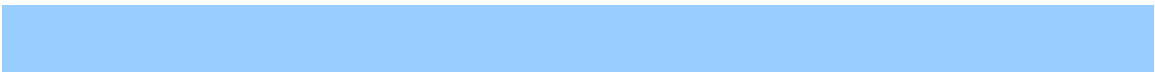


# **APPENDIX H**

## **Hazards and Hazardous Materials**



**Type of Services**

**Current Conditions Report  
Hazards and Hazardous Materials  
Envision San José 2040 General Plan Update**

**Client  
Client Address**

**David J. Powers & Associates  
1871 The Alameda, Suite 200  
San José, California 95126**

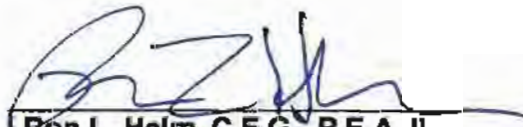
**Project Number  
Date**

**118-13-1  
February 12, 2010**

**Prepared by**



**Stason I. Foster, P.E.**  
Senior Project Engineer



**Ron L. Helm, C.E.G., R.E.A. II**  
Principal Geologist



## Table of Contents

<b>SECTION 1: INTRODUCTION .....</b>	<b>1</b>
1.1 PURPOSE.....	1
1.2 HISTORY OF SAN JOSÉ .....	1
1.3 HAZARDOUS MATERIAL DEFINITION .....	2
1.4 SAN JOSÉ 2020 GENERAL PLAN.....	3
<b>SECTION 2: ENVIRONMENTAL SETTING .....</b>	<b>5</b>
2.1 HAZARDOUS MATERIALS IN SAN JOSÉ .....	5
2.1.1 Common Land Uses and Associated Hazardous Materials .....	5
Table 1. Common Land Uses and Typical Associated Hazardous Materials.....	5
2.1.2 Petroleum Oils and Fuels.....	7
2.1.3 Natural Gas.....	8
2.1.4 Propane .....	8
2.1.5 Solvents (Volatile Organic Compounds) .....	8
2.1.6 Agricultural Chemicals.....	8
2.1.7 Asbestos.....	9
2.1.8 Lead Based Paint.....	9
2.1.9 Toxic Gas Facilities .....	10
2.1.10 Household Hazardous Materials .....	10
2.1.11 Universal Wastes .....	10
2.1.12 Medical Wastes .....	11
2.2 REPORTED HAZARDOUS MATERIAL SPILLS .....	11
2.2.1 Leaking Underground Storage Tank Sites .....	11
2.2.2 San Francisco Bay Regional Water Quality Control Board Cases .....	12
2.2.3 DTSC State Response Sites .....	12
2.2.4 DTSC School Sites .....	12
2.2.5 DTSC Voluntary Cleanup Sites.....	13
2.2.6 Federal Superfund (NPL) Sites.....	13
Table 2. Federal Superfund (NPL) Sites in San José .....	13
2.3 LANDFILLS AND SOLID WASTE FACILITIES.....	13
Table 3. Landfills and Solid Waste Facilities (SWIS) in San José.....	14
2.4 HAZARDS FROM RELEASE INCIDENTS.....	15
2.4.1 Accidental Releases .....	15
2.4.2 Historic Releases.....	16
2.4.3 Building Demolition/Renovation .....	16
2.5 SITE INVESTIGATION AND CLEANUP .....	17
<b>SECTION 3: REGULATORY FRAMEWORK.....</b>	<b>18</b>
3.1 FEDERAL REGULATIONS .....	18
3.1.1 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).....	18
3.1.2 Resource Conservation and Recovery Act (RCRA) .....	19
3.2 STATE AND LOCAL REGULATIONS AND AGENCIES.....	19
3.2.1 Department of Toxic Substances Control (DTSC).....	19
3.2.2 State Water Resources Control Board (SWRCB) .....	21
3.2.3 Certified Unified Program Agency (CUPA) Program.....	22
Table 4. Hazardous Materials Programs and Administering Agencies for San José.....	25

3.2.4 Local Ordinances..... 25  
3.2.5 Other Local Policies ..... 25  
**SECTION 4: CONSTRAINTS IN PLANNED GROWTH AREAS ..... 26**  
4.1 REPORTED HAZARDOUS MATERIALS RELEASES ..... 26  
4.2 SITE ASSESSMENT AND INVESTIGATION..... 26  
4.3 AIRBORNE RELEASES OF HAZARDOUS MATERIALS..... 27  
**SECTION 5: LIMITATIONS ..... 29**

- FIGURE 1 – HISTORIC PHOTOS
- FIGURE 2 – HISTORIC PHOTOS
- FIGURE 3 – HISTORIC PHOTOS
- FIGURE 4 – HISTORIC PHOTOS
- FIGURE 5 – SITE MAP
- FIGURE 6 – VILLAGES AND CORRIDORS

**APPENDIX A - LIST OF TOXIC GASES COMMONLY FOUND IN SAN JOSÉ**

**APPENDIX B - DRAFT GUIDELINES FOR THE PLACEMENT OF DAYCARE FACILITIES, CHURCHES AND SCHOOLS IN OR ADJACENT TO INDUSTRIAL ZONES**

**APPENDIX C - DRAFT GUIDELINE FOR PREPARATION OF RISK ASSESSMENTS**

**APPENDIX D - DEVELOPMENT GUIDELINE FOR LAND IN PROXIMITY TO HIGH PRESSURE NATURAL GAS PIPELINES**

**APPENDIX E - ENVIRONMENTAL CONDITIONS THAT COULD ADVERSELY IMPACT FUTURE DEVELOPMENT AND REDEVELOPMENT ACTIVITIES WITHIN SPECIFIC PLANNING AREAS OF THE CITY**

**CURRENT CONDITIONS REPORT**  
**HAZARDS AND HAZARDOUS MATERIALS**  
**ENVISION SAN JOSÉ 2040 GENERAL PLAN UPDATE**

## **SECTION 1: INTRODUCTION**

### **1.1 PURPOSE**

This Current Conditions Report presents a discussion of laws, regulations, policies and programs related to the use, handling and storage of hazardous materials within the City of San José. This Current Conditions Report identifies existing conditions and environmental constraints in the City of San José and was prepared for the Envision San José 2040 General Plan Update.

San José's current General Plan was adopted in 1994 and guides the city's day-to-day decision-making for land use and city services. While the strategies in the Plan serve as a consistent and stable framework, San José's dynamic landscape continues to grow and evolve. In June 2007, the City Council approved the proposed Guiding Principles, Work Program and Community Participation Program for the Envision San José 2040 General Plan Update. The Envision San José 2040 General Plan Update will serve as the blueprint for the future of San José.

### **1.2 HISTORY OF SAN JOSÉ**

San José was founded in 1777 as the first town in the Spanish colony of Nueva California, which later became Alta California. The city served as a farming community to support the presidios of San Francisco and Monterey. In 1850, San José became the second incorporated city in the state (after Sacramento). As a supply station for prospectors during the gold rush, San José underwent a population explosion; upon incorporation, the city's inhabitants numbered 5,000 people. San José was the state capital from 1849 to 1851 and then became an important stage and boat link on the route to San Francisco. Urban development moved at a swift pace during the 1860s. Gas service was introduced in 1861 and gas mains were extended from San José to Santa Clara. San José Water Company was incorporated in 1866 supplying piped water to city residents. The first sewers were contracted by the city this same year.

The need for a railroad was recognized in the early 1850s; however, the railroad line between San Francisco and San José was not completed until 1864. This event was followed a few years later with the completion of the Central Pacific line from San José to Niles connecting San José with the transcontinental railroad in 1869.

Electrical service came to San José in 1881, provided by several small independent gas and electric companies. Electric arc lamps replaced gas streetlights in the late 1880s. Commercial growth boomed during the 1880s as well as expansion of urban services. Downtown development included a new city hall in 1889 as well as new commercial and business blocks.

Samuel Bishop built the first electrical streetcar line in America when he electrified the line between San José and Santa Clara in 1887-1888. The streetcars were converted to overhead electrical trolley lines in 1891.

The first automobiles appeared in the valley in the late 1890s. Several pioneer automobile factories, the first in California, were established in San José after 1900. Clarence Letcher opened the first "garage" in the west in 1900 and the first service station shortly thereafter.

The pioneer canning industry was begun in residential San José by Dr. James Dawson in 1871. The fruit canning and packing industry quickly grew to become the urban counterpart of the valley's orchards. Other support industries such as box, basket, and can factories were established. Orchard and food processing machinery and spraying equipment also became important local industries. By the turn of the century San José was a major center for the cultivation of apricots, prunes, and grapes; with rail connections to other cities, it was also an important regional shipping hub.

Prior to World War II, San José, with its 18 canneries and 13 packing houses, was the world's largest canning and dried-fruit packing center. As World War II started, the city's economy shifted from agriculture (the Del Monte cannery was the largest employer) to industrial manufacturing.

Soon after World War II, the business community launched an active campaign to attract new non-agricultural related industries to San José. Early industries that established plants in San José were the Chicago's International Mineral and Chemical Corporation's Accent plant in 1946, the General Electric plant in the early 1950s and International Business Machines (IBM) in 1953. By the 1960s, the county's economic base was dependent upon the electronic and defense industries. The 1970s saw the development of the personal computer industry. San José's largest population boom was triggered by this high-technology revolution, and growth continued unabated from the 1950s through the early 1980s. Buoyed by the success of computer companies, a steady flow of venture capital poured into San José and Santa Clara County to finance new firms. Expansion slowed with the 1985 recession in the computer industry; by the 1990s, expansion was again underway. Today, with close to a million people, San José is the tenth largest city in the nation and third largest in California.

Selected historical photographs depicting former industries and commercial businesses in San José are presented on Figures 1 through 4.

### **1.3 HAZARDOUS MATERIAL DEFINITION**

There are many definitions and names used to describe a material as being hazardous. For example, the terms hazardous material, hazardous substance, hazardous chemical, toxic chemical and hazardous waste are often used. Several state and federal agencies, such as the Environmental Protection Agency (EPA), Department of Transportation (DOT) and the Occupational Safety and Health Administration (OSHA) have different purposes for regulating hazardous materials; thus, the terminology and definitions used by these agencies often differ.

As defined in the California Health and Safety Code (HSC) Section 25501, "*hazardous material*" means any material that, because of its quantity, concentration, or physical or chemical

*characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.*

Thus, per the HSC "hazardous material" is a broad term that includes hazardous substances and hazardous wastes. Substances that are flammable, corrosive, reactive, oxidizers, radioactive, combustible, or toxic are considered hazardous. Because of the broad definition, if a substance is considered hazardous under any other environmental, safety, or transportation law or regulation, it is likely to meet the definition of hazardous material as stated in the HSC. Some common hazardous materials include: oil, fuels, paints, thinners, solvents, compressed gases, radioactive materials and pesticides.

#### **1.4 SAN JOSÉ 2020 GENERAL PLAN**

San José 2020 General Plan is an adopted statement of policy for the physical development of the City of San José. As such, it represents the official policy regarding the future character and quality of development. The 2020 General Plan represents the City's assessment of the amount, type, and phasing of development needed to achieve the City's social, economic and environmental goals. It was developed with the participation of all City departments and the community at large. Section 4 of the San José 2020 General Plan presents goals and policies related to hazardous materials. These goals and policies are summarized below.

**Hazardous Materials Goal:** Protect City residents from the risks inherent in the transport, distribution, use and storage of hazardous materials, recognizing that the use of these materials is integral to many aspects of society.

#### **Hazardous Materials Policies:**

1. The City should require proper storage and disposal of hazardous materials to prevent leakage, potential explosions, fires, or the escape of harmful gases, and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal.
2. The City should support State and Federal legislation which strengthen safety requirements for the transportation of hazardous materials.
3. The City should incorporate soil and ground water contamination analysis within the environmental review process for development proposals. When contamination is present on a site, the City should report this information to the appropriate agencies that regulate the cleanup of toxic contamination.
4. Development located within areas containing naturally occurring asbestos should be required to mitigate any potential impacts associated with grading or other subsurface excavation.

### **Hazardous Waste Management Goals:**

1. To protect public health, safety, and the environment, whenever feasible, by reducing or eliminating the generation of hazardous waste as expeditiously as possible through the adoption and implementation of a hierarchy of hazardous waste management priorities by hazardous waste generators. The hazardous waste management hierarchy emphasizes the importance of preventing pollution by giving primacy to reducing hazardous waste at the source of generation. The hierarchy requires source reduction and recycling particularly as alternatives to land disposal whenever feasible.
2. To site only those facilities which are necessary to safely, economically and responsibly manage the hazardous waste needs of the County of Santa Clara.

### **Hazardous Waste Management Policies:**

1. All proposals to site a hazardous waste management facility shall assure compatibility with neighboring land uses and be consistent with the siting criteria established in the County Hazardous Waste Management Plan (CHWMP) and the San José 2020 General Plan. Where the two conflict, San José 2020 General Plan shall govern.
2. Areas designated for industrial uses may be appropriate for hazardous waste transfer/processing stations if, during the development review process, it is determined that such a use would be compatible with existing and planned land uses in the vicinity of the site and would meet the siting criteria established in the CHWMP and the San José 2020 General Plan.
3. All proposals for new and expanded hazardous waste management facilities must provide adequate mitigation for identified environmental impacts.
4. A risk assessment shall be conducted as part of the environmental review process at the time a site-specific proposal for a hazardous waste facility is submitted to the City. This assessment should identify health, safety and environmental factors that may be unique to the site as well as to the types of waste to be managed. It should include an analysis of the potential for accidental and cumulative health and environmental impacts resulting from the proposed facility.
5. All proposals for hazardous waste facilities shall be consistent with the plans and policies of air and water quality regulatory agencies (i.e., Air Quality Management District, and the Regional Water Quality Control Board and the city of San José).
6. Transportation of hazardous waste from the point of origin to the appropriate hazardous waste management facility shall be by the most direct legal route, utilizing state or interstate highways whenever feasible, and shall minimize distances along residential and other non-industrial frontages to the fullest extent feasible.
7. As part of the permitting process, transportation routes to and from hazardous waste facilities shall be designated by the City in order to minimize negative impacts on surrounding land uses.



8. Hazardous waste management facilities shall, where feasible, be located at sites which minimize the risks associated with the transportation of hazardous waste. Given their need for larger land areas and need to avoid incompatibility with surrounding urban land uses, residuals repositories (waste disposal facilities) may be located farther from waste generation sources than other types of hazardous waste facilities.
9. Proper storage and disposal of hazardous wastes shall be required to prevent leaks, explosions, fires, or the escape of harmful gases, and to prevent materials from combining to form hazardous substances and wastes.

## **SECTION 2: ENVIRONMENTAL SETTING**

### **2.1 HAZARDOUS MATERIALS IN SAN JOSÉ**

#### **2.1.1 Common Land Uses and Associated Hazardous Materials**

As is common to most urban communities, hazardous materials are used and stored by businesses operating within a wide range of industries including maintenance, manufacturing, construction, agricultural, transportation, dry cleaning, automotive, medical and electronics, among others. Many products containing hazardous chemicals also are routinely used and stored in homes.

Hazardous materials in various forms can cause death, serious injury, long-lasting health effects and damage to the environment. These products also are shipped daily on the nation's highways, railroads, waterways and pipelines. Chemical manufacturers are one source of hazardous materials, but there are many others, including service stations, hospitals, and hazardous materials waste sites.

Each year, Californians generate two million tons of hazardous waste. One hundred thousand privately- and publicly-owned facilities generate one or more of the 800-plus wastes considered hazardous under California law. Properly handling these wastes avoids threats to public health and degradation of the environment. These substances are most often released as a result of transportation accidents, chemical accidents, or releases from above ground/underground storage tanks.

The locations of facilities that use hazardous materials are sporadically distributed throughout the City of San José within industrial, light industrial and commercial areas. Hazardous materials typically associated with common land uses are summarized in Table 1 and briefly discussed below.

**Table 1. Common Land Uses and Typical Associated Hazardous Materials**

<b>Land Use</b>	<b>Potential Hazardous Materials</b>
Agriculture (including greenhouses*)	Pesticides, herbicides, fertilizers and metals*
Airports	Petroleum fuels, oils and solvents

Automobile service and repair	Petroleum fuels, oils, metals, paints, solvents and welding gases
Cannery/food processing	Petroleum fuels, oils, cleaning compounds, refrigerants and metals
Cemeteries and mortuaries	Formaldehyde, methanol, ethanol and other solvents
Cleaning/dry cleaning	Petroleum fuels and solvents
Cold storage	Refrigerants (Freon and ammonia)
Concrete/asphalt supply	Corrosives, oils, petroleum fuels
Construction/contractor yards	Petroleum fuels, oils, solvents and welding gases
Dairy Farming*	Petroleum fuels, pesticides (including rodenticides)
Electronics manufacturing	Solvents, petroleum fuels, metals, corrosives and toxic gases and liquids
Electric Power Plants	Petroleum fuels, oils, polyaromatic hydrocarbons (PAHs)*, toxic gases or liquids (ammonia) for air pollution control
Gasoline station	Petroleum fuels, oils, solvents and metals
Golf courses	Pesticides
Hospitals/medical facilities	Medical waste, radioactive materials and petroleum fuels
Laboratories	Solvents, corrosives, and toxics
Landfill	Petroleum hydrocarbons, landfill gas, metals, solvents (among others)
Lumber mills or yards	Petroleum fuels, oils, solvents, metals, pentachlorophenol* and creosote*
Manufacturing (miscellaneous)	Petroleum fuels, oils, solvents and metals
Meat packing	Petroleum fuels, metals, flammable liquids, refrigerant gases
Metal working, machining and milling	Petroleum fuels, oils, welding gases, solvents and metals
Nurseries	Pesticides, herbicides, metals and fuels
Painting	Solvents and metals
Pest control	Pesticides, toxic gases, and metals*
Photography	Metals and solvents
Plating	Petroleum fuels, oils, solvents, corrosives, and metals
Printing	Solvents, metals and petroleum fuels*
Railroads/rail yards	Petroleum fuels, oils, PCBs and metals
Residential	Asbestos, lead-based paint, pesticides (from termite control) and cleaning compounds
Scrap Metal Recycling	Metals, lubricants, petroleum fuels, solvents and PCBs
Semiconductor manufacturing	Solvents, petroleum fuels, metals, corrosives and toxic gases
Swimming Pools	Oxidizers and corrosives
Tanneries*	Metals (chromium), cyanide, solvents and petroleum fuels
Trucking/Transportation	Petroleum fuels, oils and metals

Continued on next page.

Table 1. (Continued.)

Land Use	Potential Hazardous Materials
Transformers/electrical equipment	PCBs and oils
Wastewater pollution control plant	Toxic gases, petroleum fuels, oils, metals, flammable gases (methane)
Water treatment plants (potable and recycled water)	Oxidizers
Woodworking	Epoxy resins, glues, lacquers, paints, petroleum hydrocarbons solvents, stains, varnishes and waste oils
*= historic use (facilities not currently located in San José or material no longer used at these facilities)	

### 2.1.2 Petroleum Oils and Fuels

Petroleum is used mostly, by volume, for producing gasoline, diesel, jet, heating, and other fuel oils. It is primarily used in trucks, ships and cars and for emergency power generation. Underground Storage Tanks (USTs) and Aboveground Storage Tanks (ASTs), typically used to store petroleum fuel, are regulated in California to help prevent release of petroleum and the contamination of soils and ground water. In addition to the fuels themselves, gasoline additives, such as MTBE, have toxic properties that can impact human health and the environment.

A UST is defined by law as "any one or combination of tanks, including pipes connected thereto, that is used for the storage of hazardous substances and that is substantially or totally beneath the surface of the ground" (certain exceptions apply). ASTs are constructed above grade. Leaking storage tanks are a significant source of petroleum impacts to soil and ground water and may pose the following potential threats to health and safety:

- Exposure from impacts to soils and/or ground water
- Contamination of drinking water aquifers
- Contamination of public or private drinking water wells
- Inhalation of vapors

These threats are minimized when tank owners or operators (responsible parties) report a leak to the local regulatory agency within 24 hours of detection, as required. Regulatory agencies will assist responsible parties in responding to leaking tanks.

A large majority of reported petroleum releases are associated with USTs. Since the inception of the UST program in 1984, more than 45,000 leaking USTs have been reported in California. Approximately 33,000 of these sites have been remediated; nonetheless, approximately 12,000 leaking UST sites remain to be investigated and mitigated.

The State Water Resource Control Board (SWRCB) is responsible for cleanup and abatement of fuel leaks. Coordination between the SWRCB and the local Certified Unified Program Agency (CUPA) typically occurs in the oversight of the investigation and cleanup of fuel system releases. A fuel release site qualifies to receive a "No Further Action" (closure) letter once the owner or operator meets all appropriate corrective action requirements. After this occurs, the local CUPA or Region 2 of the SWRCB (San Francisco Bay Regional Water Quality Control Board) will inform the responsible party in writing that no further work is required.

### **2.1.3 Natural Gas**

In the Bay Area, natural gas is used for heating residences and commercial and industrial facilities. Natural gas is also used to power generators at several electric power facilities in San José. There are several high pressure natural gas transmission lines in San José that supply local natural gas distribution systems in the City and the City has set back requirements for development near natural gas transmission lines (refer to Appendix D). Natural gas is a colorless flammable gas or liquid. Natural gas poses explosion hazards under certain conditions.

### **2.1.4 Propane**

Propane is a fuel that is derived from petroleum and natural gas. It is a flammable gas petroleum hydrocarbon fuel that is generally stored in liquid form in pressurized tanks. Propane is used as a fuel for a small number of vehicles and for barbeques and heating, cooking, and refrigeration in recreational vehicles. Several fueling stations in San José have large propane storage tanks.

### **2.1.5 Solvents (Volatile Organic Compounds)**

A solvent is a substance capable of dissolving another substance to form a mixture. The most commonly-used solvents of concern are organic (carbon-containing) chemicals. Solvents usually have a low boiling point and evaporate easily. Solvents are usually clear and colorless liquids and many have a characteristic odor. Common uses for organic solvents are in dry cleaning (e.g. tetrachloroethylene or perchloroethylene [PCE]), as paint thinners (e.g. toluene, turpentine), as nail polish removers and glue solvents (acetone, methyl acetate, ethyl acetate), in spot removers (e.g. hexane, petrol ether), in detergents (citrus terpenes), in perfumes (ethanol), and in chemical syntheses.

Trichloroethylene (TCE) was one of the more commonly used solvents by the high tech industry in Silicon Valley in the 1980s; it mainly was used to wash microscopic pieces of dust off semiconductor chips. Today, it is a common contaminant in soil and ground water and is regulated due to its toxic properties. Exposures typically occur through drinking contaminated water or through inhalation of vapor that has off-gassed from contaminated soil or ground water and entered nearby buildings.

Facilities with solvent releases to soils and ground water are typically overseen by the San Francisco Bay Regional Water Quality Control Board in the Site Cleanup Program (SCP) or by the Department of Toxic Substances Control (DTSC). Many of these sites are regulated under cleanup requirements issued by the overseeing agency that generally mandate a time schedule for specific tasks that must be performed by the responsible party(ies) to investigate and cleanup the site.

### **2.1.6 Agricultural Chemicals**

Land within Santa Clara County has been used for agricultural purposes since at least the late 1800s. Pesticides (such as arsenical insecticides and organochlorine pesticides) were applied to crops in the normal course of farming operations.

Arsenical insecticides have been used in agriculture for centuries. Lead arsenate was the most extensively used of the arsenical insecticides. It was first prepared as an insecticide in 1892. Lead arsenate applied in foliar sprays adhered well to the surfaces of plants, so its pesticidal effect was longer lasting. These properties were useful to farmers. Lead arsenate initially was prepared by farmers at home by reacting soluble lead salts with sodium arsenate. Lead arsenate pastes and powders also were sold commercially. The search for a substitute was commenced in 1919 when it was found that its residues remain in products despite washing their surfaces. Alternatives were found to be less effective or more toxic to plants and animals, until 1947 when DDT became available. The use of lead arsenate continued until the mid-1960s. It officially was banned as an insecticide on August 1, 1988.

Organochlorine pesticides were introduced in the 1940s and persist in the environment long after they are applied. The U.S. Environmental Protection Agency banned many of the uses of these chemicals during the 1970s and 1980s. Despite restrictions and bans on the use of many organochlorine pesticides in the 1970s and 1980s, they continue to persist in the environment today.

The most well known organochlorine is the insecticide DDT (Dichloro diphenyl trichloroethane). Promoted as a "cure all" insecticide in the 1940s, DDT was widely used in agricultural production around the world for many years. It was also the chemical of choice for mosquito control; until the 1960s, trucks sprayed DDT in neighborhoods across the U.S. DDT was also the primary weapon in the global "war against malaria" during this period, and continues to be used for malaria control in a handful of countries. Pesticides, like DDT, are persistent organic pollutants that are hydrophobic and strongly absorbed by soils. Depending on conditions, its soil half life can range up to several decades.

Other commonly known organochlorine pesticides that have been banned in the U.S. include aldrin, dieldrin, toxaphene, chlordane and heptachlor.

### **2.1.7 Asbestos**

Asbestos is a natural mineral fiber that was once commonly used in building materials. Inhaling airborne asbestos fibers can increase the risk of developing certain lung diseases, including lung cancer, mesothelioma and asbestosis. Many building materials can contain asbestos, especially those installed prior to 1980. The Federal government placed a moratorium on the production of most asbestos products in the early 1970s, but these products continued to be installed for many subsequent years. Some products can still legally contain asbestos.

### **2.1.8 Lead Based Paint**

Lead-based paint is a major source of lead poisoning for children and can also affect adults. Lead was used as a pigment and drying agent in "alkyd" oil based paint. "Latex" water based paints generally have not contained lead. About two-thirds of the homes built before 1940 and one-half of the homes built from 1940 to 1960 contain heavily-lead-paint. Some homes built after 1960 also contain heavily-lead-paint. It may be on any interior or exterior surface, particularly on woodwork, doors, and windows. In 1978, the U.S. Consumer Product Safety Commission lowered the legal maximum lead content in most kinds of paint to 0.06% (a trace amount). The U.S. Department of Housing and Urban Development (HUD) recommends that

action to reduce exposure be taken when the lead in paint is greater than 0.5% by lab testing or greater than 1.0 milligrams per square centimeter by X-ray fluorescence.

### **2.1.9 Toxic Gas Facilities**

A toxic gas is a material that can result in serious health effects from exposure over a relatively short period of time. Locally, toxic gases are used at sites, such as semi-conductor manufacturing, laboratory and research, water treatment and large cold storage facilities.

The San José Toxic Gas Ordinance (San José Municipal Code Chapter 17.78) was developed to address specific safety needs in San José that were not adequately covered in previous State Codes. It was first adopted in 1990 and regulates the handling, dispensing and potential release of toxic gases. At that time, the Uniform Fire Code did not adequately address the hazards associated with the multitude of toxic gases utilized by local industry. It provides for the prevention, control and mitigation of dangerous conditions, as well as for building standards and for emergency response to protect the public from acute exposure to these gases. The ordinance was a cooperative effort taking input from the Silicon Valley Toxics Coalition, Semiconductor Industry Association, Santa Clara Valley Manufacturing Group, company representatives and technical consultants. Requirements developed as a part of the Toxic Gas Ordinance are now incorporated in state and national building and fire codes.

Based on information provided by the San José Fire Department in January 2009, there are 16 facilities in San José regulated under the Toxic Gas Ordinance. A list of toxic gases commonly found in San José is presented in Appendix A.

### **2.1.10 Household Hazardous Materials**

Many common products that are in daily use contain potentially hazardous ingredients and require special care when disposed. It is illegal to dispose of hazardous waste in the garbage, down storm drains, or onto the ground. Household hazardous materials (e.g., used paint, pesticides, cleaning products and other chemicals) are prevalent and often improperly stored in garages and homes throughout the community. Waste oil is a common hazardous material generated by city residents that is often improperly disposed and can contaminate surface water, ground water and soil.

Since 1991, the Santa Clara County Household Hazardous Waste Program has provided residents with a safe, convenient disposal service with year-round access. The county and 14 cities, including San José, participate in the countywide program and share costs based on the number of households served from each jurisdiction. Details of this program can be found at <http://www.sccgov.org>.

### **2.1.11 Universal Wastes**

Another category of hazardous wastes is called "universal wastes." Universal wastes are hazardous wastes that are generated by a wide variety of entities that contain mercury, lead, cadmium, copper and other substances hazardous to human and environmental health. Common examples of universal wastes include televisions, computers, computer monitors, batteries, and fluorescent lamps.

Until recently, some universal wastes could be disposed in the trash under some circumstances; however, this is no longer the case. The universal waste rule (California Code of Regulations, title 22, division 4.5, chapter 23) allows people to handle and transport universal waste under a simple set of rules that are appropriate for the risks posed by the wastes but still protect people and the environment. In general, universal wastes now must either be sent directly to an authorized recycling facility or to a universal waste consolidator for shipment to an authorized recycling facility.

### **2.1.12 Medical Wastes**

According to the Medical Waste Management Act (MWMA), HSC Sections 117600 -118360, medical waste is defined as waste that is generated or produced as a result of certain actions, including the diagnosis, treatment, or immunizations of human beings; research pertaining to the diagnosis, treatment, or immunizations of human beings; the production or testing of biologicals; and removal of a regulated waste from a trauma scene, or by a trauma scene waste management practitioner. The medical wastes are either biohazardous waste or sharps waste. The types of facilities that generate medical waste include medical and dental offices, clinics, hospitals, surgery centers, laboratories, research laboratories, education and research facilities, and trauma scene waste management practitioners.

## **2.2 REPORTED HAZARDOUS MATERIAL SPILLS**

Information regarding reported hazardous materials release sites within San José was obtained from the state GeoTracker database (<http://geotracker.swrcb.ca.gov>) and from the Envirostor database (<http://www.envirostor.dtsc.ca.gov>). These databases are online search and Geographic Information System (GIS) tools for identifying sites with known or potential contamination, and sites where regulatory environmental oversight or review has been requested or required. Searches can be conducted by site name, address, city, and county, or ID number. Reviewing this information is useful to evaluate the potential for hazardous materials to be present in soil and ground water at proposed development sites.

The GeoTracker database tracks regulatory data about leaking underground storage tank (LUST), Department of Defense, Site Cleanup Program and Landfill sites. Geotracker was developed pursuant to a mandate by the California State Legislature (AB 592, SB 1189) to investigate the feasibility of establishing a statewide GIS for LUST sites.

The EnviroStor database is maintained by the DTSC and contains information on investigation, cleanup, permitting, and/or corrective actions that are planned, being conducted or have been completed under DTSC's oversight. The EnviroStor database includes the following site types: Federal Superfund sites, State Response sites, Voluntary Cleanup sites and School sites.

### **2.2.1 Leaking Underground Storage Tank Sites**

A search (January 2009) of the GeoTracker database indicates that there are 1238 leaking underground storage tank (LUST) sites within the City of San José. Of those, 231 are open cases where site assessment, remediation and/or monitoring are in progress. The remaining 1007 sites have been closed by the overseeing regulatory agency.

## **2.2.2 San Francisco Bay Regional Water Quality Control Board Cases**

A search (January 2009) of the Geotracker database indicates that there are 157 spill incidents within the City of San José that are being overseen by the Water Board's Site Cleanup Program (SCP). The SCP was formerly known as Spills, Leaks, Investigation and Cleanup (SLIC) program. Of the 157 cases, 126 are open cases where site assessment, remediation and/or monitoring are in progress. The LUST cases noted above typically involve releases of petroleum fuels (gasoline or diesel) or waste oil from underground storage tanks (USTs). The listed SCP cases typically involve releases of volatile organic compounds (VOCs), such as solvents. Spills of petroleum products that were not contained in USTs and other contaminants such as metals and pesticides may also be involved.

## **2.2.3 DTSC State Response Sites**

A search (January 2009) of the EnviroStor database indicates that there are 12 facilities listed as State Response sites in San José. The State Response list identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. Of the 12 listed facilities, one is listed as active. The remaining facilities are listed as Certified or No Further Action; land use restrictions are noted to be in place for four of these facilities. A Certified status identifies completed sites with a previously confirmed release that are subsequently certified by DTSC as having been remediated satisfactorily under DTSC oversight. A No Further Action status identifies completed sites where DTSC determined after investigation that the property does not pose a threat to public health or the environment. A land use restricted site is a property where DTSC has placed limits or requirements on future use of the property, usually because contaminants remain in soil or ground water at the site.

## **2.2.4 DTSC School Sites**

DTSC's School Property Evaluation and Cleanup Division is responsible for assessing, investigating and cleaning up proposed school sites (including new construction at existing school sites). The Division helps establish that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who will occupy the new school. All proposed school sites that will receive state funding for acquisition or construction are required to go through an environmental review and cleanup process under DTSC's oversight. School districts conduct environmental assessments to provide basic information for determining if there has been a release of hazardous material at the sites, or if a naturally occurring hazardous material that presents a risk to human health or the environment may be present. Outreach activities integrated into the process allow a more active role for stakeholders in the selection process for school sites. Through the environmental review process, DTSC helps protect children, staff and the environment from the potential effects of exposure to hazardous materials.

A search (January 2009) of the EnviroStor database indicates that there are four DTSC School sites in San José. Two are listed as Active and the others are listed as Certified.



## 2.2.5 DTSC Voluntary Cleanup Sites

DTSC's Voluntary Cleanup Program allows motivated parties who are able to fund the investigation and cleanup and DTSC's oversight to move ahead at their own pace to investigate and remediate their sites. The EnviroStor database identifies sites with either confirmed or unconfirmed releases, where the project proponents have requested that DTSC oversee evaluation, investigation, and/or cleanup activities and have agreed to provide coverage for DTSC's costs. Nineteen voluntary cleanup sites are listed in San José (January 2009). Seven of these are listed as Certified or No Further Action; land use restrictions are noted to be in place for some of the facilities.

## 2.2.6 Federal Superfund (NPL) Sites

The Envirostor database identifies sites that the U.S. EPA listed on the National Priorities List (NPL). The NPL is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL serves primarily informational purposes, identifying for the States and the public those sites that appear to warrant remedial actions. As shown below in Table 2 and on Figure 5, three NPL sites within San José were identified (January 2009).

**Table 2. Federal Superfund (NPL) Sites in San José**

Site Name	Location	Cleanup Status
Fairchild Semiconductor	101 Bernal Road	REFER: RWQCB
Lorentz Barrel & Drum Company	1507 South 10 <sup>th</sup> Street	ACTIVE - LAND USE RESTRICTIONS
South Bay Asbestos Area	Liberty Street and Guadalupe River	REFER: EPA - LAND USE RESTRICTIONS

## 2.3 LANDFILLS AND SOLID WASTE FACILITIES

The Solid Waste Information System (SWIS) database (<http://www.ciwmb.ca.gov/swis>) contains information on solid waste facilities, operations and disposal sites throughout the State of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites and closed disposal sites. For each facility, the database contains information about location, owner, operator, facility type, regulatory and operational status, authorized waste types, local enforcement agency and inspection and enforcement records. Information from the SWIS database regarding solid waste facilities in San José (January 2009) is summarized below in Table 3; facilities are shown on Figure 5. Figure 5 also shows the ten sites listed on the Geotracker database as undergoing active cleanups as landfill disposal sites (January 2009) under Water Board oversight.

**Table 3. Landfills and Solid Waste Facilities (SWIS) in San José**

SWIS Number	Name	Location	Unit	Activity	Regulatory Status	Operation Status
43-AN-0001	Zanker Material Processing Facility	675 Los Esteros Road	1	Solid Waste Landfill	Permitted	Active
			2	Large Volume Transfer/Proc Facility	Permitted	Active
43-AN-0004	Marshland Solid Waste Facility	Nw Hwy 237 and Gold Street Alviso	1	Solid Waste Disposal Site	Unpermitted	Closed
43-AN-0005	Nine Par Landfill	705 Los Esteros Road, Near Zanker Road	1	Solid Waste Disposal Site	Permitted	Closed
43-AN-0006	Singleton Rd DS/San José Municipal DS	850 Singleton Road	1	Solid Waste Disposal Site	Pre-regulations	Closed
43-AN-0007	Zanker Road Class III Landfill	705 Los Esteros Road, Near Zanker Road	1	Solid Waste Landfill	Permitted	Active
			2	Large Volume Transfer/Proc Facility	Permitted	Active
			3	Composting Facility (Green Waste)	Permitted	Active
			4	Minor Waste Tire Facility	Permitted	Active
43-AN-0008	Kirby Canyon Recycl. & Disp. Facility	910 Coyote Creek Golf Drive	1	Solid Waste Landfill	Permitted	Active
43-AN-0009	Roberts Avenue Landfill	Roberts Avenue	1	Solid Waste Disposal Site	Unpermitted	Closed
43-AN-0010	Martin Park Landfill	Forestdale Avenue	1	Solid Waste Disposal Site	Pre-regulations	Closed
43-AN-0011	Hellyer Park Landfill	Palisade Dr. (between Hellyer and Faris)	1	Solid Waste Disposal Site	Pre-regulations	Closed
43-AN-0012	Story Road Landfill	Remillard Court	1	Solid Waste Disposal Site	Unpermitted	Closed
43-AN-0014	BFI's Recyclery	1601 Dixon Landing Road	1	Large Volume Transfer/Proc Facility	Permitted	Active
43-AN-0015	Guadalupe Sanitary Landfill	15999 Guadalupe Mines Road	1	Solid Waste Landfill	Permitted	Active
			2	Large Volume Transfer/Proc Facility	Permitted	Active
43-AN-0017	Newby Island Compost Facility	1601 Dixon Landing Road	1	Composting Facility (Green Waste)	Permitted	Active
43-AN-0019	Greenwaste Recovery Facility	625 Charles Street	1	Large Volume Transfer/Proc Facility	Permitted	Active
43-AN-0020	Green Team MRF Direct Transfer Facility	575 Charles Street	1	Direct Transfer Facility	Permitted	Active
43-AN-0021	Syntax Court D.S.	Syntax Ct, N 1st St.	1	Solid Waste Disposal Site	Pre-regulations	Closed
43-AN-0022	Green Team Service Yard Direct Trans Fac	1333 Oakland Road	1	Direct Transfer Facility	Permitted	Active
43-AN-0023	Premier Recycling Facility	260 Leo Avenue	1	Large Volume Transfer/Proc Facility	Permitted	Active
43-AN-0024	California Waste Solutions, Inc. (CWS)	1005 Timothy Drive	1	Large Volume Transfer/Proc Facility	Permitted	Active
43-AN-0025	Rogers Avenue Transfer Station	1675 Rogers Avenue	1	Medium Volume Transfer/Proc Fac	Permitted	Active
43-AN-0026	Markovits and Fox Disposal Site	1633 Old Oakland Road	1	Solid Waste Disposal Site	Unpermitted	Closed

Continued on next page.

Table 3 (continued).

SWIS Number	Name	Location	Unit	Activity	Regulatory Status	Operation Status
43-AN-0027	Watson Park Disposal Site	550 North 22nd Street	1	Solid Waste Disposal Site	Pre-regulations	Closed
43-AN-0028	Valley Recycling	1615 B South Seventh Street	1	Medium Vol CDI Debris Proc. Fac.	Permitted	Active
43-AN-0029	Beck's Property and Tree Service	1055 Cimmercial Court, Lot E	1	Chipping and Grinding Activity Fac./ Op.	Notification	Active
43-CR-0006	Santos	East Gold Street North Of Hwy 237	1	Solid Waste Disposal Site	Pre-regulations	Closed
43-CR-0008	Sainte Claire Landfill	Gold and Moffat St	1	Solid Waste Disposal Site	Unpermitted	Closed
43-CR-0010	Route 237 Lincoln Technology Park	Route 237 and Gold Street	1	Solid Waste Disposal Site	Pre-regulations	Closed

Two environmental concerns related to landfills are the generation and control of landfill gas and water moving through landfilled materials (leachate). Organic materials in landfills, such as food scraps and yard waste, produce methane and other landfill gases as a part of anaerobic decomposition of these materials. The methane in landfill gas is a flammable material and can move through waste and landfill cover materials. Landfill gas can also contain other constituents (such as volatile organic compounds) that have health risks. For these reasons, operating and closed landfills are required to have landfill gas collection systems and other controls to minimize hazards. Monitoring of landfill gas and leachate as well as other general requirements for landfills are contained in Title 27 of the California Code of Regulations. These requirements are administered by the California Integrated Waste Management Board, the State and Regional Water Quality Control Board, and the Local Enforcement Agency (City of San José). The routine emission of hazardous materials at landfills is also locally regulated by the Bay Area Air Quality Management District (BAAQMD). Landfill gas emissions and landfill gas collection at solid waste facilities are regulated under the District's Rule 34.

## 2.4 HAZARDS FROM RELEASE INCIDENTS

Releases of hazardous materials may occur during use, storage, transportation, treatment and disposal of these materials. Potential consequences associated with these releases are discussed in the following sections.

### 2.4.1 Accidental Releases

Accidental releases of hazardous materials have the potential to cause both short- and long-term adverse impacts to the health of workers, residents, and other members of the general public, as well as to the environment.

Spilled materials can contaminate soil, ground water and air. Releases that affect ground water can migrate with the ground water and contaminate other nearby properties. Similarly, airborne releases have the potential to migrate and impact off-site populations. Depending upon the material released a risk of fire or explosion may also be present.

Accidental releases of hazardous materials often require an immediate response in order to protect human health and safety, and/or the environment. Hazardous material incidents differ from other emergency response situations because of the wide diversity of hazardous material types and large number of potential causes. Incidents may occur at fixed facilities or at any

place along transportation routes. Circumstances such as the prevailing wind and geographic features in the vicinity of a release are relevant factors that may impact the severity of the incident and influence response actions.

The San José Fire Department Hazardous Incident Team (HIT) emergency response unit responds to emergency calls related to hazardous materials within the city. Along with the Fire Department's response capabilities, an extensive framework of state, federal and local regulations has been established to facilitate the safe use, storage, transportation and disposal of hazardous materials. Regulations also have been established to guide cleanup activities at release sites. A summary of this regulatory framework is presented below in Section 3.

#### **2.4.2 Historic Releases**

Often, hazardous materials are present in soil and ground water at a site as a result of past land uses; such past uses may not be evident at the present time unless adequate research is performed to establish the site history.

As a result of historic releases, hazardous materials can be encountered during site redevelopment activities and expose construction workers and/or the general public to various health risks. For example, construction and maintenance workers may be exposed to hazardous material releases through direct exposure to soil and ground water during earthwork and other construction activities. Residents and employees may also be exposed to volatile hazardous materials that migrate into indoor air from underlying contaminated soil or ground water.

Additionally, as discussed in Section 2.2, a large number of reported hazardous material release cases have been cleaned up under regulatory agency oversight and granted a "no further action" or "case closed" status. Although no further action is being required at these sites under current conditions, residual contamination could still be present that may affect future land uses or redevelopment activities. For example, an industrial property could be remediated to cleanup levels appropriate for current or future industrial land use, but chemicals could remain in soil or ground water at concentrations that may not be appropriate for more sensitive land uses such as residential, schools and day care facilities. The failure to appropriately evaluate the suitability of these historic release sites for planned future land uses could result in health risks to future site occupants.

#### **2.4.3 Building Demolition/Renovation**

**Asbestos:** Remodel and repair activity, and demolition work in residential and commercial structures that disturbs asbestos-containing building materials (ACBM) may cause the release of asbestos fibers into the air, resulting in health impacts to workers, building occupants and the general public. There is no known health threat if asbestos-containing materials are in generally good condition and are left undisturbed.

Friable asbestos-containing material (i.e., material that can be crumbled, crushed or reduced to powder by hand pressure when dry) and non-friable asbestos-containing material that will be made friable during renovation or demolition are subject to regulation. National Emissions

Standards for Hazardous Air Pollutants (NESHAP) guidelines require the removal of potentially friable ACBMs prior to building demolition or renovation that may disturb the ACBM.

**Lead:** Demolition and renovation of buildings also have the potential to release lead particles to the air, resulting in health impacts to workers, building occupants and the general public. If demolition or renovation activities are planned, the removal of lead-based paint is not required if it is bonded to the building materials. However, if the lead-based paint is flaking, peeling, or blistering, it should be removed prior to demolition. In either case, applicable OSHA regulations must be followed; these include requirements for worker training, air monitoring and dust control, among others. Any debris or soil containing lead must be disposed appropriately.

## 2.5 SITE INVESTIGATION AND CLEANUP

The five basic elements of a site investigation and cleanup are as follows:

- 1) Preliminary site assessment to confirm the discharge and the identity of the dischargers; to identify affected or threatened waters of the state and their beneficial uses; and to develop preliminary information on the nature and vertical and horizontal extent of the discharge;
- 2) Soil, soil vapor and water investigation to determine the source, nature, and extent of the discharge with sufficient detail to provide the basis for decisions regarding subsequent clean-up and abatement actions, if any are determined by the oversight agency to be necessary;
- 3) Proposal and selection of clean-up action to evaluate feasible and effective cleanup and abatement actions and to develop preferred clean-up and abatement alternatives;
- 4) Implementation of the selected clean-up and abatement; and
- 5) Monitoring to confirm short- and long-term effectiveness of cleanup and abatement.

**“Cleanup Complete” Determinations:** The oversight agency provides no further action confirmations and no-further-active-cleanup confirmations to responsible parties when no further active cleanup is needed. For petroleum-impacted sites, the oversight agency provides a case closure letter as part of the case closure summary report.

**Public Participation:** The oversight agency will provide opportunities for public participation in the oversight process so that the public is informed and has the opportunity to comment. The level of effort is tailored to site-specific conditions, depending on site complexity and public interest. The level of public participation effort at a particular site is based on the potential threat to human health, water quality, and the environment; the degree of public concern or interest in site cleanup; and any environmental justice factors associated with the site.

**Electronic Data Reporting:** The Water Board and DTSC maintain web-based geographic information system (GIS) programs that provide the public and regulators with online access to environmental data. The State Water Board and DTSC adopted regulations that require electronic submittal of information for cleanup programs (Title 23, CCR, Division 3, Chapter 30).

**Compliance Monitoring:** Monitoring reports are required periodically that describe the status of the cleanup activities and monitoring results. The oversight agency will conduct site inspections to document that the responsible party is complying with the oversight agency's enforcement directives.

**Deed Restriction:** A deed restriction (land use covenant) may be required to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to residual hazardous materials. Water Code Section 13307.1 requires that deed restrictions be mandated for sites that are not cleaned up to "unrestricted use", and that the restrictions be recorded and run with the land to prohibit sensitive uses such as homes, schools, or day care facilities. Underground storage tank (UST) sites are exempted from this requirement because of the sheer numbers and the small size of most of these sites. Site conditions are tracked in the GeoTracker and Envirostar databases.

**Clean-Up Goals:** Dischargers may utilize screening levels during site investigation and cleanup to focus on the most significant contamination issues. These include the Water Board's Environmental Screening Levels (ESLs), Cal/EPA's California Human Health Screening Levels (CHHSLs), and USEPA's Regional Screening Levels (RSL). Dischargers may need to conduct risk assessments in the course of setting cleanup levels following USEPA and CalEPA guidance documents.

## **SECTION 3: REGULATORY FRAMEWORK**

Of concern to all communities are the safe handling, storage and transportation of hazardous materials, as well as the proper disposal of hazardous wastes. Beginning in the 1970s, governments at the federal, state, and local level became increasingly concerned about the impacts from hazardous materials on human health and the environment. Numerous laws and regulations were developed to regulate the management of hazardous materials and mitigate potential impacts. As a result, the storage, use, generation, transport, and disposal of hazardous materials and waste are highly regulated. A summary of key regulations and policies is presented in the following sections.

Note that the following should not be considered to be a complete list of all potentially applicable regulations. It is intended only to present some of the key regulations and show that there is a wide variety of regulations that may apply in a given circumstance.

### **3.1 FEDERAL REGULATIONS**

#### **3.1.1 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress in 1980. This law provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous wastes at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified.

CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

### **3.1.2 Resource Conservation and Recovery Act (RCRA)**

The Resource Conservation and Recovery Act (RCRA), initially authorized in 1976, gives the US EPA the authority to control hazardous waste from "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled US EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

## **3.2 STATE AND LOCAL REGULATIONS AND AGENCIES**

In California, the US EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (Cal/EPA). In turn, local agencies including the San José Fire Department (SJFD) and the Santa Clara County Department of Environmental Health (SCCDEH) have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program (See Section 3.2.3).

Other regional agencies are responsible for programs regulating emissions to the air, surface water, and ground water. The Bay Area Air Quality Management District (BAAQMD) has oversight over air emissions, and the Water Board regulates discharges and releases to surface and ground water. Oversight over investigation and remediation of sites impacted by hazardous materials releases can be performed by state agencies, such as DTSC (a division of Cal/EPA), regional agencies, such as the Water Board, or local agencies, such as SCCDEH. The SCCDEH oversees investigation and remediation LUST sites in San José. Other agencies that regulate hazardous materials include the California Department of Transportation (transportation safety) and Cal/EPA Division of Occupational Safety and Health, better known as Cal/OSHA (worker safety).

### **3.2.1 Department of Toxic Substances Control (DTSC)**

The DTSC regulates hazardous waste, remediation of existing contamination, and evaluates procedures to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of the federal Resource Conservation and Recovery Act of 1976 and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

From these laws and regulations, DTSC develops guidelines and regulations that define what those who handle hazardous waste must do to comply with the laws. As is the case with environmental risk management decisions, these rulemakings are subject to public review and comment.

DTSC implements protective cleanup programs and standards. An estimated 90,000 properties throughout the State - including former industrial properties, school sites, military bases, small businesses and landfills - are contaminated, or believed contaminated, with some level of toxic

substances. Some of these are "brownfields," sites that often sit idle or underused, contributing to both urban blight and urban sprawl.

Statewide, DTSC oversees the cleanup of approximately 220 hazardous substance release sites at any given time and completes an average of 125 cleanups each year. An additional 250 sites are listed on DTSC's EnviroStor database of properties that may be contaminated. Expediting cleanups is an important goal of DTSC, and a series of "Brownfields" initiatives support that effort. The Voluntary Cleanup Program and the Expedited Remedial Action Pilot Program encourage responsible parties to clean-up contaminated properties by offering economic, liability, or efficiency incentives. DTSC also encourages property owners to investigate and clean-up contamination if found, through a combination of low-interest loans. The Investigating Site Contamination and Cleanup Loans and Environmental Assistance to Neighborhoods (CLEAN Loans) programs provide loans to investigate and clean-up urban properties. At present, funding for the Loan Program is limited, but in 2001, the most recent year for which data is available, DTSC received 11 loan applications for \$7.9 million. The State Superfund covers sites for which there are no cleanup options through the responsible party and which threaten the people or the environment of California.

State laws require all proposed school sites that will receive state funding for purchase or construction to go through DTSC's environmental review. This process provides that new school sites are uncontaminated, or if previously contaminated, that they have been cleaned-up to a safe level. Last year, DTSC assessed, investigated, or cleaned up more than 450 different school sites in California.

California has one-third of the closing military bases in the country and more than 1,000 former defense sites. DTSC is currently investigating, cleaning-up, or providing technical assistance at more than 160 current or former military installations statewide. This task presents some unique challenges including addressing residual unexploded ordinance, chemical and biological munitions, and otherwise toxic substances that remain on the property.

DTSC's Emergency Response Program provides immediate assistance during sudden or threatened releases of hazardous materials. Trained responders clean-up illegal drug labs, working with law enforcement agencies to remove toxic chemicals at roughly 2,000 labs per year. They have participated at more than 10,000 labs since 1995. They also clean-up hazardous substance spills related to off-highway transportation and natural disasters. DTSC crews are ready to go into an illegal drug lab, a train derailment site, or an earthquake-damaged area to remove dangerous substances before people are injured.

In addition, DTSC continues to have lead responsibility for cleanup and enforcement at several high profile federal Superfund sites.

The U.S. Environmental Protection Agency (U.S. EPA) authorizes DTSC to carry out the Resource Conservation and Recovery Act (RCRA) program in California. Permitting, inspection, compliance, and corrective action programs help ensure that companies that manage hazardous waste follow state and federal requirements.



DTSC has permitted more than 130 major commercial facilities to treat, store, and dispose of hazardous waste in California. The Department uses a streamlined tiered permitting process to regulate the 5,000 businesses that perform lower-risk treatment and different permits cover hazardous waste generation, transportation, and recycling. In addition, DTSC tracks and monitors hazardous waste from its generation to ultimate disposal.

Requiring compliance through inspection and enforcement is an important part of effectively regulating hazardous waste. DTSC conducts roughly 200 inspections a year, resulting in as many as 30 new enforcement cases. The investigators also provide technical and investigative support to federal prosecutors and district attorneys prosecuting environmental crimes. Also, DTSC investigators and inspectors respond to nearly 1,000 citizen complaints about hazardous waste each year. They refer most of these complaints to local government.

DTSC also oversees the implementation of the hazardous waste generator and on-site treatment program, one of the six environmental programs at the local level consolidated within the Unified Program. Seventy-two Certified Unified Program Agencies (CUPAs), which are generally part of the local Fire Department or Environmental Health Department, have authority to enforce regulations, conduct inspections, administer penalties and hold hearings. DTSC participates in the triennial review of the CUPAs so that their programs are consistent statewide, conform to standards and deliver quality environmental protection at the local level. This includes working closely with the CUPAs and providing technical assistance and training. The local CUPA for San José is described in greater detail in Section 3.2.3.

DTSC's waste evaluation program assists in waste determinations to identify what substances and in what concentrations are harmful. The household hazardous waste and agricultural chemical collection programs focus on removing dangerous substances from homes and preventing their release into the environment through landfills, sewer systems and illegal dumping. DTSC also conducts a corrective action oversight program that assures any releases of hazardous constituents at generator facilities that conduct on-site treatment of hazardous waste are safely and effectively remediated.

### **3.2.2 State Water Resources Control Board (SWRCB)**

The Water Resources Control Board (SWRCB) was created by the Porter-Cologne Act (1967) and is responsible for the oversight of water rights, water pollution and water quality functions. The State is divided into nine regions, each with a Regional Water Quality Control Board. These agencies are authorized to adopt regional water quality control plans, prescribe waste discharge requirements, and perform other functions concerning water quality control within their respective regions. The City of San José is located in Region 2 (San Francisco Bay).

The San Francisco Bay Regional Water Quality Control Board oversees the unauthorized releases of pollutants to soils and ground water but in some cases also to surface waters or sediments. Sites that are managed by the San Francisco Bay Regional Water Quality Control Board include sites with pollution from recent or historical surface spills, subsurface releases (e.g., pipelines, sumps, etc.), and other unauthorized discharges that pollute or threaten to pollute surface and ground water.

The Water Code provides authority for the San Francisco Bay Regional Water Quality Control Board to require investigation and cleanup of sites with unauthorized pollutant releases. Water Code Section 13267 allows the San Francisco Bay Regional Water Quality Control Board to require technical reports from suspected dischargers. Water Code Section 13304 authorizes the San Francisco Bay Regional Water Quality Control Board to issue “cleanup and abatement” orders requiring a discharger to cleanup and abate waste, “where the discharger has caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.” The San Francisco Bay Regional Water Quality Control Board coined the term “site cleanup requirements” (SCRs) to describe Water Code Section 13304 orders where soil or ground water cleanup would take many years to complete and the dischargers are cooperating. The San Francisco Bay Regional Water Quality Control Board also complies with any requirements in the state Health and Safety Code and the federal Superfund law for authority at federal Superfund sites where the Water Board is the lead agency. Water Code Section 13304 authorizes the Regional Water Quality Control Boards to recover costs for oversight of site cleanup at sites where a discharge of waste has occurred and that discharge creates, or threatens to create, a condition of pollution or nuisance. State Water Board Resolution No. 92-49, “Policies and Procedures for Investigation, Cleanup and Abatement of Discharges Under Water Code Section 13304” No. 68-16, “Statement of Policy with Respect to Maintaining High Quality of Waters in California”; and No. 88-63, “Sources of Drinking Water”, contain the policies and procedures that all Regional Water Quality Control Boards shall follow to oversee and regulate investigations and cleanup and abatement activities resulting from all types of discharge or threat of discharge subject to Water Code Section 13304. The San Francisco Bay Regional Water Quality Control Board also provides guidance on required cleanup at low risk fuel sites.

The San Francisco Bay Regional Water Quality Control Board also oversees the discharge of storm water/urban runoff to the South San Francisco Bay. It has issued a joint NPDES Permit to Santa Clara County, the Santa Clara Valley Water District, and 13 of the cities within the County, including San José. This collection of municipalities and agencies formed an association called the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) to meet National Pollutant Discharge Elimination System (NPDES) permit regulations by sharing resources and collaborating on projects of mutual benefit. Program participants share a common permit to discharge storm water to South San Francisco Bay. To reduce pollution in urban runoff to the “maximum extent practicable”, the Program incorporates regulatory monitoring, “Industrial/Commercial Discharger Control” (referred to as “IND”) inspections, and outreach measures aimed at improving the water quality of South San Francisco Bay and the streams of the Santa Clara Valley.

### **3.2.3 Certified Unified Program Agency (CUPA) Program**

The CUPA program was created by Senate Bill 1082 (1993) to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities for several environmental and emergency management programs. The unified program is intended to provide relief to businesses complying with the overlapping and sometimes conflicting requirements of formerly independently managed programs. The following six programs are administered locally under the State’s Unified Program:

- The Hazardous Waste Generator (HWG) program and the Hazardous Waste Onsite Treatment activities authorized under the permit-by-rule, conditionally authorized, and conditionally exempt tiers – Health and Safety Code Division 20, Chapter 6.5 (generally supplemented by California Code of Regulations, Title 22, Division 4.5);
- The Aboveground Storage Tank (AST) program Spill Prevention Control and Countermeasure Plan requirements – Health and Safety Code Division 20, Chapter 6.67, Section 25270.5(c);
- The Underground Storage Tank (UST) program – Health and Safety Code Division 20, Chapter 6.7 (generally supplemented by the California Code of Regulations, Title 23, Chapters 16 and 17);
- The Hazardous Materials Release Response Plans and Inventory (HMRRP) program – Health and Safety Code Division 20, Chapter 6.95, Article 1 (generally supplemented by the California. Code of Regulations, Title 19, Sections 2620-2734);
- California Accidental Release Prevention (CalARP) program – Health and Safety Code Division 20, Chapter 6.95, Article 2 (generally supplemented by the California Code of Regulations, Title 19, Sections 2735.1-2785.1); and
- The Hazardous Materials Management Plans and the Hazardous Materials Inventory Statement (HMMP/HMIS) requirements – California Fire Code Title 24, Part 9, Sections 2701.5.1 and 2701.5.2

Some CUPAs have contractual agreements with another local agency, a "Participating Agency," that implements one or more program elements in coordination with the CUPA. Santa Clara County has four CUPAs and five Participating Agencies that administer the various hazardous materials, hazardous waste and underground storage tank programs within their respective jurisdictions.

The SCCDEH is the CUPA for the City of San José and administers the following hazardous materials related state programs:

- Hazardous Waste Generator Program (HSC Division 20, Chapter 6.5)

The County of Santa Clara has maintained a Hazardous Waste Generator Program since 1989. At that time, the DTSC entered into a Memorandum of Understanding with the County that authorized the County to inspect all hazardous waste generating facilities for compliance with Health and Safety Code regulations. In 1997, authority to conduct these inspections was modified when CalEPA certified the SCCDEH as a CUPA with the responsibility to oversee hazardous waste compliance programs.

- Hazardous Waste Tiered Permitting (HSC Division 20, Chapter 6.5)

Any business that stores, treats or disposes of hazardous wastes must obtain a permit or a grant of authorization from the DTSC. California has a five-tier permitting program for

authorizing hazardous waste treatment or storage, which matches the regulatory requirements to the degree of risk posed by the facility's activities. The first three tiers are designed to regulate on-site treatment of hazardous waste. On-site treatment is limited to relatively small amounts of wastes with proven, low risks technologies. The fourth tier is for off-site treatment or storage of wastes that would not require a federal permit, such as waste oil storage or precious metal recovery services. The final tier is that of full treatment, storage and disposal.

- California Accidental Release Prevention Program - CalARP (HSC Div. 20, Chapter 6.95)

CalARP includes the federal Accidental Release Prevention Program [Title 40, Code of Federal Regulations (CFR) Part 68] with certain additions specific to the state pursuant to Article 2, Chapter 6.95, of the Health and Safety Code (HSC). The purpose of CalARP is to prevent the accidental releases of regulated substances. The list of regulated substances is presented in Section 2770.5 of this chapter. Stationary sources with more than a threshold quantity of a regulated substance are required to be evaluated to determine the potential for and impacts of accidental releases from that covered process. Under conditions specified by this chapter, the owner or operator of a stationary source may be required to develop and submit a risk management plan (RMP). The RMP components and submission requirements are identified in Article 3 of this chapter.

As a Participating Agency (operating under a Memorandum of Understanding with the SCCDEH), the San José Fire Department, Bureau of Fire Prevention administers the following hazardous materials related state programs:

- The Hazardous Materials Release Response Plans and Inventory (HMRRP) program – Health and Safety Code Division 20, Chapter 6.95, Article 1

All facilities in the City of San José that use or store hazardous materials (defined as either virgin or waste materials) in quantities exceeding threshold amounts are required by local ordinance to report such use or storage to the San José Fire Department. The amount of detail required to be reported depends on whether or not a facility is subject to the State Hazardous Materials Business Plan reporting requirements. The intent of the Hazardous Materials Business Plan is to satisfy federal and state Community Right-To-Know laws and provide detailed information for use by emergency responders.

- Underground Storage Tanks (HSC Division 20, Chapter 6.7)
- Aboveground Storage Tanks (HSC Division 20, Chapter 6.67)
- The Hazardous Materials Management Plans and the Hazardous Materials Inventory Statement (HMMP/HMIS) requirements – California Fire Code Title 24, Part 9, Sections 2701.5.1 and 2701.5.

Although not included within the CUPA program, the San José Fire Department also administers a local Hazardous Materials Storage Ordinance (San José Municipal Code Chapter 17.68) and Toxic Gas Ordinance (San José Municipal Code Chapter 17.78). These are discussed below in Section 3.2.4. Additionally, the SCCDEH oversees the management of medical waste in accordance with the Medical Waste Management Act (HSC Sections 117600 to 118360) and Santa Clara County Ordinance Code, Sections B11-260 to B11-268.

A summary of the hazardous materials programs and administering agencies is presented below in Table 4.

**Table 4. Hazardous Materials Programs and Administering Agencies for San José**

Business Plans	Hazardous Waste	Tiered Permitting	USTs	ASTs	CalARP	California Fire Code	Hazmat Storage	Toxic Gases	Medical Waste
SJ FD	SCCDEH	SCCDEH	SJ FD	SJ FD	SCCDEH	SJ FD	SJ FD	SJ FD	SCCDEH

### 3.2.4 Local Ordinances

As noted above, the San José Fire Department administers a local Hazardous Materials Storage Ordinance (San José Municipal Code Chapter 17.68) and Toxic Gas Ordinance (San José Municipal Code Chapter 17.78). The Storage Ordinance and the Toxic Gas Ordinance are standalone ordinances developed to address specific safety needs in San José that were not adequately covered in previous state codes. The Storage Ordinance was first adopted in 1983, and the Toxic Gas Ordinance in 1990. At the time, they were the first attempt in the nation at providing some framework for regulation. Since then, a high percentage of the requirements in those ordinances have been adopted in national model codes, including the 2006 International Fire Code.

### 3.2.5 Other Local Policies

Placement of daycare facilities, churches, schools and other sensitive developments in or near areas where hazardous materials are used or stored presents potential hazards. To address these potential hazards, the City of San José has developed the following guidance documents that are used by the Building and Planning Departments during the development review and approval process.

- Draft Guidelines for the Placement of Daycare Facilities, Churches and Schools in or adjacent to Industrial Zones (San José Fire Department – Appendix B).
- Draft Guideline for Preparation of Risk Assessments (San José Fire Department – Appendix C).
- Development Guideline for Land in Proximity to High Pressure Natural Gas Pipelines (City of San José Memorandum dated July 18, 1986 – Appendix D).

There are certain uses of land or types of business that have an impact on their community. The City Council of San José controls such uses through the Conditional Use Permit process. Conditional Use Permits are approved by the Planning Commission and may be appealed to the City Council. Conditional uses are only allowed with the approval of a Conditional Use Permit. As part of the Conditional Use Permit process, the San José Environmental Services Department (ESD) may be requested to review site-specific environmental documentation. When contamination is present on a site, the city reports this information to the appropriate agencies that regulate the cleanup of toxic contamination.

## **SECTION 4: CONSTRAINTS IN PLANNED GROWTH AREAS**

Implementation of the City of San Jose's Envision 2040 General Plan Update, as currently proposed, will result in development of new residential, commercial and industrial uses throughout the City. Intensification of development is anticipated to occur within Village and Corridor and Specific Plan areas (Figure 6). Known environmental conditions that could adversely impact future development and redevelopment within specific Planning Areas of the City are identified in Appendix E on Tables E1 to E2.

### **4.1 REPORTED HAZARDOUS MATERIALS RELEASES**

Development allowed under the General Plan Update could occur on or near contaminated properties located throughout the Planning Areas as the City continues to grow. Localized contamination of soil, soil vapor and ground water could adversely impact human health or the environment if not appropriately addressed and mitigated. Contaminated properties listed on the state GeoTracker database (<http://geotracker.swrck.ca.gov>) and on the Envirostor database (<http://www.envirostor.dtsc.ca.gov>), online search and Geographic Information System (GIS) tools for identifying sites with known or potential contamination, are summarized by Planning Area (Appendix E, Tables E1 to E12). The regulatory databases reviewed on geotracker and envirostar consisted of 1) Federal Superfund (a list of national priority sites with known releases of threatened releases of hazardous substances or contaminants); 2) State Water Board Open Site Cleanup Program (spill incident sites overseen by the Water Board where site assessment, remediation or monitoring are in progress); 3) DTSC Open State Response Sites (confirmed hazardous materials releases where the DTSC is involved in overseeing remediation); 4) DTSC Open Voluntary Cleanup Sites (confirmed or unconfirmed hazardous material releases where the project proponents have funded and voluntarily requested that DTSC oversee evaluation, investigation and or cleanup activities); 5) Leaking Underground Storage Tank Sites (open fuel leak/tank sites where assessment, remediation or monitoring are in progress); 6) Solid Waste Information System and Land Disposal Sites contain information on solid waste facilities and disposal sites undergoing active assessment, remediation or monitoring; and 7) DTSC School Sites (school sites that are receiving state funding for acquisition and funding are required to undergo environmental review and cleanup, if needed, under DTSC oversight). Toxic Gas Facilities (stationary sources with more than a threshold quantity of a regulated hazardous material), provided by the San José Fire Department (January 2009), also were reviewed.

### **4.2 SITE ASSESSMENT AND INVESTIGATION**

The General Plan Update also allows for a greater mix of uses, including location of residential uses in proximity to businesses (or employment uses), which could expose sensitive receptors in residential areas to hazardous materials used, stored or disposed of as waste by industrial operations. As is typical to many industrial/commercial areas, several facilities in and near the Villages and Corridors were reported as hazardous materials users. If leaks or spills occur at these facilities, contamination could impact sites within the Villages and Corridors, depending upon the location of the facility, the magnitude of the release, and the effectiveness of cleanup efforts.

Prior to site development activities within the Villages and Corridors, performing a Phase I Environmental Site Assessment would help to identify, to the extent feasible, Recognized

Environmental Conditions at the property. As defined by ASTM E 1527-05 titled, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (ASTM Standard), the term Recognized Environmental Condition means the presence or likely presence of hazardous substances or petroleum products on a property under conditions that indicate an existing release, past release, or a material threat of a release of hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water on the property. Soil, soil vapor and ground water investigations (Phase II investigations) may be required to determine the source, nature, and extent of the contamination and to provide the basis for decisions regarding clean-up and oversight agency involvement, if any.

### **4.3 AIRBORNE RELEASES OF HAZARDOUS MATERIALS**

Each year there are hundreds of incidents in the United States in which airborne hazardous materials, generally industrial chemicals but also biological and radiological materials, are released. These releases may cause illness, injuries or disruption of activities. In most cases, these incidents result in building or area evacuations. This action is the natural response in such emergencies and usually the only practical course of action by which the occupants can reach clean air and safety. In some situations, emergency response personnel may direct people to remain inside buildings or vehicles and implement shelter-in-place actions.

The potential for airborne hazardous materials releases to pose substantial risks to human health varies with the controls in place at individual facilities and the populations of people who could be exposed to concentrations of hazardous materials that have known health effects. Advances in the containment and handling of hazardous materials have greatly reduced the chance of an accidental release of regulated hazardous materials, but have not totally eliminated risk. Public agencies, such as the California Air Resources Board and Cal EPA, recognize that children, the elderly, and people with illnesses, are considered "sensitive receptors" that are more susceptible to the effects of air contaminants than adults. The vulnerability of these groups has to do with greater sensitivity to physical health impacts from many substances and limited mobility.

Use of hazardous materials by new companies or existing facilities can be anticipated to occur as part of the normal economic development of industrial and commercial areas. Where there are mixes of land uses, or industrial or commercial facilities are located in close proximity to uses with sensitive populations, emergency response and measures to avoid illness, injury or disruption of activities can pose special challenges.

The risk of an accidental release of a chemical impacting a sensitive population is a function of the likelihood of the release occurring and the health consequences of such an event. The particular characteristics of a chemical can determine how far and fast it will disperse, as well as how severely it would affect human health. Given these factors, the proximity of sensitive populations to facilities that use hazardous materials that pose airborne hazards if released, is key. Emergency response plans and protective actions are also important in the event of an actual release.

The risk of an accidental release of hazardous materials causing harm to either workers or off-site sensitive receptors can be estimated/calculated using established methods of risk

modeling. Risk assessment can be used to help public agencies make decisions about whether the risks associated with an accidental release at a particular site are acceptable. For example, under the CalARP program, risk management plans are used to determine if there are adequate controls to limit the effects of an accidental release to a particular site. Other planning level risk assessment models can also be used to assess whether the setbacks or separation distance between sensitive receptors and existing or planning facilities that store or use hazardous materials that pose airborne hazards are large enough to avoid substantial impacts to people. For projects that involve issuance of a Conditional Use Permit or other similar discretionary approvals, the City of San Jose currently requires that a Risk Assessment be prepared when new sensitive land uses are proposed within approximately ½ mile (or a greater distance depending upon the type and quantity of the hazardous material) of an industrial facility using hazardous materials that, if released, could result in a health hazard to sensitive receptors. Toxic Gas Facilities (stationary sources with more than a threshold quantity of a regulated hazardous material as of January 2009) within approximately ½ mile from Villages and Corridors are presented on Tables E1 to E12.

In the event of an accidental release, protective actions for airborne hazardous materials include actions taken when people are outside of a building and actions taken when they are inside the building. The inside building actions, known as sheltering or protecting in-place, depend upon whether the hazardous material release occurred inside or outside the building. Shelter in-place actions can provide short-term (one-to-two hours in some cases) protection to the occupants and are most effective when building occupants plan and practice their actions in advance. Most are simple, low or no-cost actions performed by the occupants or facility manager. Sheltering in-place is not the solution for every situation. However, it may be the only practical method to provide protection for residential housing or for buildings with large populations, such as dormitories, auditoriums, movie theaters and office buildings. Other candidates for sheltering in-place include schools, medical facilities, childcare centers and other buildings that are unable to evacuate or transport most or all of the occupants to safe areas. Although the primary reason to shelter inside buildings is to increase protection, these actions also provide emergency responders with the time they need to control or contain the release and coordinate evacuation strategies.

Buildings can provide protection in varying degrees against airborne hazards that originate from the outside. Such protection is limited, however, and effective only under certain conditions. Conversely, the hazards produced by a release inside a building can be much more severe than a similar release outside. Because buildings allow only a limited exchange of air between the inside and outside, not only can higher concentrations occur when there is a release inside or directly into a building, but inside hazards are more likely to last longer.

Incidents involving airborne hazardous materials will likely occur with little or no warning and require individuals and groups to quickly implement protective actions based upon their assessment of the situation or directions from emergency response personnel.

Most strategies to protect people from airborne hazards require adequate separation distance and/or some advanced warning or a means of detecting the hazard. Advanced warning may be provided from the County Health, Police or Fire departments, or other sources and disseminated through the various communication networks. Depending upon the type of material, hazard detectors may be used to provide warning of a release. Although effective and



inexpensive devices are widely available for detecting smoke and fire, there are presently no detectors that can rapidly alert occupants to a broad range of chemical, biological, or radiological hazards. If advanced warning is not provided and detectors are not available, personnel must initially react to the situation based upon what they see, hear, feel (touch or contact) and smell.

Most hazardous chemicals have warning properties that provide a practical means for detecting a hazard and initiating protective actions. Such warning properties make chemicals perceptible; that is, chemical aerosols, vapors or gases can be perceived by the human senses (by smell, sight, taste, or irritation of the eyes, skin, or respiratory tract) before serious effects occur. The concentrations at which an individual can detect an odor vary from person to person, and these thresholds also vary relative to the level that can produce immediate, injurious effects. In addition, these perceptions may be masked or difficult to distinguish from sounds, sights, or smells normally present within a work or outside area. The most important indication is that something different from the norm has occurred and action needs to be taken.

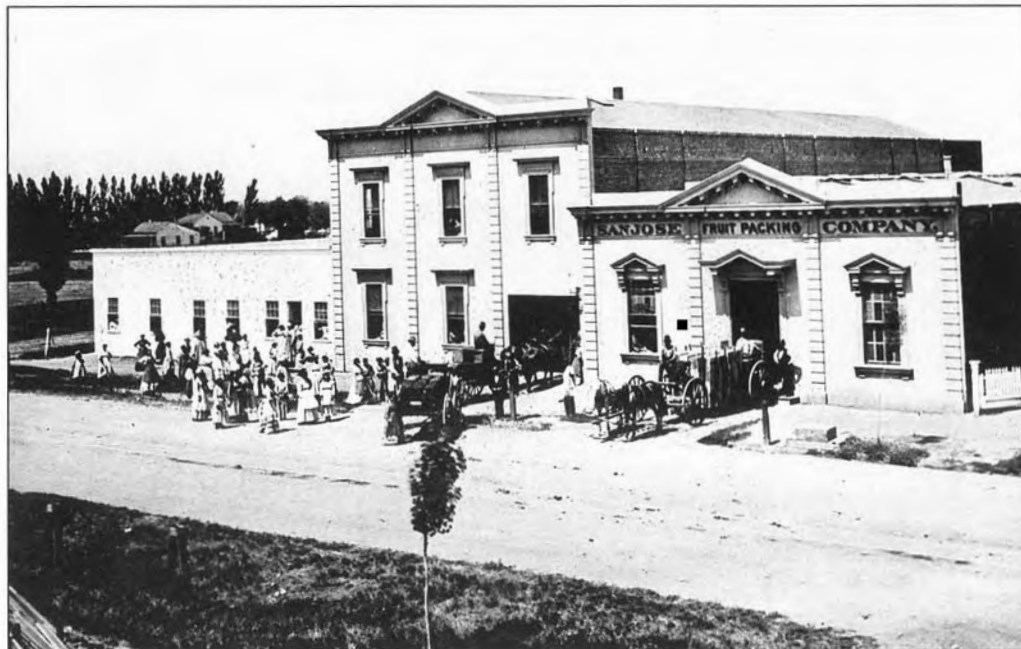
## **SECTION 5: LIMITATIONS**

This report, an instrument of professional service, was prepared for the sole use of David J. Powers & Associates and the City of San José and may not be reproduced or distributed without written authorization from Cornerstone.

Cornerstone reviewed selected publicly available information for the general area as presented in the Tables of Appendix E. Cornerstone cannot verify the accuracy or completeness of the databases reviewed, nor is Cornerstone obligated to identify mistakes or insufficiencies in the information provided. Cornerstone does not accept liability for deficiencies, errors, or misstatements that have resulted from inaccuracies in the publicly available information. In addition, environmental concerns not documented on the Tables in Appendix E do not warrant that these conditions are not present on or near a Village or Corridor; it only indicates that these conditions were not readily known to exist in the general site vicinity based on the documentation reviewed, the limits of time and the budgetary constraints.

While Cornerstone has taken precautions to produce a complete and secure electronic transmission, please check the electronic transmission against the hard copy version for conformity.

Cornerstone makes no warranty, expressed or implied, except that our services have been performed in accordance with the environmental principles generally accepted at this time and location.



San Jose Fruit Packing Company stood on the southeast corner of Fifth and Julian Streets from 1876 to early 1890's. The fruit packing company began as a humble operation run by Dr. James Madison Dawson and his wife from a small shed on their property on The Alameda, which made it the first cannery in Santa Clara County.



The Fredericks Brewery on West Julian near The Alameda was the largest of the half dozen breweries that once existed in San Jose. Established in 1869 by German brewer Gottfreid Krahenberg, Fredericks eventually expanded into a large fortress-like structure, which housed not only the brewhouse but also a saloon and hotel.



Markovitz and Fox had operated a successful scrap and salvage company in San Jose since the late 19th century. In 1919 they erected this building at 40 North Fourth Street.

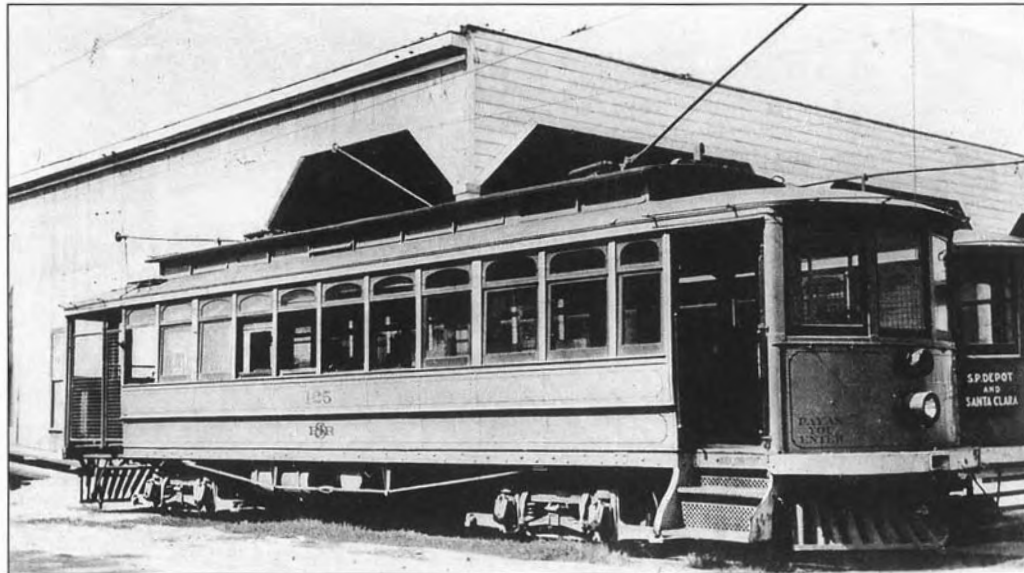


Horse-drawn vehicles constitute most of the downtown transportation in this 1910 photograph. The view is from East Santa Clara Street near Third Street, looking west toward the Electric Light Tower.

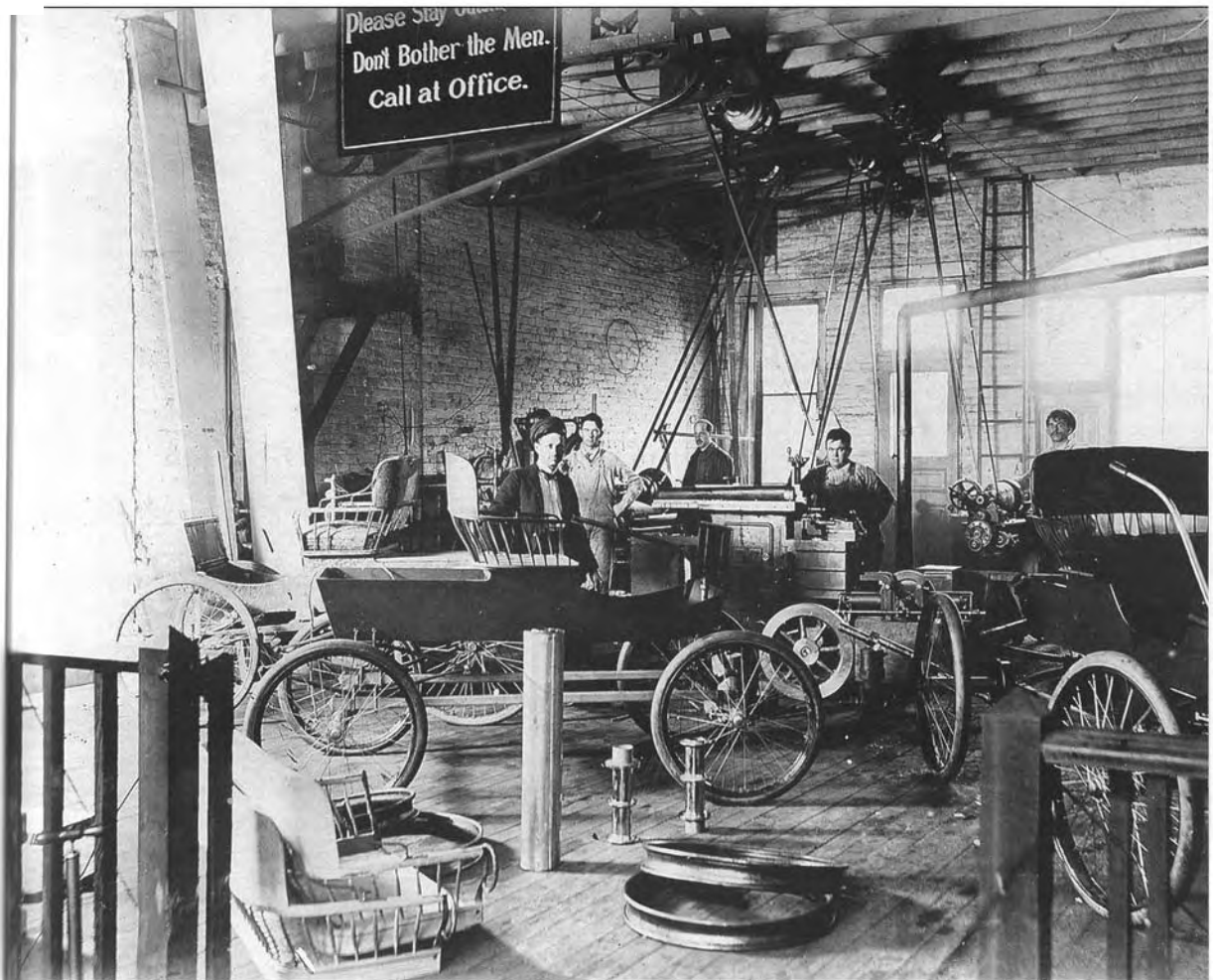
Photos provided by: "San Jose's Historic Downtown", Copyright 2004 by The City of San Jose.



<b>Historic Photos</b> Current Conditions Report Hazards and Hazardous Materials <b>Envision San Jose General Plan</b> San Jose, CA	Project Number	118-13-1
	Figure Number	Figure 2
	Date	February 2010



San Jose Railroad streetcar barn on West San Carlos Street. This 40 Passenger trolley had been built in 1912 and later converted to one-person operation by removing the rear step and fencing in the back entrance.



This interior view of the Osen and Hunt Automobile Factory shows William Hunt, wearing a motoring cap, and some of his staff at work c. 1900. George Osen and William Hunt made all automobile parts except engines, tires, and seats. The seats came from Hatman and Normandin's buggy factory, still doing business today as Normandin Chrysler-Jeep.

Photos provided by: "San Jose's Historic Downtown", Copyright 2004 by The City of San Jose.



<b>Historic Photos</b> Current Conditions Report Hazards and Hazardous Materials <b>Envision San Jose General Plan</b> San Jose, CA	Project Number	118-13-1	
	Figure Number	Figure 3	
	Date	February 2010	Drawn By

## THE SUNSET "THIRTY"

4-Cylinder 4-Cycle 1909

Roadster, Double or Single Rambler  
\$1600

Light Touring Car  
\$1650

Toy Tonneau  
\$1650

Bosch Magneto, 5 Lamps and Tube  
Horn Included

Amplly Powerful    Quiet    Economical

VICTORY MOTOR CAR COMPANY

First and Martha Streets, San Jose, Cal.

By 1909 The Victory Motor Company was advertising that the new Sunset models were "guaranteed to make a mile a minute". The factory was turning out eight new cars a month and more than 230 Sunsets were registered in San Jose alone.



For many years agriculture was the primary industry in Santa Clara County. Downtown San Jose had its share of businesses that directly served the farming community. One such was the Knapp Plow Company. The founder of the firm Robert I. Knapp, developed the special hillside plow seen in the foreground. This plow allowed vineyards to be planted on steep slopes such as those found in the Santa Cruz Mountains

Photos provided by: "San Jose's Historic Downtown", Copyright 2004 by The City of San Jose.



### Historic Photos

Current Conditions Report Hazards and Hazardous Materials  
Envision San Jose General Plan  
San Jose, CA

Project Number

118-13-1

Figure Number

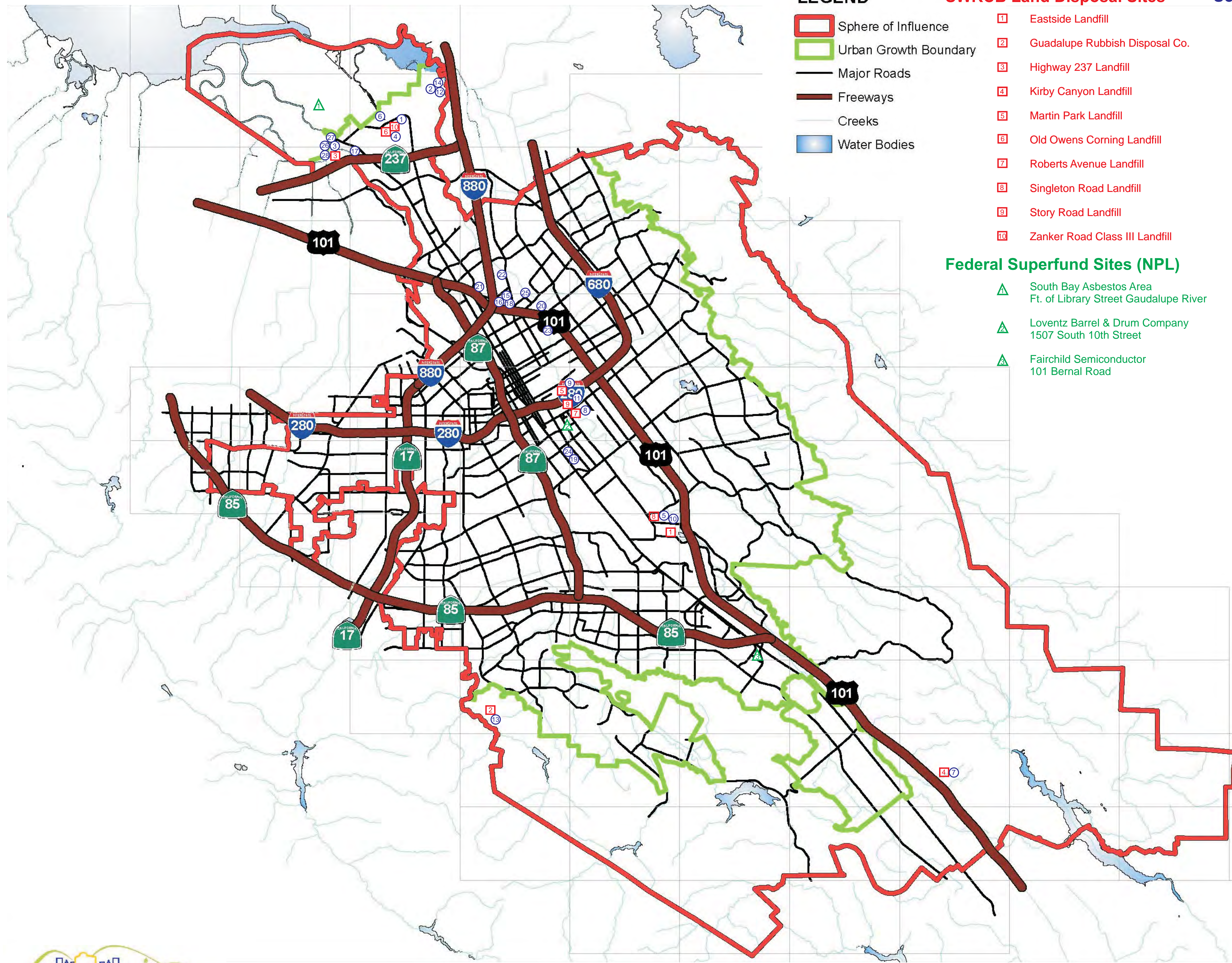
Figure 4

Date

February 2010

Drawn By

FLL



**LEGEND**

- Sphere of Influence
- Urban Growth Boundary
- Major Roads
- Freeways
- Creeks
- Water Bodies

**SWRCB Land Disposal Sites**

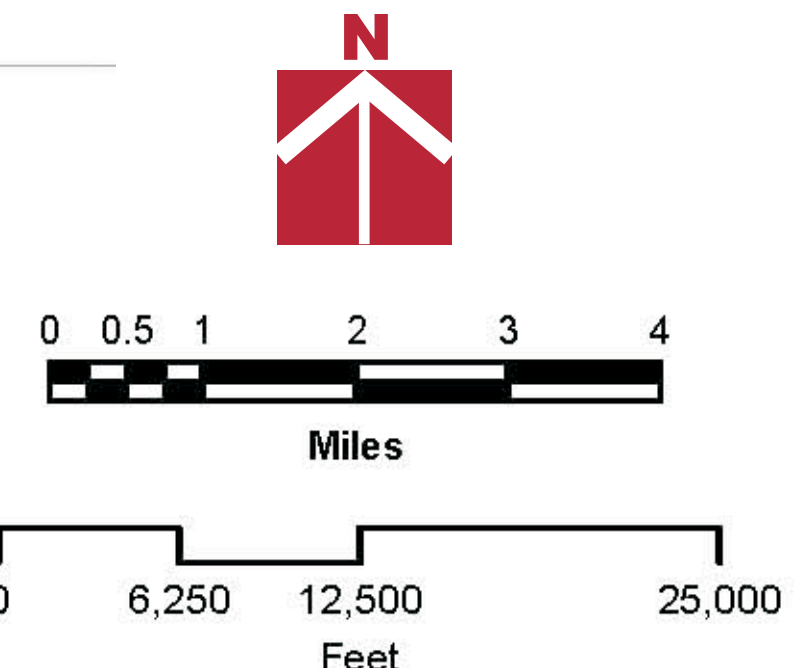
- 1 Eastside Landfill
- 2 Guadalupe Rubbish Disposal Co.
- 3 Highway 237 Landfill
- 4 Kirby Canyon Landfill
- 5 Martin Park Landfill
- 6 Old Owens Corning Landfill
- 7 Roberts Avenue Landfill
- 8 Singleton Road Landfill
- 9 Story Road Landfill
- 10 Zanker Road Class III Landfill

**Federal Superfund Sites (NPL)**

- ▲ South Bay Asbestos Area  
Ft. of Library Street Gaudalupe River
- ▲ Loventz Barrel & Drum Company  
1507 South 10th Street
- ▲ Fairchild Semiconductor  
101 Bernal Road

**Solid Waste Information System Facilities**

- ① Zanker Material Processing Facility
- ② Newby Island Sanitary Landfill
- ③ Marshland Solid Waste Facility
- ④ Nine Par Landfill
- ⑤ Singleton Road DS / San Jose Municipal DS
- ⑥ Zanker Road Class III Landfill
- ⑦ Kirby Canyon Recycl. & Disp. Facility
- ⑧ Roberts Avenue Landfill
- ⑨ Martin Park Landfill
- ⑩ Hellyer Park Landfill
- ⑪ Story Road Landfill
- ⑫ BFI's Recyclery
- ⑬ Gaudalupe Sanitary Landfill
- ⑭ Newby Island Compost Facility
- ⑮ Greenwaste Recovery Facility
- ⑯ Green Team MRF Direct Transfer Facility
- ⑰ Syntax Court D.S.
- ⑱ Green Team Service Yard Direct Transfer Fac.
- ⑲ Premier Recycling Facility
- ⑳ California Waste Solutions, Inc. (CWS)
- ㉑ Rogers Avenue Transfer Station
- ㉒ Markovits and Fox Disposal Site
- ㉓ Watson Park Disposal Site
- ㉔ Valley Recycling
- ㉕ Beck's Property and Tree Service
- ㉖ Santos
- ㉗ Sainte Claire Landfill
- ㉘ Route 237 Lincoln Technology Park



Date: January 12, 2009  
 Map By: Perihan Ozdemir  
 Source: Department of Planning,  
 Building and Code Enforcement  
 City of San Jose

Project Number

118-13-1

Figure Number

Figure 5

Date

February 2010

Drawn By

FLL





**Site Map**

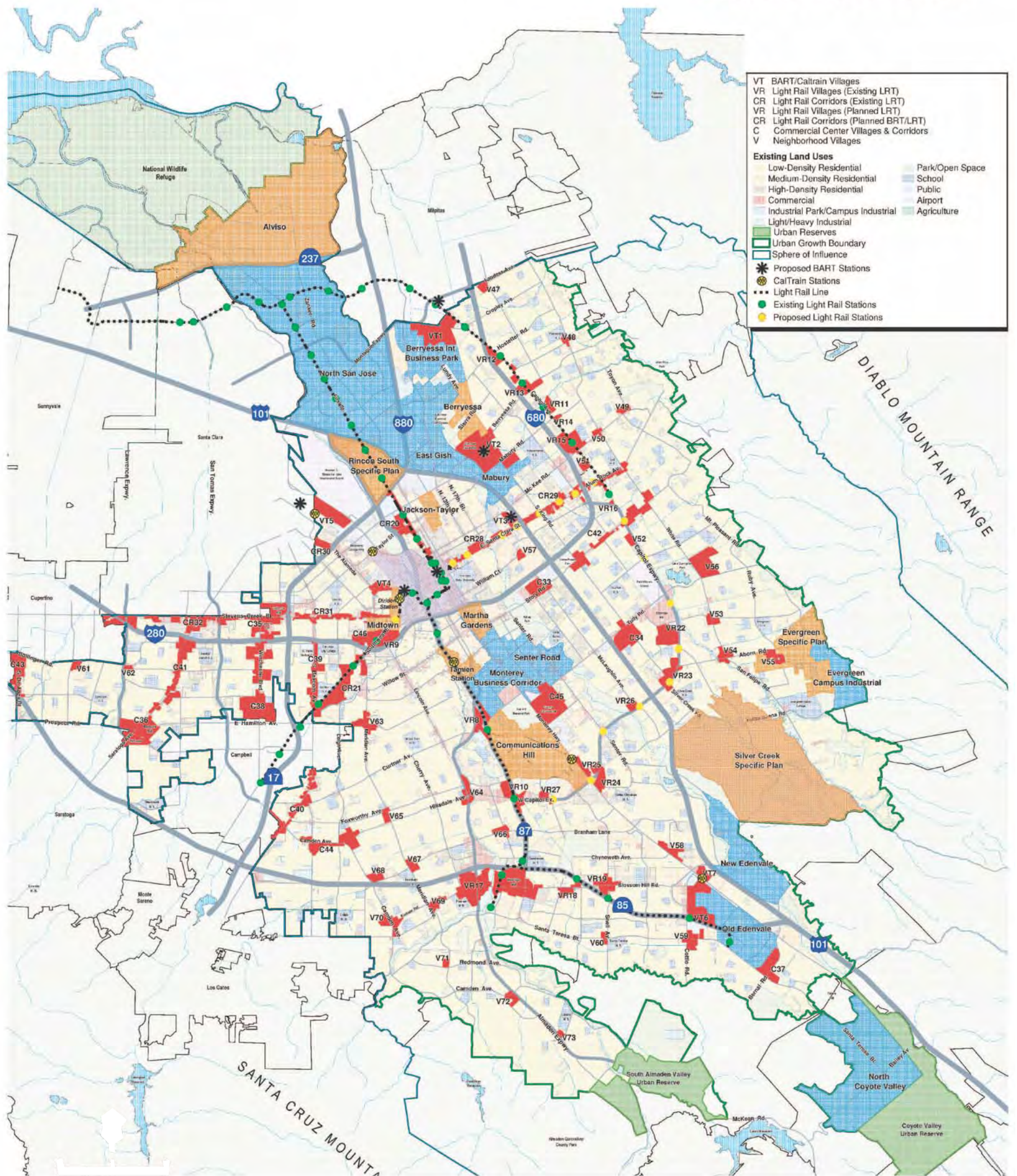
Current Conditions Report Hazards and Hazardous Material  
**Envision 2040 San Jose General Plan**  
**San Jose, CA**

**CORNERSTONE**  
**EARTH GROUP**






















**Identified and Potential Growth Areas**

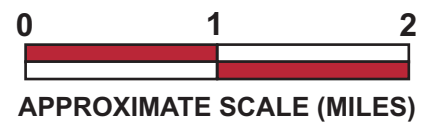
-  Employment Land Areas
-  Specific Plan Areas
-  Downtown
-  Proposed Villages and Corridors



VT	BART/Caltrain Villages
VR	Light Rail Villages (Existing LRT)
CR	Light Rail Corridors (Existing LRT)
VR	Light Rail Villages (Planned LRT)
CR	Light Rail Corridors (Planned BRT/LRT)
C	Commercial Center Villages & Corridors
V	Neighborhood Villages

	Low-Density Residential		Park/Open Space
	Medium-Density Residential		School
	High-Density Residential		Public
	Commercial		Airport
	Industrial Park/Campus Industrial		Agriculture
	Light/Heavy Industrial		
	Urban Reserves		
	Urban Growth Boundary		
	Sphere of Influence		
	Proposed BART Stations		
	CalTrain Stations		
	Light Rail Line		
	Existing Light Rail Stations		
	Proposed Light Rail Stations		



APPROXIMATE SCALE (MILES)



**Villages and Corridors**  
 Current Conditions Report Hazards and Hazardous Materials  
 Envision San Jose General Plan  
 San Jose, CA

Project Number  
 118-13-1

Figure Number  
 Figure 6

Date  
 February 2010

Drawn By  
 FLL

## **APPENDIX A - LIST OF TOXIC GASES COMMONLY FOUND IN SAN JOSÉ**

118-13-1

Current Conditions Report  
Hazards and Hazardous Materials  
February 2010



# COMMON TOXIC GASES AS DEFINED BY THE TOXIC GAS ORDINANCE AND CFC

*For Use By All Jurisdictions, Cities and County, Within the Limits of Santa Clara County.*

*Authority Cited: California Fire Code (CFC); California Building Code (CBC); Toxic Gas Ordinance (TGO)*

GAS & FORMULA	CAS No./ UN No.	CBC/CFC CLASS <sup>1</sup>	TGO CLASS <sup>2</sup>	IDLH <sup>3</sup>	LC <sub>50</sub> <sup>4</sup>	LOC	MAX TQ	PEL <sup>5</sup>
Ammonia - NH <sub>3</sub>	7664-41-7 UN1005	Corrosive <sup>6,7</sup> Flammable	III	300 ppm	4,000 ppm	30 ppm	8,000 lbs.	50 ppm
Arsine - AsH <sub>3</sub>	7784-42-1 UN2188	Highly Toxic Flammable	I	3 ppm	20 ppm	0.3 ppm	N/A	0.05 ppm
Boron Tribromide - BBr <sub>3</sub>	10294-33-4 UN2692	Toxic WR-2	II	50 ppm	380 ppm	5 ppm	760 lbs.	1 ppm ©
Boron Trichloride - BCl <sub>3</sub>	10294-34-5 UN1741	Corrosive <sup>6</sup> WR-1	II	25 ppm <sup>8</sup>	2,541 ppm	2.5 ppm	5,082 lbs.	5 ppm
Boron Trifluoride - BF <sub>3</sub>	7637-07-2 UN1008	Toxic WR-1	II	25 ppm	806 ppm	2.5 ppm	1,612 lbs.	1 ppm ©
Bromine - Br <sub>2</sub>	7726-95-6 UN1744	Highly Toxic Corrosive Oxidizer	I	3 ppm	113 ppm	0.3 ppm	N/A	0.1 ppm
Carbon Monoxide - CO	630-08-0 UN1016	Flammable <sup>6</sup>	III	1,200 ppm	3,760 ppm	120 ppm	7,520 lbs.	50 ppm
Chlorine - Cl <sub>2</sub>	7782-50-5 UN1017	Toxic Corrosive Oxidizer	II	10 ppm	293 ppm	1 ppm	586 lbs.	1 ppm ©
Chlorine Dioxide - ClO <sub>2</sub>	10049-04-4 NA9191	Toxic UR-3 Oxidizer WR-1	II	5 ppm	250 ppm	0.5 ppm	500 lbs.	0.1 ppm
Chlorine Trifluoride - ClF <sub>3</sub>	7790-91-2 UN1749	Toxic Oxidizer WR-3	II	20 ppm	299 ppm	2 ppm	598 lbs.	0.1 ppm ©
Diborane - B <sub>2</sub> H <sub>6</sub>	19278-45-7 UN1911	Highly Toxic Flammable WR-2	I	15 ppm	80 ppm	1.5 ppm	N/A	0.1 ppm

Common Toxic Gases as Defined by the Toxic Gas Ordinance and CFC – Page 2 of 4

GAS & FORMULA	CAS No./ UN No.	CBC/CFC CLASS <sup>1</sup>	TGO CLASS <sup>2</sup>	IDLH <sup>3</sup>	LC <sub>50</sub> <sup>4</sup>	LOC	MAX TQ	PEL <sup>5</sup>
Dichlorosilane - SiH <sub>2</sub> Cl <sub>2</sub> (HCl)	4109-96-0 UN2189	Toxic Corrosive Flammable	II	50 ppm	314 ppm	5 ppm	628 lbs.	5 ppm ©
Ethylene Oxide - C <sub>2</sub> H <sub>4</sub> O	75-21-8 UN1040	Flammable <sup>6</sup> UR-3	III	800 ppm	4,350 ppm	80 ppm	8,700 lbs.	1 ppm
Fluorine - F <sub>2</sub>	7782-41-4 UN1045	Highly Toxic Oxidizer	I	25 ppm	185 ppm	2.5 ppm	N/A	0.1 ppm
Germane - GeH <sub>4</sub>	7782-65-2 UN2192	UR-3 Toxic Flammable	II	6 ppm <sup>8</sup>	622 ppm	0.6 ppm	1,244 lbs.	0.2 ppm <sup>9</sup>
Hydrogen Bromide - HBr	10035-10-6 UN1048	Corrosive <sup>6</sup>	II	30 ppm	2,860 ppm	3 ppm	5,720 lbs.	3 ppm
Hydrogen Chloride - HCl	7647-01-0 UN1050	Corrosive <sup>6</sup>	II	50 ppm	2,810 ppm	5 ppm	5,620 lbs.	5 ppm ©
Hydrogen Cyanide - HCN	74-90-8 UN1051	Highly Toxic Flammable	I	50 ppm	40 ppm	5 ppm	N/A	10 ppm
Hydrogen Fluoride - HF	7664-39-3 UN1052	Toxic	II	30 ppm	1,300 ppm	3 ppm	2,600 lbs.	3 ppm
Hydrogen Selenide - H <sub>2</sub> Se	7783-07-5 UN2202	Highly Toxic Flammable	I	1 ppm	2 ppm	0.1 ppm	N/A	0.05 ppm
Hydrogen Sulfide - H <sub>2</sub> S	7783-06-4 UN1053	Toxic Flammable	II	100 ppm	712 ppm	10 ppm	1,424 lbs.	20 ppm
Methyl Bromide - CH <sub>3</sub> Br	74-83-9 UN1062	Toxic Flammable	II	250 ppm	1,007 ppm	25 ppm	2,014 lbs.	20 ppm ©
Methylisocyanate - CH <sub>3</sub> NCO	624-83-9 UN2480	Highly Toxic Flammable WR-2	I	3 ppm	22 ppm	0.3 ppm	N/A	0.02 ppm

Common Toxic Gases as Defined by the Toxic Gas Ordinance and CFC – Page 3 of 4

GAS & FORMULA	CAS No./ UN No.	CBC/CFC CLASS <sup>1</sup>	TGO CLASS <sup>2</sup>	IDLH <sup>3</sup>	LC <sub>50</sub> <sup>4</sup>	LOC	MAX TQ	PEL <sup>5</sup>
Methyl Mercaptan - CH <sub>3</sub> SH	74-93-1 UN1064	Toxic Flammable	II	150 ppm	1,350 ppm	15 ppm	2,700 lbs.	10 ppm ©
Nickel Carbonyl - Ni(CO) <sub>4</sub>	13463-39-3 UN1259	Highly Toxic UR-3 Flammable WR-1	I	2 ppm	18 ppm	0.2 ppm	N/A	0.001 ppm
Nitric Oxide - NO	10102-43-9 UN1660	Highly Toxic Oxidizer	I	100 ppm	115 ppm	10 ppm	N/A	25 ppm
Nitrogen Dioxide - NO <sub>2</sub>	10102-44-0 UN1067	Highly Toxic Oxidizer WR-1	I	20 ppm	115 ppm	2 ppm	N/A	5 ppm ©
Phosgene - COCl <sub>2</sub>	75-44-5 UN1076	Highly Toxic WR-1	I	2 ppm	5 ppm	0.2 ppm	N/A	0.1 ppm
Phosphine - PH <sub>3</sub>	7803-51-2 UN2199	Highly Toxic Pyrophoric	I	50 ppm	20 ppm	5 ppm	N/A	0.3 ppm
Phosphorus Oxychloride - POCl <sub>3</sub>	10025-87-3 UN1810	Highly Toxic WR-2	I	0.96 ppm <sup>8</sup>	96 ppm	0.096 ppm	N/A	0.1 ppm <sup>8,9</sup>
Phosphorus Pentafluoride - PF <sub>5</sub>	7647-19-0 UN2198	Toxic Oxidizer WR-1	II	2.6 ppm <sup>8</sup>	260 ppm	0.26 ppm	520 lbs.	3 ppm
Phosphorus Trichloride - PCl <sub>3</sub>	7719-12-2 UN1809	Toxic UR-2 WR-2 Oxidizer	II	25 ppm	208 ppm	2.5 ppm	416 lbs.	0.5 ppm
Selenium Hexafluoride - SeF <sub>6</sub>	7783-79-1 UN2194	Highly Toxic	I	2 ppm	50 ppm	0.2 ppm	N/A	0.05 ppm (as Se)
Silicon Tetrachloride - SiCl <sub>4</sub> (HCl)	10026-04-7 UN1818	Toxic Corrosive	II	50 ppm	750 ppm	5 ppm	1,500 lbs.	5 ppm ©
Silicon Tetrafluoride - SiF <sub>4</sub> (HF)	7783-61-1 UN1859	Toxic WR-2	II	30 ppm	450 ppm	3 ppm	900 lbs.	0.1 ppm

Common Toxic Gases as Defined by the Toxic Gas Ordinance and CFC – Page 4 of 4

GAS & FORMULA	CAS No./ UN No.	CBC/CFC CLASS <sup>1</sup>	TGO CLASS <sup>2</sup>	IDLH <sup>3</sup>	LC <sub>50</sub> <sup>4</sup>	LOC	MAX TQ	PEL <sup>5</sup>
Stibine - SbH <sub>3</sub>	7803-52-3 UN2676	Highly Toxic Flammable	I	5 ppm	20 ppm	0.5 ppm	N/A	0.1 ppm
Sulfur Dioxide - SO <sub>2</sub>	7446-09-5 UN1079	Corrosive <sup>6</sup>	II	100 ppm	2,520 ppm	10 ppm	5,040 lbs.	5 ppm
Sulfuryl Fluoride - SO <sub>2</sub> F <sub>2</sub>	2699-79-8 UN2191	Corrosive <sup>6</sup>	III	200 ppm	3,020 ppm	20 ppm	6,040 lbs.	5 ppm
Tellurium Hexafluoride - TeF <sub>6</sub>	7783-80-4 UN2195	Highly Toxic	I	1 ppm	25 ppm	0.1 ppm	N/A	0.02 ppm (as Te)
Titanium Tetrachloride - TiCl <sub>4</sub>	7550-45-0 UN1838	Highly Toxic Corrosive WR-2	I	1.3 ppm	119 ppm	0.13 ppm	N/A	
Tungsten Hexafluoride - WF <sub>6</sub> (HF)	7783-82-6 UN2196	Toxic Corrosive WR-2	II	30 ppm	217 ppm	3 ppm	434 lbs.	0.1 ppm

**Notes:**

- <sup>1</sup> Class as defined in CFC: 1.) Health Hazards per Chapter 27: Highly Toxic = < 200 LC<sub>50</sub>, Toxic = 200 - 2,000 LC<sub>50</sub>. 2.) Physical Hazards per CFC Chapter 27 and NFPA 704.
- <sup>2</sup> TGO Class Defined As: Class I = < 200 LC<sub>50</sub>, Class II = 200 – 3,000 LC<sub>50</sub>, Class III = 3,001 – 5,000 LC<sub>50</sub>
- <sup>3</sup> IDLH values published in 1994 by the National Institute for Occupational Safety and Health (NIOSH).
- <sup>4</sup> LC<sub>50</sub> data: Lowest reported value, 1 hour adjusted, taken from DOT, CGA, RTECS.
- <sup>5</sup> PEL values published by OSHA (29 CFR, part 1910.1000, Table Z-1) dated 7/1/95. OSHA values used if available, otherwise Threshold Limit Value (TLV) from American Conference of Governmental Industrial Hygienists (ACGIH) (1994-1995) or Cal OSHA values used. © = Ceiling Limit.
- <sup>6</sup> Moderately toxic as adopted by the cities of San Jose, Santa Clara, and Milpitas: LC50 = 2,000 – 5,000.
- <sup>7</sup> When used as a refrigerant, CBC Class does not apply. See TGO consensus guidelines for additional information regarding ammonia refrigeration systems.
- <sup>8</sup> IDLH determined by 0.01 of LC<sub>50</sub>.
- <sup>9</sup> Cal OSHA PEL, Title 8, Section 5155, 9/1/95.

**APPENDIX B - DRAFT GUIDELINES FOR THE PLACEMENT OF DAYCARE  
FACILITIES, CHURCHES AND SCHOOLS IN OR ADJACENT TO  
INDUSTRIAL ZONES**

# **DRAFT**

## **San Jose Fire Department**

### **Draft Guidelines for the Placement of Daycare Facilities, Churches and Schools in or adjacent to Industrial Zones**

Placement of daycare facilities, churches or schools (and the like) in or near areas where hazardous materials are used or stored present potential hazards that must be addressed in the design of the building and in the daily operation of the facility. The following guidelines are provided to assist in the safe design and operation of daycare, churches and school facilities (and the like) in or near areas where hazardous materials are used or stored. If you have questions about these guidelines, please contact the San Jose Fire Department Hazardous Materials and the City of San Jose Building, Planning and Code Enforcement Department.

#### **Design Criteria**

Buildings intended for use as a daycare, church or school (or like facilities) in or near an industrial zone shall be designed to be effective as a shelter in place for the on-site project population. Specifically, in the event of a hazardous materials release incident, the building shall be capable of protecting the children indoors. It shall include a ventilation system designed to be shut off manually or automatically, a positive pressure system designed to keep contaminants from migrating into the building, and all windows and doors shall be capable of being securely closed and secured by facility staff to prevent toxic gases or fumes from entering the facility.

The building air handling system shall be designed to provide a positive pressure and to operate for a reasonable amount of time to protect students during an incident. Airflow and air exchanges within the building shall be calculated to demonstrate this capability. System design shall include consideration of the effect of exterior wind or breezes. System shall include filters or other approved methods to prevent the introduction of toxic gases or fumes.

For toxic gases or fumes that have poor warning qualities, the system shall include the installation of sensors in the ventilation intake of the building. The system shall include automatic air intake shut-off, air filtration or equivalent means to prevent the entry of toxic gases or fumes to the building. The sensors shall be designed to detect the presence of toxic gases or fumes before occupants of the building might be aware that a toxic gas release had occurred, thereby allowing the facility staff to take the necessary actions to implement emergency procedures.

#### **Hazard Assessment**

A qualified safety consultant retained by the daycare/church/school owner or operator (or like facility) shall conduct an evaluation of nearby businesses that are permitted to use and store hazardous materials and of the hazardous materials used and stored in the area in order to identify potential sources of hazardous materials that could impact the daycare or school. The consultant shall prepare a report with recommendations based on a worst case scenario and using air modeling results to determine the appropriate measures, if any, necessary to protect individuals at the daycare or school from a release of hazardous materials. This report shall be provided to City of San Jose Fire Department and the Building, Planning and Code Enforcement Department.

Annually thereafter, the daycare/school owner or operator or their authorized representative shall review the Fire Department's files to identify changes in nearby facilities' hazardous materials usage and storage and shall consult with the Fire Department to determine if changes that have occurred necessitate additional requirements. Significant changes or past problems with the existing emergency plan or design may result in the requirement of a new hazard assessment or additional controls.

# DRAFT

## Emergency Preparedness Plan

The daycare/school owner or operator or their authorized representative shall prepare an Emergency Preparedness Plan modeled after the Contra Costa County's Model Emergency Plan for Schools, or approved alternate, by a qualified consultant based upon the risks in the industrial area near the subject site. This plan shall be approved by the San Jose Fire Department and the Building, Planning and Code Enforcement Department before a certificate of occupancy can be issued. The plan shall be made available to the Bay Area Air Quality Management District for review and comment.

The Emergency Preparedness Plan shall include at a minimum:

- 1 Days and hours of operation, including evening and weekend activities that may occur at the site.
- 2 A written training plan for all volunteers, assistants, or new staff. Such training shall be provided to all before they commence working at the site.
- 3 Measures to mobilize and protect all persons who are on the premises but outside the building (i.e., for activities such as gym, lunch or recess)
- 4 A procedure for notifying parents in the event of an emergency, such as the use of a phone tree and the internet.
- 5 A shelter-in-place plan in the event of a hazardous materials release from a nearby site.
- 6 An evacuation plan for relocation of all children/sensitive receptors to a safe location in the event that a fire, earthquake or other emergency renders the site unsafe.
- 7 A parental notification process, including a description of how each parent will be notified of the nature of hazards in this neighborhood, the emergency procedures that will be in place to protect their children, and what procedures the parents need to follow in the event of each type of anticipated emergency. The business owner or operator shall maintain records of notification signed by each parent, stating that they understand and accept the procedures that are in place.
- 8 Monthly drills conducted while children are present.
- 9 Provisions for supplies.
- 10 Monitoring and maintenance of sensors, if provided, at manufacturers recommended intervals or annually, whichever is more frequent.
- 11 The number of students outside the building at any given time shall be governed by the number of adults outside at a ratio of students as prescribed by the Plan.

The daycare/church/school owner or operator or their authorized representative shall review and update the Emergency Preparedness Plan when there are changes in the industrial uses surrounding the subject site, or when changes in the use, volume or type of hazardous materials in these industries warrant additional precautionary measures in the plan or appropriate changes in response to incidents.

The daycare/school owner or operator or their authorized representative shall annually review the files of the San Jose Fire Department to identify changes in local chemical usage and shall consult with the Fire Department to determine if changes have occurred that warrant revision to the Emergency Preparedness Plan.

School/church and daycare uses shall be limited to the days and hours listed in this Emergency Preparedness Plan. Limited but occasional group activities may occur from time to time, but shall be conducted in accordance with the provisions defined in this plan.

The Fire Department shall be provided a copy of this Emergency Preparedness Plan and shall be requested annually by the daycare/school owner or operator to verify that Fire Communications has a special notification for each facility of concern so that

## **DRAFT**

Communications will call the subject site in the event of a reported release from identified industries in the area.

Industry neighbors shall be contacted annually and requested to notify the daycare or school immediately in the event of a fire or release.



## **APPENDIX C - DRAFT GUIDELINE FOR PREPARATION OF RISK ASSESSMENTS**

# DRAFT

## Draft Guideline for Preparation of Risk Assessments

### San Jose Fire Department

#### Scope and Purpose:

As part of the review of a Conditional Use Permit, a Risk Assessment may be required to be submitted, to evaluate the potential health and safety risks to individuals from the exposure to hazardous materials which may occur at the proposed site due to its location in an industrial zone. The Risk Assessment shall identify potential hazards occupants may come in contact with and any mitigation measures that could be applied to offset exposure to hazardous conditions.

#### Elements of the Risk Assessment

The following elements shall be included in the Risk Assessment Plan:

##### 1. Summary of Proposed Project

- a. Location of project, zoning district
- b. Building information (size, construction type, location on property)
- c. Proposed use of property for the project (activities within building, hours of operation, number of occupants in building, any outdoor activity, identify any '*sensitive occupants*' i.e. children, elderly, handicapped)

##### 2. Identify Primary land use in area of project

- a. Identify neighboring businesses and type of activities within 0.5 mile of the proposed project. Identify businesses that could have potential environmental impacts. Businesses outside of the 0.5 mile radius which could have potential environmental impacts shall also be included in the risk assessment.
- b. Review chemicals of concern within the neighboring businesses. Identify chemicals that are likely to have off site consequences if catastrophically released. This would include chemicals that are acutely toxic, exist in a form that readily allow offsite transport (after release) and are used/stored in sufficient quantities.

##### 3. Review of historical hazmat incidents

A review of historical hazmat incidents within the project area shall be conducted. The incidents should be evaluated as to their potential for off site consequences. The incident history shall be incorporated into the risk evaluation.

##### 4. Evaluation of Risk

To estimate potential risks, worst-case hypothetical chemical release models, shall be calculated for any chemicals identified as a concern within the neighboring area, (prevailing weather, wind direction, etc. should be factored into the release models).

The release model shall evaluate if the release could produce a release at 1/10 of the IDLH - 'Immediately Dangerous to Life and Health', chemical concentration within the proposed project area. The risk analysis shall address both a release under controlled conditions inside the building as well as releases outdoors associated with transport and delivery of chemicals where no engineering controls are in place.

##### 5. Conclusion

The risk assessment shall state a conclusion based on a review of the parameters evaluated and the probability of an event occurring. The document shall be prepared and stamped by a qualified California registered professional, (i.e. Certified Industrial Hygienist, Registered Chemical Engineer). If the Risk Assessment concludes that exposure will occur at 1/10 of the IDLH level than mitigation measures as outlined below shall be completed.

##### 6. Mitigation Measures

Based on the conclusion of the risk assessment, mitigation measures shall be identified to reduce any potential offsite consequences to the occupants of the proposed project. The measures can be both administrative as well as engineering controls. Examples of mitigation measures include airborne chemical monitoring system, automatic shut down of the ventilation system and in place communication system for notifying occupants.

---

## **APPENDIX D - DEVELOPMENT GUIDELINE FOR LAND IN PROXIMITY TO HIGH PRESSURE NATURAL GAS PIPELINES**

118-13-1

Current Conditions Report  
Hazards and Hazardous Materials  
February 2010

CITY OF SAN JOSE - MEMORANDUM

TO Honorable Mayor and City Council

FROM Gary J. Schoennauer, Director of Planning

John Felde, Fire Marshal

SUBJECT DEVELOPMENT GUIDELINES FOR LAND IN PROXIMITY TO HIGH PRESSURE NATURAL GAS PIPELINES

DATE July 18, 1986

APPROVED

DATE

7-18-86

In May, the Administration informed the City Council that the Fire Department was analyzing the public safety issues raised by pending housing developments in close proximity to high pressure natural gas pipelines. The Council was further informed of the Administration's intent to formulate development guidelines to be applied to projects which are affected by this issue.

The attached development guidelines are the result of that analysis and an evaluation by the Department of City Planning of remaining undeveloped land which could be affected by an accident related to the pipelines. Although the probability of an accident is low and urban living involves inherent risks, these guidelines are considered to be a reasonable constraint on the intensity and type of occupancy in close proximity to high pressure natural gas pipelines. They will be used by staff in the review of discretionary land use approvals.

Gary J. Schoennauer  
Director of Planning

John Felde  
Fire Marshal

Attachment  
2122L:3

cc: Gerald Newfarmer  
Les White

Post-It Fax Note	7671	Date	2/26	Page	4
To	JOHN SCHWARZ	From	JOHN SATY		
Co./Dept.	PSP	Co.	CS		
Phone #		Phone #	(408) 277-8526		
Fax #	(408) 248-9641	Fax #			

**DEVELOPMENT GUIDELINES FOR LAND IN PROXIMITY  
TO HIGH PRESSURE NATURAL GAS PIPELINES**

**A. Uses Within Pipeline Right-of-Way**

1. Preferred uses are those under the control of P.G. & E., the City, County, or other public agency.
2. No structure, either temporary or permanent, should be placed within the right-of-way.
3. Public park and open space uses such as playing fields, walkways, bicycle paths, and golf courses, are appropriate uses.
4. Parking, streets, walks, and landscaping may be placed within the right-of-way.
5. Landscaping within the right-of-way should be so designed as to not impede access, and to avoid deep rooted shrubs or trees from causing damage to the pipelines.
6. All uses within the right-of-way are contingent upon written approval from P.G. & E. prior to the start of any construction or excavation activity.

**B. Uses Adjacent to Pipeline Right-Of-Way**

1. Only buildings having a "low-density occupancy load" should be allowed within 250 ft. of the edge of right-of-way. This is exclusive of buildings intended for non-ambulatory persons or where freedom of movement is otherwise restricted.

Buildings assumed to have a "low-density occupancy load" include single and multiple family dwellings, offices, industrial buildings, hotels/motels, parking garages and retail stores not a part of a shopping mall.

2. No building of more than two stories should be allowed within 250 ft. of the edge of right-of-way.
3. No buildings other than detached carports or minor accessory structures should be allowed within 15 ft. of the edge of right-of-way.
4. Buildings having a "high-density occupancy load" or more than two stories should be set back at least 250 ft. from edge of right-of-way.

Buildings, assumed to have a "high-density occupancy load" include restaurants, drinking establishments, conference facilities, stadiums, auditoriums, hospitals, and nurseries for children.

**DEVELOPMENT GUIDELINES FOR LAND IN PROXIMITY  
TO HIGH PRESSURE NATURAL GAS PIPELINES**

Page 2

**C. Access to Pipeline Right-of-Way**

1. Site design and building placement adjacent to pipeline right-of-way should allow for access for routine and emergency maintenance and repair unless access can be provided at street crossings.

2122L:5

## CITY OF SAN JOSE - MEMORANDUM

---

TO	Implementation Division Staff	FROM	Kent Edens Chief of Plan Implementation
SUBJECT	DEVELOPMENT GUIDELINES FOR LAND IN PROXIMITY TO HIGH PRESSURE NATURAL GAS PIPELINES	DATE	August 7, 1986

---

APPROVED

DATE

All Project Review and Environmental staff should be aware of the attached guidelines which this Department and the Fire Marshal have recently formulated. There are presently pending rezonings which are subject to these guidelines and, in the future, there will be Site Development Permits subject to these guidelines. I have asked the Principal Planners to review these guidelines with their respective staffs.



Kent Edens  
Chief of Plan Implementation

KE:bn

Attachment

2452L/3

**APPENDIX E - ENVIRONMENTAL CONDITIONS THAT COULD ADVERSELY  
IMPACT FUTURE DEVELOPMENT AND REDEVELOPMENT ACTIVITIES  
WITHIN SPECIFIC PLANNING AREAS OF THE CITY**



## Almaden Planning Area - Potentially Hazardous Environmental Conditions

The Almaden Planning Area lies in the largely undeveloped southern quarter of the City, adjacent to the Santa Cruz Mountains. The Almaden Planning Area is 10.2 square miles in size. This planning area contains three Neighborhood Villages and the South Almaden Valley Urban Reserve. The known potentially hazardous environmental conditions identified in the Almaden Planning Area are presented below.

**Table E1. Almaden Planning Area – Potentially Hazardous Environmental Conditions**

Growth Area	Reported Hazardous Materials Spills and Releases					Facilities			Other
	Federal Superfund (NPL) Sites (1 Mile)	State Water Board Open Site Cleanup Program <sup>a</sup> (1/2 mile)	State DTSC Open State Response Sites <sup>a</sup> (1/2 mile)	State DTSC Open Voluntary Cleanup Program Sites <sup>a</sup> (1/2 mile)	Open Leaking Underground Tank (LUST) Cleanup Sites <sup>a</sup> (1,000 feet)	SWRCB Land Disposal Sites and Soil Waste Information System Facilities (1,000 feet)	Toxic Gas Facilities (1/2 mile)	Open State DTSC School Cleanup Sites <sup>a</sup> (1,000 feet)	
<b>Villages and Corridors</b>									
V71	0	0	0	0	0	0	0	0	b,d,e
V72	0	1	0	0	0	0	0	0	b,d,e
V73	0	0	0	0	0	0	0	0	b,d,e
<b>Other Areas</b>									
South Almaden Valley Urban Reserve	0	0	0	0	0	0	2	0	b,d,e
Other	<ul style="list-style-type: none"> <li>a) A change in land use may require sites that have received regulatory 'closure' or 'no further action' status to be reopened and evaluated for risk to human health in the proposed future setting.</li> <li>b) The general area may have been used for agricultural purposes. Pesticides may have been applied to crops in the normal course of farming operations. If residential or sensitive land use is planned, soil sampling and laboratory analyses may be required to evaluate the residual pesticide concentrations.</li> <li>c) Fill, if present, may contain elevated contaminant concentrations as a result of the long commercial and industrial history of the area. Soil sampling and laboratory analyses may be required to evaluate potential contaminant concentrations.</li> <li>d) As is typical to many commercial areas, facilities that use hazardous materials, such as dry cleaners and fuel service stations, may be located within the Planning Area. If leaks or spills occur at these facilities, contamination could impact the Villages and Corridors and Other Areas, depending upon the location of the facility, the magnitude of the release, and the effectiveness of the cleanup efforts.</li> <li>e) Prior to site development, a Phase I Environmental Site Assessment should be performed at each site to identify Recognized Environmental Conditions. In addition and dependent upon the findings presented in the above report, a Site Management Plan that establishes practices for handling buried structures, wells, burn areas, debris or impacted soil, soil vapor or ground water that may be encountered during site development activities should be prepared and/or further investigation performed.</li> </ul>								

## Alum Rock Planning Area - Potentially Hazardous Environmental Conditions

The Alum Rock Planning Area is located east of Downtown and adjacent to the Diablo Mountain Range. The Alum Rock Planning Area is 15.5 square miles in size and contains Council District 5 and portions of Council Districts 3, 4, 7, and 8. This planning area contains one Employment Land Area, six Transit Oriented Villages and Corridors, two Commercial Center Villages and Corridors, and four Neighborhood Villages. The known potentially hazardous environmental conditions identified in the Alum Rock Planning Area are presented below.

**Table E2. Alum Rock Planning Area – Potentially Hazardous Environmental Conditions**

Growth Area	Reported Hazardous Materials Spills and Releases					Facilities			Other
	Federal Superfund (NPL) Sites (1 Mile)	State Water Board Open Site Cleanup Program <sup>a</sup> (1/2 mile)	State DTSC Open State Response Sites <sup>a</sup> (1/2 mile)	State DTSC Open Voluntary Cleanup Program Sites <sup>a</sup> (1/2 mile)	Open Leaking Underground Tank (LUST) Cleanup Sites <sup>a</sup> (1,000 feet)	SWRCB Land Disposal Sites and Soil Waste Information System Facilities (1,000 feet)	Toxic Gas Facilities (1/2 mile)	Open State DTSC School Cleanup Sites <sup>a</sup> (1,000 feet)	
<b>Villages and Corridors</b>									
VT2	0	4	0	1	1	0	0	0	b,d,e
VR11	0	0	0	0	1	0	0	0	b,d,e
VR14	0	0	0	0	1 (1 on-site)	0	0	0	b,d,e
VR15	0	0	0	0	0	0	0	0	b,d,e
VR16	0	0	0	0	0	0	0	0	b,d,e
CR29	0	2 (2 on-site)	0	0	11 (8 on-site)	0	0	0	b,d,e
CR34	0	0	0	0	2	0	0	0	b,d,e
C42	0	2 (2 on-site)	0	0	10 (7 on-site)	0	0	0	b,d,e
V49	0	0	0	0	1 (1 on-site)	0	0	0	b,d,e
V50	0	0	0	0	0	0	0	0	b,d,e
V51	0	0	0	0	0	0	0	0	b,d,e
V52	0	0	0	0	0	0	0	0	b,d,e
V56	0	0	0	0	0	0	0	0	b,d,e
<b>Employment Land Area</b>									
Mabury	0	4 (2 on-site)	0	0	1	0	0	0	b,d,e
Other	<p>a) A change in land use may require sites that have received regulatory ‘closure’ or ‘no further action’ status to be reopened and evaluated for risk to human health in the proposed future setting.</p> <p>b) The general area may have been used for agricultural purposes. Pesticides may have been applied to crops in the normal course of farming operations. If residential or sensitive land use is planned, soil sampling and laboratory analyses may be required to evaluate the residual pesticide concentrations.</p> <p>c) Fill, if present, may contain elevated contaminant concentrations as a result of the long commercial and industrial history of the area. Soil sampling and laboratory analyses may be required to evaluate potential contaminant concentrations.</p> <p>d) As is typical to many commercial areas, facilities that use hazardous materials, such as dry cleaners and fuel service stations, may be located within the Planning Area. If leaks or spills occur at these facilities, contamination could impact the Villages and Corridors and Other Areas, depending upon the location of the facility, the magnitude of the release, and the effectiveness of the cleanup efforts.</p> <p>e) Prior to site development, a Phase I Environmental Site Assessment should be performed at each site to identify Recognized Environmental Conditions. In addition and dependent upon the findings presented in the above report, a Site Management Plan that establishes practices for handling buried structures, wells, burn areas, debris or impacted soil, soil vapor or ground water that may be encountered during site development activities should be prepared and/or further investigation performed.</p>								

## Alviso Planning Area - Potentially Hazardous Environmental Conditions

The Alviso Planning Area is located adjacent to the southern tip of San Francisco Bay and is the northernmost planning area in the City. The Alviso Planning Area is 16.8 square miles in size and is located in Council District 4. The known potentially hazardous environmental conditions identified in the Alviso Planning Area are presented below.

**Table E3. Alviso Planning Area – Potentially Hazardous Environmental Conditions**

Growth Area	Reported Hazardous Materials Spills and Releases					Facilities			Other
	Federal Superfund (NPL) Sites (1 Mile)	State Water Board Open Site Cleanup Program <sup>a</sup> (1/2 mile)	State DTSC Open State Response Sites <sup>a</sup> (1/2 mile)	State DTSC Open Voluntary Cleanup Program Sites <sup>a</sup> (1/2 mile)	Open Leaking Underground Tank (LUST) Cleanup Sites <sup>a</sup> (1,000 feet)	SWRCB Land Disposal Sites and Soil Waste Information System Facilities (1,000 feet)	Toxic Gas Facilities (1/2 mile)	Open State DTSC School Cleanup Sites <sup>a</sup> (1,000 feet)	
	<b>Specific Plan Area</b>								
Alviso	1	9 (2 on-site)	1 (1 on-site)	4 (2 on-site)	1 (1 on-site)	4 (3 on-site)	2 (1 on-site)	0	b,c,d,e
	<b>Other Areas</b>								
National Wildlife Refuge	1 (1 on-site)	0	0	0	0	0	0	0	b,c,d,e
Other	<p>a) A change in land use may require sites that have received regulatory 'closure' or 'no further action' status to be reopened and evaluated for risk to human health in the proposed future setting.</p> <p>b) The general area may have been used for agricultural purposes. Pesticides may have been applied to crops in the normal course of farming operations. If residential or sensitive land use is planned, soil sampling and laboratory analyses may be required to evaluate the residual pesticide concentrations.</p> <p>c) Fill, if present, may contain elevated contaminant concentrations as a result of the long commercial and industrial history of the area. Soil sampling and laboratory analyses may be required to evaluate potential contaminant concentrations.</p> <p>d) As is typical to many commercial areas, facilities that use hazardous materials, such as dry cleaners and fuel service stations, may be located within the Planning Area. If leaks or spills occur at these facilities, contamination could impact the Villages and Corridors and Other Areas, depending upon the location of the facility, the magnitude of the release, and the effectiveness of the cleanup efforts.</p> <p>e) Prior to site development, a Phase I Environmental Site Assessment should be performed at each site to identify Recognized Environmental Conditions. In addition and dependent upon the findings presented in the above report, a Site Management Plan that establishes practices for handling buried structures, wells, burn areas, debris or impacted soil, soil vapor or ground water that may be encountered during site development activities should be prepared and/or further investigation performed.</p>								

## Berryessa Planning Area - Potentially Hazardous Environmental Conditions

The Berryessa Planning Area lies northeast of Downtown and adjacent to the Diablo Mountain Range. The Berryessa Planning Area is 9.8 square miles in size and is located in Council District 4. The planning area contains one Planned Community, three Employment Land Areas, four Transit-Oriented Villages and Corridors, and two Neighborhood Villages.

The known potentially hazardous environmental conditions identified in the Berryessa Planning Area are presented below.

**Table E4. Berryessa Planning Area – Potentially Hazardous Environmental Conditions**

Growth Area	Reported Hazardous Materials Spills and Releases					Facilities			Other
	Federal Superfund (NPL) Sites (1 Mile)	State Water Board Open Site Cleanup Program <sup>a</sup> (1/2 mile)	State DTSC Open State Response Sites <sup>a</sup> (1/2 mile)	State DTSC Open Voluntary Cleanup Program Sites <sup>a</sup> (1/2 mile)	Open Leaking Underground Tank (LUST) Cleanup Sites <sup>a</sup> (1,000 feet)	SWRCB Land Disposal Sites and Soil Waste Information System Facilities (1,000 feet)	Toxic Gas Facilities (1/2 mile)	Open State DTSC School Cleanup Sites <sup>a</sup> (1,000 feet)	
	<b>Villages and Corridors</b>								
VT1	0	5	0	1	2	0	1 (1 on-site)	0	b,d,e
VT2	0	3	0	0	2 (1 on-site)	0	0	0	b,d,e
VR12	0	1	0	0	0	0	0	0	b,d,e
VR13	0	0	0	0	3 (2 on-site)	0	0	0	b,d,e
V47	0	3	1	0	1 (1 on-site)	0	0	0	b,d,e
V48	0	0	0	0	2 (2 on-site)	0	0	0	
	<b>Employment Land Area</b>								
North San Jose	0	0	0	3 (2 on-site)	2	1 (1 on-site)	4	0	b,d,e
East Gish	0	20 (6 on-site)	2 (1 on-site)	4 (2 on-site)	7 (5 on-site)	4 (4 on-site)	0	0	
Berryessa International Business Park	0	5	0	4	(2 on-site)	0	0	0	
	<b>Specific Plan Area</b>								
Berryessa	0	3	0	1	2	0	0	0	
Other	<p>a) A change in land use may require sites that have received regulatory 'closure' or 'no further action' status to be reopened and evaluated for risk to human health in the proposed future setting.</p> <p>b) The general area may have been used for agricultural purposes. Pesticides may have been applied to crops in the normal course of farming operations. If residential or sensitive land use is planned, soil sampling and laboratory analyses may be required to evaluate the residual pesticide concentrations.</p> <p>c) Fill, if present, may contain elevated contaminant concentrations as a result of the long commercial and industrial history of the area. Soil sampling and laboratory analyses may be required to evaluate potential contaminant concentrations.</p> <p>d) As is typical to many commercial areas, facilities that use hazardous materials, such as dry cleaners and fuel service stations, may be located within the Planning Area. If leaks or spills occur at these facilities, contamination could impact the Villages and Corridors and Other Areas, depending upon the location of the facility, the magnitude of the release, and the effectiveness of the cleanup efforts.</p> <p>e) Prior to site development, a Phase I Environmental Site Assessment should be performed at each site to identify Recognized Environmental Conditions. In addition and dependent upon the findings presented in the above report, a Site Management Plan that establishes practices for handling buried structures, wells, burn areas, debris or impacted soil, soil vapor and ground water that may be encountered during site development activities should be prepared and/or further investigation performed.</p>								

## Cambrian/Pioneer Planning Area - Potentially Hazardous Environmental Conditions

The Cambrian/Pioneer Planning Area is located in southwestern San José adjacent to the Santa Cruz Mountains. The Cambrian/Pioneer Planning Area is 8.6 square miles in size and is located in Council Districts 9 and 10. The planning area contains one Transit-Oriented Village, two Commercial Center Villages and Corridors, and five Neighborhood Villages. The known potentially hazardous environmental conditions identified in the Cambrian/Pioneer Planning Area are presented below.

**Table E5. Cambrian/Pioneer Planning Area – Potentially Hazardous Environmental Conditions**

Growth Area	Reported Hazardous Materials Spills and Releases					Facilities			Other
	Federal Superfund (NPL) Sites (1 Mile)	State Water Board Open Site Cleanup Program Sites <sup>a</sup> (1/2 mile)	State DTSC Open State Response Sites <sup>a</sup> (1/2 mile)	State DTSC Open Voluntary Cleanup Program Sites <sup>a</sup> (1/2 mile)	Open Leaking Underground Tank (LUST) Cleanup Sites <sup>a</sup> (1,000 feet)	SWRCB Land Disposal Sites and Soil Waste Information System Facilities (1,000 feet)	Toxic Gas Facilities (1/2 mile)	Open State DTSC School Cleanup Sites <sup>a</sup> (1,000 feet)	
<b>Villages and Corridors</b>									
VR17	0	1	0	0	0	0	0	0	b,d,e
C40	0	0	0	0	4 (1 on-site)	0	0	0	b,d,e
C44	0	0	0	0	2 (1 on-site)	0	0	0	b,d,e
V64	0	0	0	0	0	0	0	0	b,d,e
V67	0	0	0	0	0	0	0	0	b,d,e
V68	0	0	0	0	1 (1 on-site)	0	0	0	b,d,e
V69	0	0	0	0	0	0	0	0	b,d,e
V70	0	0	0	0	0	0	0	0	b,d,e
Other	<p>a) A change in land use may require sites that have received regulatory 'closure' or 'no further action' status to be reopened and evaluated for risk to human health in the proposed future setting.</p> <p>b) The general area may have been used for agricultural purposes. Pesticides may have been applied to crops in the normal course of farming operations. If residential or sensitive land use is planned, soil sampling and laboratory analyses may be required to evaluate the residual pesticide concentrations.</p> <p>c) Fill, if present, may contain elevated contaminant concentrations as a result of the long commercial and industrial history of the area. Soil sampling and laboratory analyses may be required to evaluate potential contaminant concentrations.</p> <p>d) As is typical to many commercial areas, facilities that use hazardous materials, such as dry cleaners and fuel service stations, may be located within the Planning Area. If leaks or spills occur at these facilities, contamination could impact the Villages and Corridors and Other Areas, depending upon the location of the facility, the magnitude of the release, and the effectiveness of the cleanup efforts.</p> <p>e) Prior to site development, a Phase I Environmental Site Assessment should be performed at each site to identify Recognized Environmental Conditions. In addition and dependent upon the findings presented in the above report, a Site Management Plan that establishes practices for handling buried structures, wells, burn areas, debris or impacted soil that may be encountered during site development activities should be prepared and/or further investigation performed.</p>								

## Central/Downtown Planning Area - Potentially Hazardous Environmental Conditions

The Central/Downtown Planning Area encompasses Downtown and the surrounding area; it is 11.8 square miles in size and is located in Council Districts 3, 6, and 7. The planning area contains Downtown San José, four Planned Community/ Specific Plan areas, two Employment Land Areas, six Transit Oriented Villages and Corridors, two Commercial Center Villages and Corridors, and one Neighborhood Village. The known potentially hazardous environmental conditions identified in the Central/Downtown Planning Area are presented below.

**Table E6. Central/Downtown Planning Area – Potentially Hazardous Environmental Conditions**

Growth Area	Reported Hazardous Materials Spills and Releases					Facilities			Other
	Federal Superfund (NPL) Sites (1 Mile)	State Water Board Open Site Cleanup Program <sup>a</sup> (1/2 mile)	State DTSC Open State Response Sites <sup>a</sup> (1/2 mile)	State DTSC Open Voluntary Cleanup Program Sites <sup>a</sup> (1/2 mile)	Open Leaking Underground Tank (LUST) Cleanup Sites <sup>a</sup> (1,000 feet)	SWRCB Land Disposal Sites and Soil Waste Information System Facilities (1,000 feet)	Toxic Gas Facilities (1/2 mile)	Open State DTSC School Cleanup Sites <sup>a</sup> (1,000 feet)	
<b>Villages and Corridors</b>									
VT3	0	5	0	0	1	0	0	0	c,d,e
VT4	0	5	1	0	3 (1 on-site)	0	1	0	c,d,e
VR9	0	0	0	1	0	0	0	0	c,d,e
CR20	0	10	1	1	4	0	1	0	c,d,e
CR28	0	12 (2 on-site)	0	0	6 (4 on-site)	0	1	0	c,d,e
CR31	0	2 (1 on-site)	0	1	5 (3 on-site)	0	0	0	c,d,e
C33	1	0	1	0	2 (2 on-site)	2	1	0	c,d,e
C46	0	1	0	1	5	0	0	0	c,d,e
V57	0	1 (1 on-site)	0	0	0	1	0	0	c,d,e
<b>Downtown</b>									
Downtown	1	28 (18 on-site)	1 (1 on-site)	3	26 (13 on-site)	0	1 (1 on-site)	0	c,d,e
<b>Planned Community/Specific Plan Areas</b>									
Jackson-Taylor	0	14 (5 on-site)	2 (1 on-site)	0	13 (7 on-site)	0	0	0	c,d,e
Martha Gardens	1	4	1	1 (1 on-site)	8 (4 on-site)	0	0	0	c,d,e
Midtown	0	11 (2 on-site)	0	1 (1 on-site)	9 (1 on-site)	0	1	0	c,d,e
Tamien Station	1	11	1	0	8 (2 on-site)	0	0	0	c,d,e
<b>Employment Land Areas</b>									
Monterey Business	1	10 (2 on-site)	1 (1 on-site)	1	8 (3 on-site)	0	0	0	c,d,e
Mabury	0	5	0	1	0	1	0	0	c,d,e
Other	<ul style="list-style-type: none"> <li>a) A change in land use may require sites that have received regulatory 'closure' or 'no further action' status to be reopened and evaluated for risk to human health in the proposed future setting.</li> <li>b) The general area may have been used for agricultural purposes. Pesticides may have been applied to crops in the normal course of farming operations. If residential or sensitive land use is planned, soil sampling and laboratory analyses may be required to evaluate the residual pesticide concentrations.</li> <li>c) Fill, if present, may contain elevated contaminant concentrations as a result of the long commercial and industrial history of the area. Soil sampling and laboratory analyses may be required to evaluate potential contaminant concentrations.</li> <li>d) As is typical to many commercial areas, facilities that use hazardous materials, such as dry cleaners and fuel service stations, may be located within the Planning Area. If leaks or spills occur at these facilities, contamination could impact the Villages and Corridors and Other Areas, depending upon the location of the facility, the magnitude of the release, and the effectiveness of the cleanup efforts.</li> <li>e) Prior to site development, a Phase I Environmental Site Assessment should be performed at each site to identify Recognized Environmental Conditions. In addition and dependent upon the findings presented in the above report, a Site Management Plan that establishes practices for handling buried structures, wells, burn areas, debris or impacted soil, soil vapor and ground water that may be encountered during site development activities should be prepared and/or further investigation performed.</li> </ul>								

## Edenvale Planning Area - Potentially Hazardous Environmental Conditions

The Edenvale Planning Area is located in the southern portion of the City. The Edenvale Planning Area is 20.6 square miles in size and is located in Council Districts 2, 8, 9, and 10. The Planning Area contains one Employment Land Area (Old and New Edenvale), eight Transit-Oriented Villages and Corridors, one Commercial Center Village and Corridor, and four Neighborhood Villages. The known potentially hazardous environmental conditions identified in the Edenvale Planning Area are presented below.

**Table E7. Edenvale Planning Area – Potentially Hazardous Environmental Conditions**

Growth Area	Reported Hazardous Materials Spills and Releases					Facilities			Other
	Federal Superfund (NPL) Sites (1 Mile)	State Water Board Open Site Cleanup Program Sites <sup>a</sup> (1/2 mile)	State DTSC Open State Response Sites <sup>a</sup> (1/2 mile)	State DTSC Open Voluntary Cleanup Program Sites <sup>a</sup> (1/2 mile)	Open Leaking Underground Tank (LUST) Cleanup Sites <sup>a</sup> (1,000 feet)	SWRCB Land Disposal Sites and Soil Waste Information System Facilities (1,000 feet)	Toxic Gas Facilities (1/2 mile)	Open State DTSC School Cleanup Sites <sup>a</sup> (1,000 feet)	
	<b>Employment Areas</b>								
New Edenvale	1	2	0	0	0	0	0	0	b,d,e
Old Edenvale	1	2 (1 on-site)	0	0	2 (1 on-site)	0	0	0	b,d,e
	<b>Villages and Corridors</b>								
VT6	0	2 (1 on-site)	0	0	3	0	0	0	b,d,e
VT7	0	2	0	0	1	0	0	0	b,d,e
VR10	0	0	0	0	1	0	0	0	b,d,e
VR17	0	1	0	0	1 (on-site)	0	0	0	b,d,e
VR18	0	0	0	0	1	0	0	0	b,d,e
VR19	0	1 (on-site)	0	0	3 (on-site)	0	0	0	b,d,e
VR24	0	0	0	0	0	0	0	0	b,d,e
VR27	0	0	0	0	0	0	0	0	b,d,e
C37	1 (on-site)	1 (on-site)	0	0	1	0	0	0	b,d,e
V58	0	0	0	0	1 (on-site)	0	0	0	b,d,e
V59	0	1	0	0	1 (on-site)	0	0	0	b,d,e
V60	0	0	0	0	0	0	0	0	b,d,e
V66	0	1	0	0	0	0	0	0	b,d,e
Other	<p>a. A change in land use may require sites that have received regulatory ‘closure’ or ‘no further action’ status to be reopened and evaluated for risk to human health in the proposed future setting.</p> <p>b. The general area may have been used for agricultural purposes. Pesticides may have been applied to crops in the normal course of farming operations. If residential or sensitive land use is planned, soil sampling and laboratory analyses may be required to evaluate the residual pesticide concentrations.</p> <p>c. Fill, if present, may contain elevated contaminant concentrations as a result of the long commercial and industrial history of the area. Soil sampling and laboratory analyses may be required to evaluate potential contaminant concentrations.</p> <p>d. As is typical to many commercial areas, facilities that use hazardous materials, such as dry cleaners and fuel service stations, may be located within the Planning Area. If leaks or spills occur at these facilities, contamination could impact the Villages and Corridors and Other Areas, depending upon the location of the facility, the magnitude of the release, and the effectiveness of the cleanup efforts.</p> <p>e. Prior to site development, a Phase I Environmental Site Assessment should be performed at each site to identify Recognized Environmental Conditions. In addition and dependent upon the findings presented in the above report, a Site Management Plan that establishes practices for handling buried structures, wells, burn areas, debris or impacted soil, soil vapor or ground water that may be encountered during site development activities should be prepared and/or further investigation performed.</p>								

## Evergreen Planning Area - Potentially Hazardous Environmental Conditions

The Evergreen Planning Area is located in southeast San José. The Evergreen Planning Area is 15.1 square miles in size and located in Council Districts 2, 7, and 8. The planning area contains one Planned Community/Specific Plan Area, one Employment Land Area, two Transit-Oriented Villages and Corridors, one Commercial Center Village and Corridor, and three Neighborhood Villages. The known potentially hazardous environmental conditions identified in the Evergreen Planning Area are presented below.

**Table E8. Evergreen Planning Area – Potentially Hazardous Environmental Conditions**

Growth Area	Reported Hazardous Materials Spills and Releases					Facilities			Other
	Federal Superfund (NPL) Sites (1 Mile)	State Water Board Open Site Cleanup Program <sup>b</sup> (1/2 mile)	State DTSC Open State Response Sites <sup>b</sup> (1/2 mile)	State DTSC Open Voluntary Cleanup Program Sites <sup>b</sup> (1/2 mile)	Open Leaking Underground Tank (LUST) Cleanup Sites <sup>b</sup> (1,000 feet)	SWRCB Land Disposal Sites and Soil Waste Information System Facilities (1,000 feet)	Toxic Gas Facilities (1/2 mile)	Open State DTSC School Cleanup Sites <sup>b</sup> (1,000 feet)	
<b>Planned Community/Specific Plan Areas</b>									
Evergreen	0	1	0	0	0	0	0	1	b,d,e
<b>Employment Areas</b>									
Campus Industrial	0	0	0	0	0	0	0	0	b,d,e
<b>Villages and Corridors</b>									
VR22	0	0	0	0	1	0	0	1	b,d,e
VR23	0	0	0	0	1 (on-site)	0	0	1	b,d,e
C34	0	0	0	0	2 (1 on-site)	0	0	0	b,d,e
V53	0	0	0	0	0	0	0	0	b,d,e
V54	0	1 (on-site)	0	0	1 (on-site)	0	0	0	b,d,e
V55	0	0	0	0	0	0	0	1	b,d,e
Other	<p>a. A change in land use may require sites that have received regulatory ‘closure’ or ‘no further action’ status to be reopened and evaluated for risk to human health in the proposed future setting.</p> <p>b. The general area may have been used for agricultural purposes. Pesticides may have been applied to crops in the normal course of farming operations. If residential or sensitive land use is planned, soil sampling and laboratory analyses may be required to evaluate the residual pesticide concentrations.</p> <p>c. Fill, if present, may contain elevated contaminant concentrations as a result of the long commercial and industrial history of the area. Soil sampling and laboratory analyses may be required to evaluate potential contaminant concentrations.</p> <p>d. As is typical to many commercial areas, facilities that use hazardous materials, such as dry cleaners and fuel service stations, may be located within the Planning Area. If leaks or spills occur at these facilities, contamination could impact the Villages and Corridors and Other Areas, depending upon the location of the facility, the magnitude of the release, and the effectiveness of the cleanup efforts.</p> <p>e. Prior to site development, a Phase I Environmental Site Assessment should be performed at each site to identify Recognized Environmental Conditions. In addition and dependent upon the findings presented in the above report, a Site Management Plan that establishes practices for handling buried structures, wells, burn areas, debris or impacted soil, soil vapor or ground water that may be encountered during site development activities should be prepared and/or further investigation performed.</p>								



## North San José Planning Area - Potentially Hazardous Environmental Conditions

The North San José Planning Area is located between Downtown and State Route 237 (refer to Figure 15). The North San José Planning Area is 8.8 square miles in size and located in Council Districts 3 and 4. The planning area contains one Planned Community/Specific Plan Area, one Employment Land Area, and one Transit-Oriented Village and Corridor. The potentially hazardous environmental conditions identified in the Neighborhood Villages in the North San José Planning Area based upon existing information are identified below.

**Table E9. North San José Planning Area – Potentially Hazardous Environmental Conditions**

Growth Area	Reported Hazardous Materials Spills and Releases					Facilities			Other
	Federal Superfund (NPL) Sites (1 Mile)	State Water Board Open Site Cleanup Program <sup>a</sup> (1/2 mile)	State DTSC Open State Response Sites <sup>a</sup> (1/2 mile)	State DTSC Open Voluntary Cleanup Program Sites <sup>a</sup> (1/2 mile)	Open Leaking Underground Tank (LUST) Cleanup Sites <sup>a</sup> (1,000 feet)	SWRCB Land Disposal Sites and Soil Waste Information System Facilities (1,000 feet)	Toxic Gas Facilities (1/2 mile)	Open State DTSC School Cleanup Sites <sup>a</sup> (1,000 feet)	
	<b>Planned Community/Specific Plan Areas</b>								
Rincon South	0	7	0	0	15 (2 on-site)	0	0	0	b,c,d,e
	<b>Employment Areas</b>								
North San José	0	23 (13 on-site)	2 (1 on-site)	6 (2 on-site)	13 (12 on-site)	3 (1 on-site)	10	0	b,c,d,e
	<b>Villages and Corridors</b>								
VT5	0	13 (1 on-site)	2	1	0	1	1	0	b,c,d,e
Other	<p>a. A change in land use may require sites that have received regulatory 'closure' or 'no further action' status to be reopened and evaluated for risk to human health in the proposed future setting.</p> <p>b. The general area may have been used for agricultural purposes. Pesticides may have been applied to crops in the normal course of farming operations. If residential or sensitive land use is planned, soil sampling and laboratory analyses may be required to evaluate the residual pesticide concentrations.</p> <p>c. Fill, if present, may contain elevated contaminant concentrations as a result of the long commercial and industrial history of the area. Soil sampling and laboratory analyses may be required to evaluate potential contaminant concentrations.</p> <p>d. As is typical to many commercial areas, facilities that use hazardous materials, such as dry cleaners and fuel service stations, may be located within the Planning Area. If leaks or spills occur at these facilities, contamination could impact the Villages and Corridors and Other Areas, depending upon the location of the facility, the magnitude of the release, and the effectiveness of the cleanup efforts.</p> <p>e. Prior to site development, a Phase I Environmental Site Assessment should be performed at each site to identify Recognized Environmental Conditions. In addition and dependent upon the findings presented in the above report, a Site Management Plan that establishes practices for handling buried structures, wells, burn areas, debris or impacted soil, soil vapor or ground water that may be encountered during site development activities should be prepared and/or further investigation performed.</p>								

## South San José Planning Area - Potentially Hazardous Environmental Conditions

The South San José Planning Area is located directly south of Downtown between State Route 87 and US 101. It is 11.4 square miles in size and is located in Council Districts 2, 6, 7, and 10. The planning area contains one Planned Community/ Specific Plan Area, two Employment Land Areas, six Transit-Oriented Villages and Corridors and two Commercial Center Villages and Corridors. The potentially hazardous environmental conditions identified in the South San José Planning Area based upon existing information are identified below.

**Table E10. South San José Planning Area – Potentially Hazardous Environmental Conditions**

Growth Area	Reported Hazardous Materials Spills and Releases					Facilities			Other
	Federal Superfund (NPL) Sites (1 Mile)	State Water Board Open Site Cleanup Program <sup>a</sup> (1/2 mile)	State DTSC Open State Response Sites <sup>a</sup> (1/2 mile)	State DTSC Open Voluntary Cleanup Program Sites <sup>a</sup> (1/2 mile)	Open Leaking Underground Tank (LUST) Cleanup Sites <sup>a</sup> (1,000 feet)	SWRCB Land Disposal Sites and Soil Waste Information System Facilities (1,000 feet)	Toxic Gas Facilities (1/2 mile)	Open State DTSC School Cleanup Sites <sup>a</sup> (1,000 feet)	
<b>Planned Community/Specific Plan Areas</b>									
Comm. Hill	0	4	0	0	2 (1 on-site)	0	0	0	b,c,d,e
<b>Employment Areas</b>									
Monterey Bus. and Senter Road	1	9 (5 on-site)	0	0	13 (10 on-site)	0	0	0	b,c,d,e
<b>Villages and Corridors</b>									
VR8	0	0	0	0	2	0	0	0	b,c,d,e
VR10	0	0	0	0	1	0	0	0	b,c,d,e
VR24	0	0	0	0	0	0	0	0	b,c,d,e
VR25	0	0	0	0	0	0	0	0	b,c,d,e
VR26	0	0	0	0	1 on-site	0	0	0	b,c,d,e
VR27	0	0	0	0	0	0	0	0	b,c,d,e
C33	1	1	0	0	3 (1 on-site)	0	1	0	b,c,d,e
C45		4 (1 on-site)	0	0	1 on-site	0	0	0	b,c,d,e
Other	<p>a. A change in land use may require sites that have received regulatory 'closure' or 'no further action' status to be reopened and evaluated for risk to human health in the proposed future setting.</p> <p>b. The general area may have been used for agricultural purposes. Pesticides may have been applied to crops in the normal course of farming operations. If residential or sensitive land use is planned, soil sampling and laboratory analyses may be required to evaluate the residual pesticide concentrations.</p> <p>c. Fill, if present, may contain elevated contaminant concentrations as a result of the long commercial and industrial history of the area. Soil sampling and laboratory analyses may be required to evaluate potential contaminant concentrations.</p> <p>d. As is typical to many commercial areas, facilities that use hazardous materials, such as dry cleaners and fuel service stations, may be located within the Planning Area. If leaks or spills occur at these facilities, contamination could impact the Villages and Corridors and Other Areas, depending upon the location of the facility, the magnitude of the release, and the effectiveness of the cleanup efforts.</p> <p>e. Prior to site development, a Phase I Environmental Site Assessment should be performed at each site to identify Recognized Environmental Conditions. In addition and dependent upon the findings presented in the above report, a Site Management Plan that establishes practices for handling buried structures, wells, burn areas, debris or impacted soil, soil vapor or ground water that may be encountered during site development activities should be prepared and/or further investigation performed.</p>								

## West Valley Planning Area - Potentially Hazardous Environmental Conditions

The West Valley Planning Area is the westernmost area of San José. The West Valley Planning Area is 10.9 square miles in size and is located in Council Districts 1 and 6. The planning area contains two Transit-Oriented Villages and Corridors, five Commercial Center Villages and Corridors, and two Neighborhood Villages. The potentially hazardous environmental conditions identified in the Neighborhood Villages in the West Valley Planning Area based upon existing information are identified below.

**Table E11. West Valley Planning Area – Potentially Hazardous Environmental Conditions**

Growth Area	Reported Hazardous Materials Spills and Releases					Facilities			Other
	Federal Superfund (NPL) Sites (1 Mile)	State Water Board Open Site Cleanup Program <sup>a</sup> (1/2 mile)	State DTSC Open State Response Sites <sup>a</sup> (1/2 mile)	State DTSC Open Voluntary Cleanup Program Sites <sup>a</sup> (1/2 mile)	Open Leaking Underground Tank (LUST) Cleanup Sites <sup>a</sup> (1,000 feet)	SWRCB Land Disposal Sites and Soil Waste Information System Facilities (1,000 feet)	Toxic Gas Facilities (1/2 mile)	Open State DTSC School Cleanup Sites <sup>a</sup> (1,000 feet)	
<b>Villages and Corridors</b>									
CR30	0	5	1	0	1 on-site	0	0	0	b,d,e
CR32	1	4 (1 on-site)	0	1	4 (3 on-site)	0	0	0	b,d,e
C35	0	1	0	0	4 (3 on-site)	0	0	0	b,d,e
C36	0	1 on-site	0	0	3 on-site	0	0	0	b,d,e
C38	0	0	0	1	0	0	0	0	b,d,e
C41	0	3 (1 on-site)	0	0	1 on-site	0	0	0	b,d,e
C43	0	0	0	1	2 (1 on-site)	0	0	0	b,d,e
V61	0	0	0	0	0	0	0	0	b,d,e
V62	0	0	0	0	0	0	0	0	b,d,e
Other	<p>a. A change in land use may require sites that have received regulatory 'closure' or 'no further action' status to be reopened and evaluated for risk to human health in the proposed future setting</p> <p>b. The general area may have been used for agricultural purposes. Pesticides may have been applied to crops in the normal course of farming operations. If residential or sensitive land use is planned, soil sampling and laboratory analyses may be required to evaluate the residual pesticide concentrations.</p> <p>c. Fill, if present, may contain elevated contaminant concentrations as a result of the long commercial and industrial history of the area. Soil sampling and laboratory analyses may be required to evaluate potential contaminant concentrations.</p> <p>d. As is typical to many commercial areas, facilities that use hazardous materials, such as dry cleaners and fuel service stations, may be located within the Planning Area. If leaks or spills occur at these facilities, contamination could impact the Villages and Corridors and Other Areas, depending upon the location of the facility, the magnitude of the release, and the effectiveness of the cleanup efforts.</p> <p>e. Prior to site development, a Phase I Environmental Site Assessment should be performed at each site to identify Recognized Environmental Conditions. In addition and dependent upon the findings presented in the above report, a Site Management Plan that establishes practices for handling buried structures, wells, burn areas, debris or impacted soil, soil vapor or ground water that may be encountered during site development activities should be prepared and/or further investigation performed.</p>								

## Willow Glen Planning Area - Potentially Hazardous Environmental Conditions

The Willow Glen Planning Area is located southwest of Downtown. The Willow Glen Planning Area is 10.4 square miles in size and is located in Council Districts 6 and 9. The planning area contains one Transit-Oriented Village and Corridor, three Commercial Center Villages and Corridors, and three Neighborhood Villages. The potentially hazardous environmental conditions identified in the Neighborhood Villages in the Willow Glen Planning Area based upon existing information are identified below.

**Table E12. Willow Glen Planning Area – Potentially Hazardous Environmental Conditions**

Growth Area	Reported Hazardous Materials Spills and Releases					Facilities			Other
	Federal Superfund (NPL) Sites (1 Mile)	State Water Board Open Site Cleanup Program <sup>a</sup> (1/2 mile)	State DTSC Open State Response Sites <sup>a</sup> (1/2 mile)	State DTSC Open Voluntary Cleanup Program Sites <sup>a</sup> (1/2 mile)	Open Leaking Underground Tank (LUST) Cleanup Sites <sup>a</sup> (1,000 feet)	SWRCB Land Disposal Sites and Soil Waste Information System Facilities (1,000 feet)	Toxic Gas Facilities (1/2 mile)	Open State DTSC School Cleanup Sites <sup>a</sup> (1,000 feet)	
<b>Villages and Corridors</b>									
CR21	0	0	0	0	0	0	0	0	b,c,d,e
C39	0	2	0	0	1 on-site	0	0	0	b,c,d,e
C40	0	0	0	0	1 on-site	0	0	0	b,c,d,e
C44	0	0	0	0	1 on-site	0	0	0	b,c,d,e
V63	0	0	0	0	2 (1 on-site)	0	0	0	b,c,d,e
V64	0	0	0	0	0	0	0	0	b,c,d,e
V65	0	0	0	0	1 on-site	0	0	0	b,c,d,e
Other	<p>a. A change in land use may require sites that have received regulatory 'closure' or 'no further action' status to be reopened and evaluated for risk to human health in the proposed future setting.</p> <p>b. The general area may have been used for agricultural purposes. Pesticides may have been applied to crops in the normal course of farming operations. If residential or sensitive land use is planned, soil sampling and laboratory analyses may be required to evaluate the residual pesticide concentrations.</p> <p>c. Fill, if present, may contain elevated contaminant concentrations as a result of the long commercial and industrial history of the area. Soil sampling and laboratory analyses may be required to evaluate potential contaminant concentrations.</p> <p>d. As is typical to many commercial areas, facilities that use hazardous materials, such as dry cleaners and fuel service stations, may be located within the Planning Area. If leaks or spills occur at these facilities, contamination could impact the Villages and Corridors and Other Areas, depending upon the location of the facility, the magnitude of the release, and the effectiveness of the cleanup efforts.</p> <p>e. Prior to site development, a Phase I Environmental Site Assessment should be performed at each site to identify Recognized Environmental Conditions. In addition and dependent upon the findings presented in the above report, a Site Management Plan that establishes practices for handling buried structures, wells, burn areas, debris or impacted soil, soil vapor, or ground water that may be encountered during site development activities should be prepared and/or further investigation performed.</p>								