed – Case Closed	0.8 mile
Venco Cardlock	9050 Elkmont Way	Permitted UST	n/a	0.3 mile

Source: SWRCB 2013

As shown in **Table 5.8-2**, there are no active investigations into leaking USTs within 1 mile of the Project area. There are closed cases where cleanup activities have been completed and operating permitted USTs, which will continue to be monitored for the possibility of leaks by the SWRCB. All but one of the sites within 1 mile of the Project area is located to the east on the opposite side of SR 99. The UST located at the Elk Grove County Park is generally located to the northeast on the opposite side of SR 99 as well.

Residual Agricultural Chemicals

The majority of the Project area has been used for agricultural purposes. Past use of agricultural chemicals used as pesticides can result in residual chemicals in the soil that can expose people to possible health risks. In general, over-the-counter insecticides and herbicides generally do not persist in soils for greater than one year from application. However, certain types of agricultural chemicals can be persistent and remain in soils for years. Irrigated pasture, dry-farmed crops, and natural grasses typically require little to no applications of environmentally persistent

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pesticides, but cultivated irrigated row crops may have been subject to applications of restricted agricultural chemicals, which could be persistent. Orchards and orchard-cultivated soils may have been contaminated through the repeated application of agricultural chemicals to fruit or nut trees (City of Elk Grove 2003b, p. 4.4-13). If any soils or groundwater contaminated with persistent chemicals from past agricultural practices are encountered during ground-disturbing activities associated with Project construction, it could create a potential hazard to human health and the environment if not properly contained and cleaned up.

Potentially Hazardous Building Materials

Many of the existing structures located within the Project area would be demolished as development activities proceed. As described in more detail below, some of the properties within the Project area have had Phase I ESAs performed and are known to contain such structures, so it is possible that other properties contain buildings with potentially hazardous building materials. One of the studies also described asbestos pipes that could pose a threat. Older structures may contain potentially hazardous building materials such as asbestos and/or lead-based paint, which can create a hazard to construction workers when released into the atmosphere.

Asbestos Containing Building Materials

Structures constructed or remodeled between 1930 and 1981 have the potential to contain asbestos containing building materials (ACBM). These materials can include, but are not limited to: resilient floor coverings, drywall joint compounds, acoustic ceiling tiles, piping insulation, electrical insulation and fireproofing materials. Portions of the Project area contain residential and agricultural uses, and many of the structures onsite were built prior to a government ban on ACBM in 1978/79. Therefore, building materials containing asbestos may be present onsite in any of the residences constructed after 1930 and prior to 1979. Due to the timeframe in which many of the onsite structures were built and because some of the Phase I ESAs already prepared for properties within the Project area disclosed the likelihood of ACBM being present within those properties, it is likely that many of the onsite buildings contain ACBM.

Lead Based Materials

Lead-based paints were phased out of production in the early 1970s. Exposure to lead from vintage paint is possible when the paint is in poor condition or during its removal. In construction settings, workers can be exposed to airborne lead during renovation, maintenance, or removal work. Many of the on-site buildings were constructed prior to the ban on lead-based paints and therefore these materials may be present on-site. Furthermore, some of the Phase I ESAs identified the potential for the presence of lead at several properties as a concern with regard to on-site hazards.

Electrical Power Lines and Transformer PCB Potential

In 1976, the United States Congress enacted the Toxic Substance Control Act (TSCA) which reviewed all industrial chemicals, including polychlorinated biphenyls (PCBs). Since the TSCA, the production and use of PCBs has been prohibited, limited, or phased out. Potential sources of PCBs onsite include fluorescent light ballast and electrical transformers. Power lines and transformers have been identified as being located within the Project area.

On-Site Known and Unknown Hazardous Materials

Phase One (also called Phase I) Environmental Site Assessments (ESAs) have been prepared for some of the properties within the Project area (see **Figure 5.8-1, Phase I Environmental Site Assessments (ESAs)**). The following discussion contains site-specific summaries of the Phase One ESAs, which are provided in numerical order by APN. Mitigation measures associated with Recognized Environmental Conditions (RECs) and other environmental concerns identified by the Phase One ESAs are included under the Impacts and Mitigation Measures subsection below.

While several of the properties located within the Project area have been evaluated for the presence of hazardous materials and conditions, the remaining properties have not been evaluated, so there is a possibility that these properties could contain hazardous materials and/or conditions. This may include the presence of large quantities of materials like agricultural chemicals, underground or aboveground storage tanks containing materials such as diesel fuels or petroleum, potentially dangerous structures, or contaminated soils. The potential for these properties to contain these types of hazardous materials or conditions will remain unknown until investigations are prepared by each property owner, or prior to properties being sold (a Phase I ESA is typically prepared as part of due diligence for purchase of developable property).

Moore Property (APN 132-0290-014)

The Moore Property was historically used for cattle grazing and as a family residence. The property currently contains the following structures: a single-family residence; a carport; an empty, enclosed, belowground pool; a shop building; a barn; and a storage/playhouse building. Drainage ditches are located along the north, south, and western boundaries of the property, with a livestock watering pond near the mid-point of the western boundary. The remaining portion of the property contains irrigated pasture land.

The Moore Property was not identified in any of the local, state, or federal agency databases searched by Environmental Data Resources, Inc. for the Phase One ESA or in recent database searches. Site reconnaissance and interviews conducted as part of the Phase One ESA identified several items of concern were identified on the property, including:

- The buildings located on the property were built during a time period when lead-based paints and asbestos-containing building materials could have been used for their construction.
- A septic system, an electrically powered agricultural well, and a domestic water supply well are located on the property and will need to be abandoned once they are no longer in use.
- Eight 5-gallon buckets of paint, along with a cabinet filled with various oils and spray paint, were observed in the shop and carport on the property.
- A debris pile consisting of wood debris, PVC piping, metal debris, three empty 55-gallon drums, one empty 35-gallon drum, and fencing materials was observed on the property. In addition, two rows of dirt piles containing PVC pipe, yard drain, and grass were observed.
- Pole-mounted power lines run east to west along the northern boundary of the property. One heavily stained transformer was observed near the northeast corner of the property. Additionally, pole-mounted power lines run north to south along the eastern boundary of

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the property. At the terminus of these lines, three stained pole-mounted transformers were observed. (Engeo 2005a)

Los Rios Community College District (LRCCD) Property (APN 132-0290-015)

The LRCCD Property currently contains one single-family residence, a detached garage, a horse barn, a horse riding arena, and a domestic water well. The remainder of the property consists of dry-farmed land (hay). Some orderly and organized metal debris was observed on the side of the barn. The property was historically used for dry farming activities.

The Phase One ESA prepared for the LRCCD Property, which included site reconnaissance and review of historical information, did not identify any Recognized Environmental Concerns, with the exception of potential asbestos-containing material in on-site structures (Ramcon 2003).

Boulder Glen Investors Property (APN 132-0290-016)

The Boulder Glen Investors Property, also referred to as 8488 Poppy Ridge Road, was historically used for rural residential and dry-farming (hay or grain) purposes. The site currently contains one rural residence, one barn, and vacant agricultural land that supports winter hay crops. The barn is used for equipment and vehicle storage. Two large debris piles containing scrap metal, scrap wood, tires, numerous wood pallets, wood wall panels, a truck bed tool chest, an outboard boat motor, a lawn mower, a water heater, an air conditioner, several washers, steel piping, wood crates, steel racks, and tree and lawn clippings were observed on the east and west sides of the barn. A 55-gallon oil drum and an approximately 250-gallon aboveground storage tank were observed south of the residence. One water supply well is located on the site (WKA 2007a).

The Boulder Glen Investors Property was not identified in any of the local, state, or federal agency databases searched by Environmental Data Resources, Inc. for the Phase One ESA. Site reconnaissance and interviews conducted as part of the Phase One ESA did not identify any Recognized Environmental Conditions on the property. No evidence of hazardous material contamination was identified on or adjacent to the property. The only potential environmental issues identified were a septic system and a water supply well that will need to be abandoned once they are no longer in use and the debris piles located on the property (WKA 2007a).

Krull Property (APN 132-0290-017 and 132-0290-018)

The Krull Property was historically used for alfalfa production, limited dairy operations, irrigated pasture, residential, and limited chicken farming. The property is currently occupied by two single-family residences, two agricultural production wells, one domestic water well, one agricultural tailwater collection basin, one former milk barn, one equipment shelter, three former feed barns, one shop building, empty chicken shelters, and former cattle shelters. Approximately 10 acres of the property are currently being used to farm corn, bok choy, beans, snow peas, peppers, and tomatoes.

The Krull Property was not identified in any of the local, state, or federal agency databases searched by Environmental Data Resources, Inc. for the Phase One ESA. Site reconnaissance and interviews conducted as part of the Phase One ESA identified several Recognized Environmental Conditions on the Krull Property, including:

- Two underground storage tanks were removed in 2002 under an agricultural exemption. No analytical testing was performed on the soil within the tank pit at the time of removal. The former tanks remain on the property and are being used as burn barrels.

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- The buildings located on the property were built during a time period when lead-based paints and asbestos-containing building materials could have been used during their construction.
- Soil stockpiles are located in the northern area of the property.
- Agricultural and domestic water wells, as well as a septic system, are located on the property and will need to be abandoned once they are no longer in use. (Engeo 2003a)
- North Vineyard Investors Property (APN 132-0290-020)

The North Vineyard Investors Property was historically used for rural residential and dry-farming (hay or grain) purposes. The site is currently vacant agricultural land. One water supply well is located on the site.

The North Vineyard Investors Property was not identified in any of the local, state, or federal agency databases searched by Environmental Data Resources, Inc. for the Phase One ESA. Site reconnaissance and interviews conducted as part of the Phase One ESA did not identify any Recognized Environmental Conditions on the property. No evidence of hazardous material contamination was identified on or adjacent to the property, and there is a low potential for any significant concentration of persistent residual pesticide to exist in the soils. The only potential environmental issue identified was a water supply well that will need to be abandoned once it is no longer in use (WKA 2007b).

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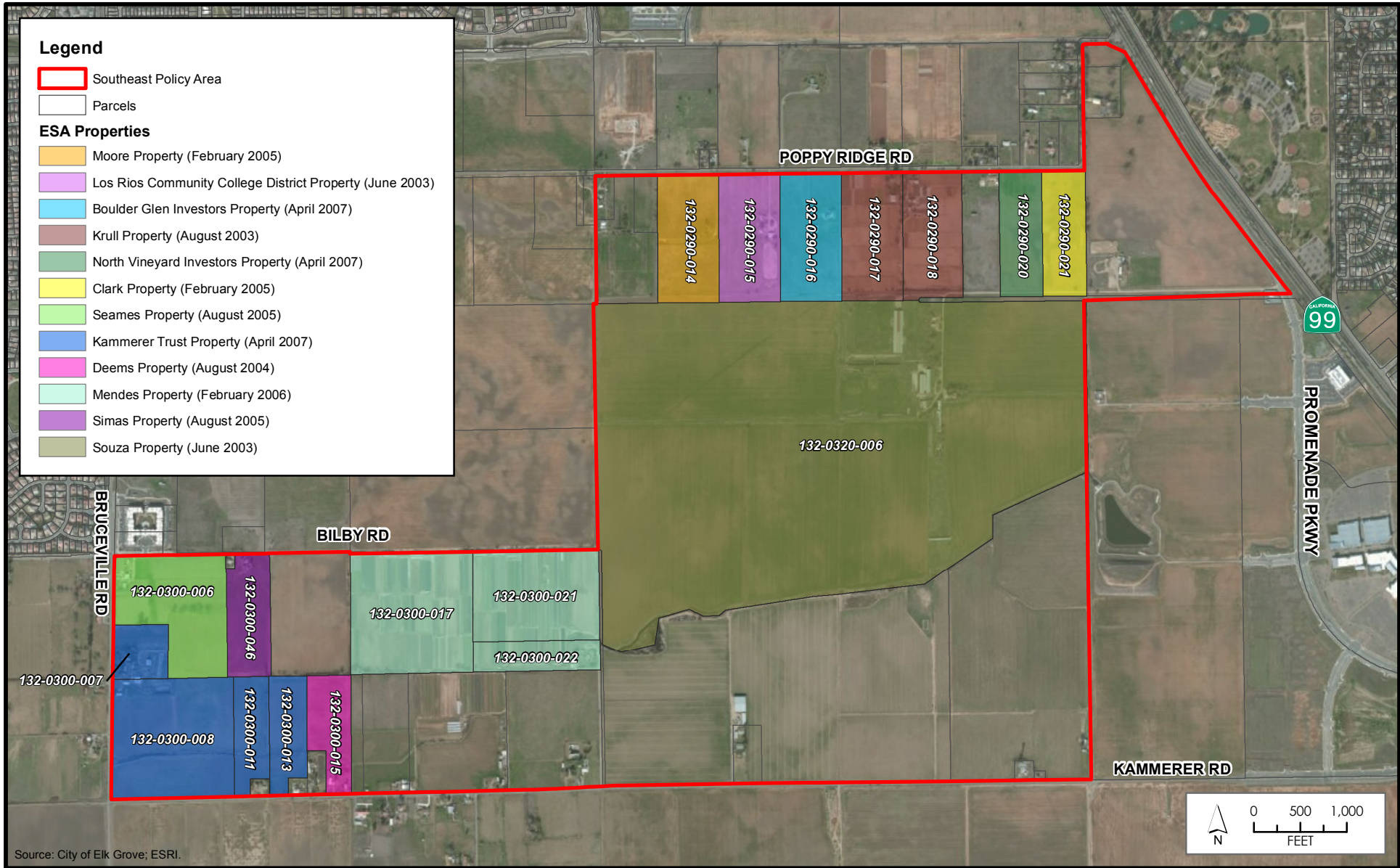


Figure 5.8-1
Phase 1 Environmental Site Assessments (ESA)

Clark Property (APN 132-0290-021)

The Clark Property was historically used as a rural residence and for small-scale farming and ranching activities. The property currently contains a modular home and garage, farm outbuilding structures, a small-scale farm operation, two trailers, and a large area occupied by fallow agricultural fields.

The Clark Property was not identified in any of the local, state, or federal agency databases searched by Environmental Data Resources, Inc. for the Phase One ESA. Site reconnaissance and interviews conducted as part of the Phase One ESA did not identify documentation of soil or groundwater impairments. No Recognized Environmental Conditions were identified on the property. However, the following potential environmental issues were identified:

- The property was historically used for agricultural purposes, and near-surface soils could potentially have experienced agrichemical impacts.
- A large quantity of debris was identified on the property. Debris included piles of compost heaps, scrap metal, approximately three dozen automobile tires, miscellaneous furniture and other household refuse, considerable lumber materials, and abandoned automobiles, boats, motorcycles, and trailers. (Engeo 2005b)

Seames Property (APN 132-0300-006)

The Seames Property currently contains primarily fallow land and a single-story rural residence, garage, and barn located in the northwestern portion the property. Two concrete septic tanks are located adjacent to the northeast and southwest of the residence. Also observed on the property were two motor homes, various household appliances, and farm equipment within the barn, a domestic water well located southeast of the barn, one 500-gallon aboveground storage tank containing gasoline located behind the barn, and irrigation wells and a subsurface irrigation distribution system.

Tetra Tech's site reconnaissance and review of historical information did not indicate any Recognized Environmental Conditions to the Seames property. However, the following developmental conditions were identified at the target property:

- Due to the age of the on-site structures located on the property, it is possible that asbestos-containing material and/or lead-based paint is present within building materials or finishes of each structure.
- One domestic well and a septic system are located on the property and will need to be removed when no longer in use.
- Irrigation wells and a distribution system were observed on the property and will need to be abandoned when no longer in use.
- One 500-gallon aboveground storage tank is located behind the barn. (Tetra Tech 2005a)

Kammerer Trust Property (APN 132-0300-007, 132-0300-008, 132-0300-011, and 132-0300-013)

The Kammerer Trust Property was historically used as a rural residence, grazing land, and a family-owned dairy farm. Currently, the majority of the property consists of fallow agricultural fields. An east-west-trending stream crosses the southern portion of the property.

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The Kammerer Trust Property also contains former dairy buildings (milk barn, hay barn, feedlot barn), two single-family residences, two mobile homes, two garages, a pond, and three debris piles. These are described in more detail below.

The main residence is located in the northwestern portion of the property. Three empty 55-gallon drums were observed in the side yard of the residence. A koi pond and bird enclosures, as well as a domestic supply well, are in the vicinity of the main residence. An unoccupied residence with a garage and shed is located southwest of the main residence.

An unoccupied mobile home was observed southeast of the residence, with a shed, the remains of a grain silo, and a covered animal enclosure located in the vicinity of the mobile home. A debris pile containing green waste and discarded household items is located to the east of the mobile home. A second mobile home and debris pile containing lumber, tires, an empty water tank, and various metal scraps were also identified on the property.

Three buildings are located in the central portion of the Kammerer Family Trust Property: a milk barn, a hay barn, and a garage. Drainage from this area is primarily directed to a main drainage channel and a 200-foot by 100-foot pond. An agriculture water supply well is located on the north side of the pond. An exposed well casing was also observed on the property near the active water supply well.

A feedlot barn and fenced cattle holding area are located to the north of the hay barn and pond, along with several soil stockpiles. A third debris pile was observed near the feedlot barn.

The Kammerer Family Trust Property was not identified in any of the local, state, or federal agency databases searched by Environmental Data Resources, Inc. for the Phase One ESA. Site reconnaissance and interviews conducted as part of the Phase One ESA identified several areas of concern, including potential Recognized Environmental Conditions associated with the former dairy operations. These areas of concern include:

- The buildings located on the property were built during a time period when lead-based paints and asbestos-containing building materials could have been used in their construction.
- There is the potential for persistent pesticides to have been applied in the past to the areas surrounding the structures, to the orchard, and in the area of the former vineyard.
- Dairy operations formerly occurred on the property. Dairy waste consists of manure and wastewater from dairy operations and maintenance activities. In general, dairy wastewater ponds create an anoxic soil column and increased nitrogen in soil and groundwater. The subsurface organics present in an anaerobic environment are one of the conditions necessary for potential methane gas generation to occur.
- A septic system, as well as five water supply wells (three active and two inactive but not abandoned), are located on the property and will need to be abandoned once they are no longer in use.
- Given the reported agricultural history of the site, the potential for buried asbestos-concrete (transite) irrigation piping exists.
- Three debris piles containing stacked, stored, and discarded items were identified on the property. (WKA 2007c)

Deems Property (APN 132-0300-015)

The southern portion of the Deems Property contains two rural residences and associated outbuildings. In addition, the property contains a two water supply wells, an irrigation pond with an associated gas-powered pump, two septic systems, agricultural land used for dry-farmed crops such as alfalfa and wheat, and a farm equipment shed containing a hay baler, a swather, and a tractor.

The Deems Property was not identified in any of the local, state, or federal agency databases searched by Environmental Data Resources, Inc. for the Phase One ESA. Site reconnaissance and interviews conducted as part of the Phase One ESA did not identify any Recognized Environmental Conditions on the Deems Property. The only potential environmental issues identified were septic systems and water supply wells located on the property that will need to be abandoned once they are no longer in use (WKA 2004).

Mendes Property (APN 132-0300-017, 132-0300-021, and 132-0300-022)

The Mendes Property is currently being used as agricultural land for crops such as broccoli, cabbage, and carrots being farmed under a typical truck farm-type operation. The property contains several small sheds and greenhouses, an empty 55-gallon diesel fuel drum, two tractors, an 8-foot by 20-foot concrete pad, two agricultural water supply wells and a lift pump, a domestic well, two mobile homes, a carport, two outbuildings, and an aboveground pool. Miscellaneous stored items, such as three vehicles, wood, plastic pipe, and metal, are located in and around the yard area of the mobile homes.

The Mendes Property was not identified in any of the local, state, or federal agency databases searched by Wallace-Kuhl & Associates and Environmental Data Resources, Inc. for the Phase One ESA. Site reconnaissance and interviews conducted as part of the Phase One ESA did not identify any Recognized Environmental Conditions on the property. No evidence of hazardous material contamination was identified on or adjacent to the property, and there is a low potential for any significant concentration of persistent pesticide residual to exist in the soils. The only potential environmental issues identified were septic systems and water supply wells that will need to be abandoned once they are no longer in use and stored items and debris located on the property (WKA 2006).

Simas Property (APN 132-0300-046)

The Simas Property consists primarily of fallow agricultural land, with an unoccupied single-story rural residence and two wood garages in the northeastern portion of the property, and two concrete septic tanks located behind the residence. Farm equipment, used tires, and various household appliances are stored within the two garages. Three unmarked, empty, 55-gallon drums were located outside of the garage to the south of the residence. A domestic water well was located southeast of the residence. Irrigation wells and a subsurface irrigation distribution system were also observed on the property.

Tetra Tech's site reconnaissance and review of historical information did not indicate any Recognized Environmental Conditions on the Simas property. However, following developmental conditions were observed at the property:

- Due to the age of the on-site structures located on the property, it is possible that asbestos-containing material and/or lead-based paint is present within building materials or finishes of each structure.

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- One domestic well and a septic system are located on the property and will need to be removed when no longer in use.
- Irrigation wells and a distribution system were observed on the property and will need to be abandoned when no longer in use. (Tetra Tech 2005b)

Souza Property (APN 132-0320-006)

The Souza Property currently consists of feed crop production land, cattle grazing land, six residences, dairy barns, and feed lots.

The Souza Property was not identified in any of the local, state, or federal agency databases searched by Environmental Data Resources, Inc. for the Phase One ESA. Site reconnaissance and interviews conducted as part of the Phase One ESA identified several Recognized Environmental Conditions on the property, including:

- Immediately adjacent to the northwest corner of the small barn south of the milking barn, a 6-foot by 6-foot concrete and cinderblock box was observed buried in the ground. Approximately 2 feet of a clear liquid that appeared to be water was observed in the box. Piping within and over the box had been disconnected.
- A former underground storage tank was located underneath the main residence. No record of the removal, disposal, or any analytical testing performed on soils from the tank pit was available.
- The RWQCB is considering legal action against the Souza Property regarding illegal discharges to surface water.
- The buildings located on the property were built during a time period when lead-based paints and asbestos-containing building materials could have been used in their construction.
- Soil staining, tires, debris, and 55-gallon drums were observed on the property.
- Piles of animal waste and a waste lagoon were identified on the property.
- Septic systems and groundwater wells are located on the property and will need to be abandoned once they are no longer in use.
- Six empty above-ground storage tanks are located on the Souza Property. (Engeo 2003b)

Hazardous Materials Transport

Hazardous materials are transported on area roadways, including SR 99, continually. The transportation of hazardous materials within the City is subject to various federal, state, and local regulations. The only roadway and transportation route approved for the transportation of explosives, poisonous inhalation hazards, and radioactive materials in the City is Interstate 5, located more than 3 miles west of the Project area (City of Elk Grove 2003b, p. 4.4-5). Smaller quantities of hazardous materials, such as medical supplies, pool chemicals, cleansing agents, paint, and household chemicals, may be transported on all roadways throughout the City. An industrial area where larger concentrations of hazardous materials may occur is located

approximately 0.5 mile southeast of the Project area. It is likely that the majority of deliveries of hazardous materials to this area would occur via Grant Line Road and SR 99.

Hazardous material transport may also occur along the Union Pacific Railroad (UPRR), located less than a mile east of the Project area on the eastern side of SR 99.

Hazardous Materials Handling Facilities

According to the City General Plan EIR, two major industrial facilities that may handle large quantities of hazardous materials may pose safety hazards to other parts of the City: the Suburban Propane facility and the Georgia-Pacific Resins facility. Both facilities are located in the industrial area east of SR 99 approximately 0.7 mile and 0.5 mile from the nearest portion of the Project area, respectively. The General Plan EIR disclosed the following worst case scenarios as potential risks to off-site properties: vapor cloud explosion, radiant heat, flash fire, shrapnel, and formaldehyde exposure (City of Elk Grove 2003b, p. 4.4-7).

As mentioned above, the Georgia-Pacific Resins facility, also known as Georgia-Pacific Chemicals, ceased operations in 2010 and the site has been cleaned up. Unlike the Georgia-Pacific Resins facility, the Suburban Propane facility is still in operation. As mentioned above, the facility is approximately 0.7 mile from the closest portion of the Project area, which is the triangular section designated for Office uses directly adjacent to Highway 99. The nearest portion of the Project area planned for residential development is approximately 1.3 miles from the Suburban Propane facility.

The Suburban Propane Elk Grove Facility is considered one of the largest above ground propane storage facilities in the United States. This facility receives pressurized ambient temperature liquid propane from tank trucks and railcars, and stores both ambient temperature and refrigerated liquid propane, and loads ambient temperature propane for off-site transport. The major components at the Suburban Propane facility include four 60,000-gallon pressurized, ambient temperature propane storage tanks (herein referred to as "bullet tanks"); two 12,000,000-gallon refrigerated, low-pressure storage tanks; tank truck and railcar loading/unloading stations; a propane refrigeration system; a flare; and safety systems such as the water spray system in place in the railcar and truck loading area. The propane storage bullet tanks are approximately 12 feet in diameter and 91 feet long, placed horizontally on concrete supports about 5 feet above the ground. The large refrigerated propane storage tanks are approximately 146 feet in diameter and 122 feet tall. Propane stored in the pressurized, ambient temperature bullet tanks is used to fill tank trucks or railcars for off-site delivery. The facility is equipped with water deluge systems, which are intended to help prevent tank trucks and railcars from failing catastrophically due to excessive heat and internal pressure (City of Elk Grove 2003c).

To ensure safety of residents, the City has had prepared several risk evaluation studies that analyze the potential for hazards associated with both the Georgia-Pacific and Suburban Propane facilities. Since the Georgia-Pacific facility is no longer in operation, this analysis focuses on the potential for hazards associated with the Suburban Propane facility. One of the studies prepared by the City, *Review of Suburban Propane Hazards Analysis Studies and Evaluation of Accident Probabilities* (Quest 2003), indicated that the following two off-site hazards (accidental incidents and intentional acts) that could occur as a result of operation of the Suburban Propane facility as having potential to impact General Plan land uses that would contain large population areas:

Flash Fire – following failure of one or both refrigerated storage tanks at Suburban Propane facility

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Impact extent:	out to 1.5 miles
Accidental incident probability:	one chance in 2,800,000 a year
Intentional act probability:	one chance in 2,100,000 a year

Vapor cloud explosion – following failure of both refrigerated storage tanks at Suburban Propane facility

Impact extent:	out to 0.75 miles
Accidental incident probability:	one chance in 104,000,000 a year
Intentional act probability:	one chance in 3,200,000 a year

5.8.2 REGULATORY FRAMEWORK

Numerous federal, state, and local laws have been enacted to regulate the management of hazardous materials and wastes. These laws are regulated through programs administered by various agencies at the federal, state, and local levels. The following discussion contains a summary review of regulatory controls pertaining to hazardous substances, including federal, state, and local regulations.

FEDERAL

Federal agencies that regulate hazardous materials include the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), the Department of Transportation (DOT), and the National Institute of Health. The following federal laws and guidelines govern hazardous materials:

- Clean Water Act
- Clean Air Act
- Occupational Safety and Health Act
- Federal Insecticide, Fungicide, and Rodenticide Act
- Comprehensive Environmental Response, Compensation, and Liability Act
- Guidelines for Carcinogens and Biohazards
- Superfund Amendments and Reauthorization Act Title III
- Resource Conservation and Recovery Act
- Safe Drinking Water Act
- Toxic Substances Control Act

Prior to August 1992, the principal agency at the federal level regulating the generation, transport, and disposal of hazardous waste was the EPA under the authority of the Resource Conservation and Recovery Act (RCRA). As of August 1, 1992, however, the California

Department of Toxic Substances Control was authorized to implement the State's hazardous waste management program for the EPA. The federal EPA continues to regulate hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act.

Worker Safety

The Hazard Communication Standard (Title 29, Part 1910 of the Code of Federal Regulations [CFR]) requires that workers be informed of the hazards associated with the materials they handle. Workers must be trained in safe handling of hazardous materials, use of emergency response equipment, and the building emergency response plan and procedures. Containers must be appropriately labeled, and Material Safety Data Sheets must also be available in the workplace.

Hazardous Waste Handling

The California Department of Toxic Substances Control (DTSC) is authorized by the EPA to enforce hazardous waste laws and regulations in California. Requirements place "cradle-to-grave" responsibility for hazardous waste disposal on hazardous waste generators, who must ensure that their wastes are disposed of properly. Legal requirements dictate the disposal requirements for many waste streams (e.g., banning many types of hazardous wastes from landfills).

Hazardous Materials Transportation

The US Department of Transportation developed regulations pertaining to the transport of hazardous materials and hazardous wastes by all modes of transportation. DOT regulations specify packaging requirements for different types of materials. In addition to the US DOT, the US Postal Service (USPS), the US Environmental Protection Agency (EPA), the California Highway Patrol (CHP), the California Department of Transportation (Caltrans), and the DTSC implement and enforce state and federal laws regarding hazardous materials transportation. The USPS has regulations for the transport of hazardous materials by mail. The EPA has also promulgated regulations for the transport of hazardous wastes. These more stringent requirements include tracking shipments with manifests to ensure that wastes are delivered to their intended destinations.

Transporters of hazardous materials are subject to both US DOT and EPA enforcement of the regulations. Consequently, the DOT and the EPA coordinate their efforts, especially at the regional level, to obtain compliance with both the RCRA and Hazardous Materials Transportation Act (HMTA) regulations. Under the authority of the Resource Conservation and Recovery Act, the EPA regulates the transportation of hazardous materials. The EPA coordinates its transportation ordinances with the requirements of the HMTA and any statutes promulgated by the DOT pursuant to the HMTA. The EPA has set forth these standards applicable to transporters of hazardous materials in 40 CFR 263. These EPA standards incorporate and require compliance with the DOT provisions on labeling, marking, placarding, using proper containers, and reporting discharges. The EPA's adoption of these DOT standards ensures consistency among the requirements and avoids establishing conflicting rules. The DOT's regulations are documented in 49 CFR 171-180 and implemented by the Research and Special Programs Administration within the DOT. In summary, the EPA is directed by the RCRA to establish certain standards for transporters of hazardous materials and to coordinate regulatory activities with the DOT.

EPA regulations require a transporter to:

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- Comply with the manifest system (a system that ensures the integrity of the shipment from the point of origin to its destination).
- Maintain the appropriate records (signed manifests) for three years.
- Take immediate action to protect human health and the environment (e.g., notify local authorities or initiate interim measures) in the case of a discharge.
- Notify the National Response Center and submit a report to the DOT Office of Hazardous Materials Regulations in the event of a hazardous waste discharge.
- Clean up any discharges to the environment and take any actions required by the appropriate government officials for mitigating the discharge effects on human health and environment.

Transporters of hazardous wastes must also adhere to all of the Federal Motor Carrier Safety Regulations that the DOT has adopted under the Motor Carrier Safety Act of 1984. This act specifies more requisites that apply to the transport vehicle and the driver. Among them are concise specifications for vehicle parts and accessories, such as lighting devices, brakes, glazing and windows, fuel systems, tires, and horns. Additional requirements concerning inspection, repair, and maintenance are enumerated. Special driving and parking rules that relate to hazardous materials transportation are also indicated. Standards for drivers identify minimum qualifications, including physical qualifications, background and character profiles, and pertinent examinations. Also included among these rules are testing requirements for alcohol and controlled substances such as marijuana, cocaine, opiates, amphetamines, and phencyclidine. Other regulations pertaining to drivers include standards for the driving of vehicles, stopping, fueling, the use of lamps, the reporting of accidents, and the monitoring of a driver's hours of service.

STATE

The California Environmental Protection Agency (CalEPA) and the State Water Resources Control Board establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable state and local laws include the following:

- Public Safety/Fire Regulations/Building Codes
- Hazardous Waste Control Law
- Hazardous Substances Information and Training Act
- Air Toxics Hot Spots and Emissions Inventory Law
- Underground Storage of Hazardous Substances Act
- Porter-Cologne Water Quality Control Act

Hazardous Materials Management

CalEPA has established regulations governing the use of hazardous materials in the State. Within CalEPA, the DTSC has primary hazardous materials regulatory responsibility, but can delegate enforcement responsibilities to local jurisdictions that enter into agreements with the DTSC, for the generation, transport, and disposal of hazardous materials under the authority of the

Hazardous Waste Control Law. State regulations applicable to hazardous materials are contained primarily in Title 22 of the California Code of Regulations (CCR). Title 26 of the CCR is a compilation of those chapters or titles of the CCR that are applicable to hazardous materials management. Cal/OSHA standards are presented in Title 8 of the CCR; these are more stringent than federal OSHA regulations and address workplace regulations involving the use, storage, and disposal of hazardous materials.

CalEPA adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The six program elements of the Unified Program are hazardous waste generation and on-site treatment, underground storage tanks, aboveground storage tanks, hazardous material release response plans and inventories, risk management and prevention programs, and Uniform Fire Code hazardous materials management plans and inventories. The program is implemented at the local level by a local agency, referred to as the Certified Unified Program Agency (CUPA), which is responsible for consolidating the administration of the six program elements within its jurisdiction. The Sacramento County Environmental Management Department (EMD) is the CUPA for Sacramento County.

State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or to mitigate injury to health or the environment. California's Hazardous Materials Release Response Plans and Inventory Law, also called the Business Plan Act, is intended to minimize the potential for accidents involving hazardous materials and facilitate an appropriate response to possible hazardous materials emergencies. The law requires businesses that use hazardous materials to provide inventories of those materials to designated emergency response agencies, to illustrate on a diagram where the materials are stored on site, to prepare an emergency response plan, and to train employees to use the materials safely.

Worker Safety

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. Cal/OSHA is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA obligates many businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. As at the federal level, the Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle. This is achieved through actions such as requiring manufacturers to appropriately label containers, make Material Safety Data Sheets available in the workplace, and require employers to properly train workers.

Uniform Fire Code

The Uniform Fire Code contains regulations relating to construction and maintenance of buildings and the use of premises. The code includes specification for fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and premises.

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California Accidental Release Prevention Program

The California Accidental Release Prevention Program (CCR Title 19, Division 2, Chapter 4.5) covers certain businesses that store or handle more than a certain volume of specific regulated substances at their facilities. The list of regulated substances is found in Article 8, Section 2770.5 of the program regulations.

LOCAL

Sacramento County

The County of Sacramento Office of Emergency Services implements the State's Right-to-Know Ordinance that gives it the authority to inventory hazardous materials used by businesses. The County is also in the process of collecting information regarding existing and proposed locations of hazardous material disposal, storage, handling, and transportation facilities.

The Sacramento County EMD is responsible for enforcing the State regulations on the City and county level, governing hazardous waste generators, hazardous waste storage, underground storage tanks, and environmental health including inspections and enforcement. The EMD also regulates the use, storage, and disposal of hazardous materials and the abandonment of wells (Chapter 6.28 of the Sacramento County Code) and septic systems (Chapter 6.32 of the Sacramento County Code) in the county by issuing permits, monitoring regulatory compliance, investigating complaints, and other activities. The EMD reviews technical aspects of hazardous waste site cleanups and oversees remediation of certain contaminated sites resulting from leaking underground storage tanks (USTs) and aboveground storage tanks (Chapter 6.35 of the Sacramento County Code). The EMD is also responsible for providing technical assistance to public and private entities that seek to minimize the generation of hazardous waste. As noted above, the EMD is the CUPA for Sacramento County and administers the local regulatory programs for all CUPA program elements through inspections, permit issuance, enforcement, complaint response, local ordinance maintenance and oversight, and establishment of administrative policy.

City of Elk Grove General Plan

The City of Elk Grove Draft General Plan Safety Element addresses regulatory issues including safety and exposure standards, risk management, and interagency coordination. The following policies would have a mitigating effect with respect to hazards and hazardous materials:

"Policy SA-1: The City will seek to maintain acceptable levels of risk of injury, death, and property damage resulting from reasonably foreseeable safety hazards in Elk Grove."

"Policy SA-2: In considering the potential impact of hazardous facilities on the public and/or adjacent or nearby properties, the City shall consider the hazards posed by reasonably foreseeable events. Evaluation of such hazards shall address the potential for events at facilities to create hazardous physical effects at offsite locations that could result in death, significant injury, or significant property damage. The potential hazardous physical effects of an event need not be considered if the occurrence of an event is not reasonably foreseeable as defined in Policy SA-3. Absent substantial evidence to the contrary, a "hazardous physical effect" from an event shall be a level

of exposure to a hazardous physical effect in excess of the levels identified in Policy SA-4.”

“Policy SA-3: For the purpose of implementing Policy SA- 2, the City considers an event to be “reasonably foreseeable” when the probability of the event occurring is as indicated in the table below.”

Land Use	Probability of Occurrence Per Year
“Agriculture, Light Industrial and Industrial” Uses involving continuous access and the presence of limited number of people but easy evacuation, e.g. open space, warehouses, manufacturing plants, etc.	Between 100 in one million and 10 in one million (10 ⁻⁴ to 10 ⁻⁵)
“Commercial” Uses involving continuous access but of easy evacuation, e.g. commercial uses, offices, etc.	Between 10 in one million and 1 in one million (10 ⁻⁵ to 10 ⁻⁶)
“Residential” All other land uses without restriction including institutional uses, residential areas, etc.	1 in one million and less(10 ⁻⁶)

“Policy SA-4: The Maximum Acceptable Exposure standards shown in Table SA-A shall be used in determining the appropriateness of either:

- 1) Placing a use near an existing hazardous facility which could expose the new use to hazardous physical effects, or
- 2) Siting a hazardous facility that could expose other nearby uses to hazardous physical effects. Absent substantial evidence to the contrary, the placement of land uses that do not meet the Maximum Acceptable Exposure standards shall be considered to result in a significant, adverse impact for the purposes of CEQA analysis.”

“Policy SA-7: Storage of hazardous materials and waste shall be strictly regulated, consistent with state and federal law.”

“Policy SA-8: Industrial facilities shall be constructed and operated in accordance with up-to-date safety and environmental protection standards.”

City of Elk Grove Municipal Code – 23.60.030 Hazardous Materials

The following standards are intended to ensure that the use, handling, storage and transportation of hazardous materials comply with all applicable state laws (Section 65850.2 of the Government Code and Section 25505 et seq. of the Health and Safety Code) and that appropriate information is reported to the Fire Department as the regulatory authority.

- A. Reporting Requirements. All businesses required by state law (Section 6.95 of the Health and Safety Code) to prepare hazardous materials release response plans and hazardous materials inventory statements shall, upon request, submit copies of these plans, including any revisions, to the Fire Department.
- B. Underground Storage. Underground storage of hazardous materials shall comply with all applicable requirements of state law (Section 6.7 of the Health and Safety Code and Articles 679 and 680 of the California Fire Code, or as subsequently amended). Businesses that use underground storage tanks shall comply with the following procedures:

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- 1) Notify the Fire Department of any unauthorized release of hazardous materials prescribed by City, county, state and federal regulations;
 - 2) Notify the Fire Department and the Sacramento County Health Department of any proposed abandoning, closing or ceasing operation of an underground storage tank and actions to be taken to dispose of any hazardous materials; and
 - 3) Submit copies of the closure plan to the Fire Department.
- C. Above-Ground Storage. Above-ground storage tanks for hazardous materials and flammable and combustible materials may be allowed subject to the approval of the Fire Department.
- D. New Development. Structures adjacent to a commercial supply bulk transfer delivery system with at least six (6) inch pipes shall be designed to accommodate a setback of at least one hundred (100) feet from that delivery system. The setback may be reduced if the Planning Director, with recommendation from the Fire Department, can make one or more of the following findings:
- 1) The structure would be protected from the radiant heat of an explosion by berming or other physical barriers;
 - 2) A one hundred (100) foot setback would be impractical or unnecessary because of existing topography, streets, parcel lines or easements; or
 - 3) A secondary containment system for petroleum pipelines and transition points shall be constructed. The design of the system shall be subject to the approval of the Fire Department.
- E. Notification Required. A subdivider of a development within five hundred (500) feet of a pipeline shall notify a new/potential owner before the time of purchase and the close of escrow of the location, size and type of pipeline."

5.8.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the application of the CEQA Guidelines Appendix G environmental checklist. An impact is considered significant if implementation of the Project will:

- 1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- 2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment as defined by City of Elk Grove General Plan Policy SA-3.
- 3) Result in a safety hazard for people residing or working in the project area for a project in the vicinity of a private airstrip, within an airport land use plan, or within 2 miles of a public airport or public use airport.

The Project area is not located in the vicinity of a public or private airport, or within an airport land use plan; therefore, Standard of Significance 3 would not apply, and this issue is not addressed in this Draft EIR.

METHODOLOGY

Exposure pathways refer to the way in which a person may come into contact with a hazardous substance. A complete exposure pathway must have four parts: (1) a source of contamination; (2) a mechanism for transport of the substance from the source to the air, surface water, groundwater, or soil; (3) a point where people come in contact with contaminated air, surface water, groundwater, or soil; and (4) a route of entry into the body.

As discussed in the Regulatory Framework subsection above, the transport, use, storage, and disposal of hazardous materials are governed by a substantial body of existing regulations. These regulations are intended to reduce the potential for exposure by controlling the pathways by which persons could be exposed to hazardous substances to ensure that effects are less than significant. Compliance with these regulations is required, not optional.

The qualitative analysis of the potential public safety and hazards impacts identified is based on review of intended uses to identify potential environmental effects, based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that the proposed Project would comply with all applicable laws, ordinances, and regulations (summarized above).

PROJECT IMPACTS AND MITIGATION MEASURES

Exposure Through Transport, Use, Storage, and Disposal of Hazardous Materials (Standard of Significance 1)

Impact 5.8.1 Construction and/or operation of the proposed Project would involve the routine transport, use, storage, and disposal of hazardous materials, which could create a potential health hazard to the public or environment. This impact is **less than significant**.

Project Construction

Construction of the Project would involve the use of various products that could contain materials classified as hazardous (e.g., solvents, adhesives and cements, certain paints, cleaning agents, and degreasers). Construction of the Project would be required to comply with applicable building, health, fire, and safety codes. Hazardous materials would be used in varying amounts during construction and occupancy of the Project. Construction and maintenance activities would use hazardous materials such as fuels (gasoline and diesel), oils and lubricants, paints and paint thinners, glues, cleaners (which could include solvents and corrosives in addition to soaps and detergents), and possibly pesticides and herbicides. Compliance with applicable federal, state, and local regulations including, but not limited to, Titles 8 and 22 of the California Code of Regulations (CCR), the Uniform Fire Code, and Chapter 6.95 of the California Health and Safety Code would ensure that the Project would not create a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous materials.

Hazardous materials regulations, which are codified in Titles 8, 22, and 26 of the CCR, and their enabling legislation set forth in Chapter 6.95 of the California Health and Safety Code, were

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established at the state level to ensure compliance with federal regulations to reduce the risk to human health and the environment from the routine use of hazardous substances. These regulations must be implemented by employers/businesses, as appropriate, and are monitored by the State (e.g., Cal/OSHA in the workplace or DTSC for hazardous waste) and/or local jurisdictions.

Project Operation

Development of the Project area would result in office, residential, commercial, and light industrial/flex space uses. None of these land uses would be expected to transport, use, store, or dispose of substantial amounts of hazardous materials, but it is common for small amounts of materials that may be considered hazardous to be used daily in these types of land uses, including, for example, the use of household or commercial cleaning materials, paints, gasoline in cars, solvents, etc. Some of the nonresidential uses may use, sell, or store some hazardous materials as well. For example, the commercial uses could be occupied by uses that may sell paints, oils, and solvents, such as a home improvement store, hardware store, gas station, or auto parts store. The office land uses could be developed with medical offices that could use, store, or dispose of materials such as pressurized oxygen tanks, small amounts of medical waste, biohazardous materials, and/or radioactive materials. The light industry/flex space within the Project area could be developed with light manufacturing uses that could potentially use, store, or dispose of hazardous materials.

The use, storage, and transportation of hazardous materials are subject to local, State, and federal regulations, the intent of which is to minimize the public's risk of exposure. Based on the uses that would be part of the Project and the existing regulatory structure related to these materials, the proposed Project would not cause a threat to public safety, either during Project construction or operation. Therefore, because the transport, use, storage, and disposal of hazardous materials within the Project area would be relatively minor and subject to extensive regulatory oversight, this impact is considered to be **less than significant**.

Mitigation Measures

None required.

Hazards Associated with Suburban Propane Facility (Standard of Significance 2)

Impact 5.8.2 Development of the proposed Project may expose residents and users of the site to hazardous conditions resulting from an incident at the Suburban Propane facility. This is considered a **less than significant** impact.

Potential for Off-Site Releases Affecting the Proposed Project

As stated in the Environmental Setting subsection, there are known hazardous materials release sites in the City. The closest to the Project area, the Georgia-Pacific Chemicals site, is 0.5 mile away and is now closed and recently completed cleanup efforts. The Suburban Propane facility is located approximately 0.7 mile from the nearest portion of the Project area, which is the triangular area adjacent to State Route 99 planned for the development of office uses. There are no known leaking USTs within 1 mile of the Project area, and other known sites with ongoing cleanup efforts or investigations are more than 2 miles from the Project area and would not affect construction or operation of the proposed Project. In the event of upset or accidental release of hazardous materials at known UST cleanup or investigation sites, the Project area is too far away to be adversely affected.

However, as stated in the Existing Setting subsection, previous hazard studies have determined that, under a worst-case scenario, a flash fire or vapor cloud resulting from an accident or intentional act at the Suburban Propane facility could have an impact extent of up to 1.5 miles or 0.75 mile from the facility, respectively. A vapor cloud would have an impact range of up to 0.75 mile, which would reach the southeastern corner of the triangular portion of the Project area adjacent to State Route 99. This area is planned for office uses. In the event of a catastrophic flash fire, the potential impact area could extend to up to 1.5 miles from the propane tanks, which could affect a larger portion of the Project area. The affected area could include nearly the entire triangular portion of the Project area adjacent to State Route 99, as well as (generally) the area up to 0.25 mile west of the eastern boundary of the Project area. Most of this area is planned for office and light industrial/flex space, but there are portions of this area planned for high density residential, medium density residential, low density residential, and parks.

As stated in the Existing Setting subsection, the probability of an accidental flash fire incident would be one in 2,800,000 a year; an intentional act would be one in 2,100,000. The probability of an accidental vapor cloud incident would be one in 104,000,000 a year, and the chance of an intentional vapor cloud incident would be one in 3,200,000. According to General Plan Policy SA-3, the City has defined unlikely events that are not considered reasonably foreseeable as events with a one chance in 1,000,000 or greater a year for residential projects. This probability is substantially lower than probabilities associated with individual risks of fatality associated with risks the general public is commonly exposed to (e.g., motor vehicle accidents: one chance in 6,125 a year; homicide: one chance in 10,800; drowning: one chance in 68,035; rail travel: one chance in 687,400) (City of Elk Grove 2000). Based on these criteria, the potential for an accidental or intentional event resulting in either a vapor cloud or a flash fire is not considered to be substantial for the purposes of CEQA. Therefore, the Project's exposure to hazards associated with the Suburban Propane facility is considered to be **less than significant**.

Mitigation Measures

None required.

Create a Hazard to the Public or Environmental Through Possible Upset or Accidental Release of Hazardous Materials (Standard of Significance 2)

Impact 5.8.3 Construction and demolition activities conducted as part of Project development could potentially result in the release of hazardous materials, which could expose construction workers to hazards. This impact is **potentially significant**.

Recognized Environmental Concerns

The Phase I ESAs identified several RECs within the study properties, including, but not limited to, septic systems that would need to be abandoned; structures containing asbestos and lead-based paint; USTs and aboveground storage tanks; agricultural and domestic water wells that would need to be abandoned; potential for soil and groundwater contamination from past use of persistent agricultural chemicals; animal waste; and scrap piles containing debris that could contain hazardous materials. Since the remaining properties contain similar uses, it is likely that many of these RECs are also present on those properties.

The Phase I ESAs done for properties that contain dairies also identified potential issues associated with dairy wastes that could create hazardous conditions. This includes manure and

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dairy wastewater, which have the potential to create anoxic soil, resulting in increased levels of nitrogen in soil and groundwater. These dairy wastes could ultimately generate methane gas. The Phase One ESA prepared for the Souza property also disclosed that at the time of the study, the RWQCB was considering legal action against the property for illegal discharges to surface water.

Many of these RECs may be indicative of soil and groundwater contamination, which could be released during ground-disturbing activities associated with Project construction. If construction workers or any other human came into contact with any such contamination, there could be a serious threat to human health. Dust from contaminated soil generated by ground-disturbing activities could spread beyond the Project area and adversely affect public health. If contaminated groundwater is encountered and accidentally released to surface water, it could adversely affect people downstream.

Several properties are known to contain older structures that could contain asbestos and lead-based paint, and it is likely that the other properties that have not yet been evaluated for the presence of hazards and hazardous materials also contain structures with asbestos and lead-based paint. If not properly mitigated, demolition of these structures could result in the release of hazardous materials, which could pose a threat to those in the surrounding area.

Each of these RECs could pose a serious threat to public health and the environment if not properly cleaned up and contained. Regulations for cleanup of many of the identified RECs are currently in place, which would be required before those portions of the Project area could be developed. For example, the Sacramento County EMD, as the CUPA for Sacramento County, has oversight authority over the abandonment and cleanup of wells, septic tanks, USTs, and aboveground storage tanks, all of which are known to exist within the Project area and would require abandonment prior to future development activities. As the CUPA, the Sacramento County EMD is responsible for ensuring that all properties within the Project area obtain permits for and comply with Chapter 6.28 of the Sacramento County Code (Well Chapter) for well abandonment; issuing permits for septic tank destruction and that septic tanks are removed and cleaned up in accordance with Section 722 of the Uniform Plumbing Code; and issue permits to property owners to remove USTs and aboveground storage tanks. Because abandonment and remediation of wells, septic systems, USTs, and aboveground storage tanks is required by law, this analysis assumes that this will be completed as part of the Project, so no additional mitigation is necessary to ensure that these actions are taken. However, several of the properties located within the Project area have not yet had any investigations for the presence of hazardous materials performed or may require additional measures to ensure that hazards and hazardous materials are remediated, so it is not known whether these properties contain hazardous materials or conditions or what mitigation needs to be completed to clean up the sites in order to make them safe for future development. This is a **potentially significant** impact.

Mitigation Measures

MM 5.8.3a Prior to approval of improvement plans and/or a grading permit for properties within the Project area that have not already been evaluated for the potential for the presence of hazardous materials and hazardous conditions, Phase I ESAs shall be prepared by a qualified professional. Each subsequent Phase I ESA shall assess the potential for hazards and recommend measures for cleaning up hazards, if present. Future project applicants shall implement all measures as recommended in the Phase I ESA to the satisfaction of the City Development Services Department and the Sacramento County Environmental Management Department.

Timing/Implementation: Prior to approval of improvement plans and/or grading plans

Enforcement/Monitoring: City of Elk Grove Planning Department;
Sacramento County Environmental
Management Department

MM 5.8.3b

With each improvement plan and/or grading plan application, the Project applicant shall include a detailed assessment of soil contamination associated with previous herbicide/pesticide use on the site. Soil sampling shall be conducted within the areas of potential herbicide/pesticide contamination. If substances are detected at concentrations that could pose a health hazard and/or violate local, State, or federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County Environmental Management Department. Development of the site shall not commence until the site is deemed remediated and clear for development by the City in consultation with the Sacramento County Environmental Management Department.

Timing/Implementation: Prior to approval of improvement plans and/or grading plans

Enforcement/Monitoring: City of Elk Grove Planning Department;
Sacramento County Environmental
Management Department

MM 5.8.3c

Prior to the issuance of demolition permits for existing onsite structures constructed prior to 1979, asbestos material sampling shall be conducted to determine if asbestos containing building materials are present. Any identified asbestos containing building materials present in each of the structures to be dismantled shall be removed under acceptable engineering methods and work practices by a licensed asbestos abatement contractor prior to removal. These practices include, but are not limited to: containment of the area by plastic, negative air filtration, wet removal techniques, and personal respiratory protection and decontamination. The process shall be designed and monitored by a California Certified Asbestos Consultant. The abatement and monitoring plan shall be developed and submitted for review and approval by the Sacramento Metropolitan Air Quality Management District.

Timing/Implementation: Prior to the issuance of demolition permits

Enforcement/Monitoring: City of Elk Grove Planning Department;
Sacramento Metropolitan Air Quality
Management District

MM 5.8.3d

Prior to the issuance of demolition permits for existing onsite structures that were constructed prior to 1970, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor, in accordance with local, State, and federal regulations. The demolition contractor shall be informed that all paint on the buildings shall be considered as containing lead. The contractor shall take precautions in

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accordance with local, State, and federal regulations to protect his/her workers, the surrounding community, and to dispose of construction waste containing lead paint.

Timing/Implementation: Prior to the issuance of demolition permits and included in construction contracts

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 5.8.3e

Prior to approval of improvement plans and/or a grading permit for development of properties that formerly contained, or currently contain, dairy operations or debris piles, the Project applicant shall retain a qualified environmental consultant to prepare a Phase 2 environmental site assessment (ESA). The Phase 2 ESA shall incorporate soil testing to determine if past dairy operations or the presence of debris piles resulted in soil and/or groundwater contamination. If the Phase 2 ESA determines that the property does not contain soil and/or groundwater contamination, cleanup of the dairy operations and debris piles may proceed in accordance with the requirements of the Sacramento County Environmental Management Department. Hazardous materials and wastes shall be disposed of at appropriate hazardous waste acceptance facilities.

In the event that the Phase 2 ESA determines that past dairy operations and/or debris piles have resulted in soil and/or groundwater contamination, the environmental consultant preparing the Phase 2 ESA shall provide a detailed work plan for clean up and remediation. All remediation work shall be done to the cleanup standards for the particular land use being proposed on the subject property. Remediation shall be completed to the satisfaction of the Sacramento County Environmental Management Department.

Timing/Implementation: Prior to approval of improvement plans and/or grading plans

Enforcement/Monitoring: City of Elk Grove Planning Department; Sacramento County Environmental Management Department

MM 5.8.3f

Prior to approval of improvement plans and/or a grading permit for development of properties that contain transformers, the City Planning Department shall consult with SMUD, which owns and operates the transformers, to determine whether on-site transformers are to be abandoned, moved, upgraded, etc. Together, the City Planning Department and SMUD shall develop a plan for dealing with all of the transformers located within the Project area. Future actions associated with the transformers may be implemented as individual development Projects are proposed.

Timing/Implementation: Prior to approval of improvement plans and/or grading plans

Enforcement/Monitoring: City of Elk Grove Planning Department; SMUD

Mitigation measure **MM 5.8.3a** requires that properties that have not already been investigated for the potential for hazards and/or hazardous materials have Phase I ESAs prepared, which would identify if any hazards exist, and if so, how those hazards can be removed. This mitigation measure would ensure that hazardous materials, if found, are properly cleaned up and are not released into the environment, where they could pose a threat to human health. Mitigation measure **MM 5.8.3b** would ensure that soil and groundwater contamination related to agricultural use, if present, is cleaned up. Mitigation measures **MM 5.8.3c** and **MM 5.8.3d** would ensure that asbestos and lead are properly abated prior to demolition of structures. Mitigation measure **MM 5.8.3e** would ensure that Phase 2 ESAs are prepared, as appropriate, and that all required mitigation measures provided in those studies are implemented. Mitigation measure **5.8.3f** would ensure that the City engage with SMUD in developing plans to address the transformers located within the Project area. Implementation of these mitigation measures, combined with compliance with all applicable federal, State, and local regulations pertaining to hazardous materials, would reduce this impact to **less than significant**.

5.8.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The analysis of cumulative impacts focuses on those effects that, when combined together with other similar activities or projects, could result in a large enough effect or impact that would be considered cumulatively significant. If an individual project's contribution is substantial enough, it may be considered cumulatively considerable. In some instances, a project-specific impact may not combine with effects from other activities, in which case, the project's contribution to a cumulative effect would be less than considerable. The health and safety hazards posed by most hazardous materials are typically local in nature. They generally do not combine in any cumulative sense with the hazards of other projects. Therefore, site-specific conditions, such as those related to lead-based paint or asbestos-containing materials within individual properties, in the Project area would not combine with lead or asbestos risks at other properties in the region. Possible exceptions, however, include potential transportation of hazardous materials and waste disposal. The context for the evaluation of cumulative impacts associated with operation of the proposed project includes projects that would increase the amount of hazardous materials used, stored, disposed of, and transported in combination with other development in the City.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Exposure Through Transport, Use, Storage, and Disposal of Hazardous Materials (Standard of Significance 1)

Impact 5.8.4 Cumulative development within the City would increase handling, storage, disposal, and transport of hazardous materials within the Project area. However, cumulative development, including the proposed Project, would be subject to applicable federal, state, and local regulations that would govern the handling, storage, disposal, and transport of hazardous materials. This impact is **less than cumulatively considerable**.

Hazardous materials are transported on virtually all public roads, particularly since all motor vehicles contain hazardous materials (e.g., fuel) in addition to any hazardous cargo that may be on board. The transport, use, storage, and disposal of hazardous materials are governed by a substantial body of existing regulations.

These regulations are intended to reduce the potential for exposure by controlling the pathways by which persons could be exposed to hazardous substances to ensure that effects are less than

5.8 HAZARDS AND HAZARDOUS MATERIALS

significant. Compliance with these regulations is required by all projects and handlers of these materials. The majority of hazardous materials handling for the Project would be associated with the construction of individual projects within the Project area and operation of some nonresidential uses, such as light industrial. The hazardous materials used during the construction of the Project, and well as all construction projects, must comply with federal, state, and local regulations regarding the handling, use, storage, and transportation of such materials, thereby reducing the potential for accidental release of those materials to the environment. Consequently, compliance with these regulations would ensure that the overall cumulative impact associated with the handling, storage, disposal, and transport of hazardous materials is considered to be **less than cumulatively considerable**.

Mitigation Measures

None required.

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