

E. HAZARDS AND HAZARDOUS MATERIALS

This section describes existing hazardous materials and hazards-related conditions in the vicinity of the Plan Area, discusses policies relevant to these hazards, evaluates potential impacts resulting from implementation of the Draft Specific Plan, and identifies mitigation measures to reduce the significance of potential impacts, as appropriate. Development and operations within the Plan Area could cause temporary and permanent increases in hazardous materials use and expose demolition workers to hazardous building materials or subsurface hazards. The section also addresses emergency response and evacuation issues for the Plan Area.

1. Setting

The existing context for hazards and hazardous materials includes the following topics: regulatory framework; Plan Area hazardous materials uses and investigations; emergency response and evacuation plans; and goals, policies and programs in the City of Benicia General Plan.

a. Regulatory Framework. The following section describes the regulatory framework that affects the management of hazardous materials (including site investigation and remediation), worker health and safety, and lead/asbestos and other hazardous building materials.

(1) Site Investigation and Remedial Regulation Requirements. Many laws and regulations at the federal, State, and local levels affect the management of hazardous materials, including site investigation and remedial actions. In California, the U.S. Environmental Protection Agency (U.S. EPA) has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency's (Cal/EPA) offices, boards, and departments. The Department of Toxic Substances Control (DTSC) or San Francisco Bay Regional Water Quality Control Board (Water Board) may provide oversight on investigation and remediation of sites affected by hazardous materials releases in Benicia. Alternatively, oversight may be provided on the County level by the Solano County Environmental Health Services (SCEHS).

(2) Hazardous Materials Management and Worker Health and Safety Requirements. Several local, State, and federal requirements pertain to hazardous materials management, including use, storage, disposal, and training of workers handling hazardous materials. Generally, State requirements mirror federal requirements, and in some cases are more stringent. State requirements, which can be implemented through the adoption of local ordinances, are often enforced by the local administering agency, such as the fire department or county environmental health department.

There are specific requirements for storage of hazardous materials in excess of threshold limits. For example, the State Office of Emergency Services requires a Hazardous Materials Business Plan (Business Plan)¹ for storage of quantities of hazardous materials equal to or greater than 55 gallons of liquid hazardous materials (including hazardous wastes), 500 pounds of solids, or 200 cubic feet of compressed gases. Although specific future businesses have not yet been identified for the industrial, manufacturing and processing land areas within the Plan Area, some examples of hazardous materials that could be stored by future businesses in quantities subject to the Business Plan requirements include petroleum hydrocarbons (e.g., gasoline, diesel, motor oil, grease, lubricants), paints, and compressed gases, acids, and pesticides/herbicides for landscape management. In Benicia, the

¹ California Health and Safety Code, Chapter 6.95, Section 25500 et seq; 19 CCR 2620 et seq.

requirements for Business Plans are administered by the SCEHS. The Business Plan is required to contain facility maps, up-to-date inventories of all hazardous materials equal to or above the threshold limits stated above, emergency response procedures, equipment, and an employee training program.

Businesses that generate hazardous waste (e.g., waste oil, waste antifreeze) are subject to Business Plan and Contingency Plan requirements, if these wastes are generated in quantities equal to or greater than the threshold requirements outlined above. Contingency Plan² requirements include identification of an emergency coordinator, identification and location of emergency response equipment, and reporting procedures in the event of a spill or other emergency. Hazardous wastes must be properly packaged, stored, manifested, and disposed of at a permitted off-site facility in accordance with local, State, and federal requirements; generators of hazardous wastes must be registered by the U.S. EPA.³ Requirements for hazardous waste management are regulated by DTSC and the U.S. EPA.

In addition to the Business Plan and Contingency Plan requirements, preparation of Accidental Release Prevention Plans (ARPP) for acutely hazardous materials may be required of future businesses in the Plan Area if there is a significant likelihood that the businesses' use of hazardous materials could pose an accidental release risk for acutely hazardous materials stored above threshold quantities.⁴ Facilities with aboveground or underground tanks are also required to be permitted.⁵ Other plans, such as Spill Prevention Control and Countermeasures Plans,⁶ may be required for aboveground tanks, depending on the tank size, location and contents. Some facilities located within the Plan Area may be required to prepare Process Safety Management Plans for their operations. The purpose of these plans is to eliminate, to a substantial degree, the risks to which employees are exposed to hazardous materials in facility processes.⁷

Worker training programs and establishment of employer programs for worker health and safety training related to hazardous materials uses are also likely to be required for some businesses within the Plan Area. Some of these requirements include: Hazard Communications and worker training,⁸ Injury and Illness Prevention Plan and training,⁹ Emergency Action Plan and training,¹⁰ Fire Prevention Plan and training,¹¹ Permissible Exposure Limits for hazardous materials,¹² and other applicable programs, based on the work to be performed and the hazardous material used.

² Title 22, California Code of Regulations (CCR) Section 66265.50-66265.56.

³ Title 22, CCR; 40 Code of Federal Regulations (CFR).

⁴ California Health and Safety Code, Section 25531 et seq; 40 CFR Part 68.

⁵ California Health and Safety Code, Section 25270 et seq.; California Health and Safety Code Section, Section 25280 et seq.; Uniform Fire Code; 3 United States Code (USC) 1251; 42 USC 6991; Title 23 CCR Section 2610-2873; 40 CFR Part 112 et seq.; 40 CFR Parts 112.3 and 112.7; 40 CFR Part 280.

⁶ 40 CFR Parts 112.3 and 112.7.

⁷ Title 8, CCR Section 5189 and 40 CFR Part 1910.119.

⁸ Title 8, CCR Section 5194.

⁹ Title 8, CCR Section 1509 and 3203.

¹⁰ Title 8, CCR Section 3220.

¹¹ Title 8, CCR Section 3221.

¹² Title 8, CCR Section 5155.

Workers at hazardous waste sites (or persons working with hazardous wastes that are encountered during excavation of contaminated soils) must receive specialized training and medical supervision according to the Hazardous Waste Operation and Emergency Response (HAZWOPER) regulations.¹³ Regulations have also been developed for workers potentially exposed to lead¹⁴ and asbestos.¹⁵ Cal/Occupational Safety and Health Administration (OSHA) conducts on-site evaluations to identify non-compliance with the requirements above and issues notices of violation to enforce necessary health and safety practices.

(3) Lead, Asbestos and Other Hazardous Building Materials. The Plan Area contains many older buildings, most of which would be rehabilitated as the Plan Area is developed (see Section A.1.b below). Prior to 1978, lead compounds were commonly used in interior and exterior paints. Prior to the 1980s, building materials often contained asbestos fibers, which were used to provide strength and fire resistance to the materials. If maintained in good condition, lead-based paint and asbestos-containing materials are not expected to present a health risk; however, demolition or renovation of buildings containing these materials has the potential to release lead particles and/or asbestos fibers to the air, where they may be inhaled by construction workers and the general public. In addition, other common items, such as electrical transformers, fluorescent lighting, electrical switches, heating/cooling equipment, and thermostats can contain hazardous materials, which may pose a risk if not handled and disposed of properly.

Lead is a suspected human carcinogen, a known teratogen (i.e., causes birth defects), and a reproductive toxin. Asbestos is a known human carcinogen. Federal, State, and local requirements govern the abatement requirements for lead based paint and removal of asbestos or suspected asbestos containing materials (ACM), including special construction worker health and safety standards for sites where lead and/or asbestos may be present. For example, the U.S. EPA and DTSC require that lead-based paint with lead concentrations equal to or greater than the U.S. Department of Housing and Urban Development (HUD) definition of lead-based paints (greater or equal to 1 mg/cm² or 0.5 percent lead by weight) be removed prior to demolition if the paint is loose and peeling. If the paint is securely adhering to the substrate, the entire material may be disposed of as demolition debris, which is a non-hazardous waste. Loose and peeling paint must be disposed of as a State and/or federal hazardous waste, if the concentration of lead exceeds applicable waste thresholds. Hazardous wastes must be managed, labeled, transported, and disposed of in accordance with local requirements by trained workers, as described above. State and federal construction worker health and safety regulations, described above, require air monitoring and other protective measures during demolition or renovation activities where lead-based paint is present.

Removal of asbestos or suspect ACM, including removal as part of building demolition, is regulated by the U.S. EPA, federal and State OSHA, DTSC, and the Bay Area Air Quality Management District (BAAQMD). All friable (crushable by hand) ACM, or non-friable ACM subject to damage, must be abated prior to demolition in accordance with applicable requirements. Friable ACM must be disposed of as an asbestos waste at an approved facility. Non-friable ACM may be disposed of as a non-

¹³ Title 8, CCR Section 5192.

¹⁴ 29 CFR Part 1926.62; Title 8, CCR Section 532.1; CDHS Training, Certification and Workpractices Rule.

¹⁵ 29 CFR Part 1926.1101; 40 CFR Part 61 and 152; Title 8, CCR Section 1529; Bay Area Air Quality Management District Regulation 11, Rule 2.

hazardous waste at landfills that accept such wastes. Workers conducting asbestos abatement must be trained in accordance with State and federal OSHA requirements, described above.

Fluorescent lighting tubes and ballast, computer displays, and several other common items containing hazardous materials are regulated as “universal wastes” by the State. Universal waste regulations allow common, low-hazard wastes to be managed under less stringent requirements than other hazardous wastes. Management of other hazardous wastes is governed by DTSC hazardous waste rules, as described above.

b. Hazardous Materials Setting. The following discussion describes historic and existing hazardous materials issues within the Plan Area. An assessment of existing hazardous materials usage and known historic releases of hazardous materials or hazardous waste within the Plan Area is based on the results of a search of State, federal and local databases that track businesses that use, store and dispose of hazardous materials and available site-specific investigations within the Plan Area.^{16 17 18} The search included databases that comprise the Cortese list,¹⁹ which were reviewed to determine whether any properties within the Plan Area are identified on any list of hazardous materials release sites compiled pursuant to Government Code Section 65962.5. Aerial photographs for the Plan Area for various years between 1937 and 1998, and historic topographic maps for years between 1898 and 1980, were reviewed to develop a general understanding of historic land uses and development of the Plan Area.²⁰

(1) Historical Hazardous Materials Uses within the Plan Area. The Plan Area lies within the borders of the former Benicia Arsenal, which was constructed between 1852 and 1911, with additional buildings added during World War II. The Arsenal is clearly marked on the earliest topographic maps of the area (as “US Arsenal”) and is visible in the earliest (1937) aerial photograph. In 1937 the Plan Area contained few buildings, mostly the historic structures that are present today. The largest structure at the arsenal at the time was located south of the railroad spur that formerly ran along Tyler Street just outside of the Plan Area. Development appears to have been substantial during the World War II era because by the 1950s many buildings had been constructed in the area bounded

¹⁶ EDR, 2007. The EDR Radius Map with GeoCheck, Inquiry No. 1902163.2s, Benicia Lower Arsenal, Benicia, California. April 12.

¹⁷ Northgate Environmental Management, Inc., 2000. Soil Sampling Report for Property at Jefferson and Adams Street, Benicia, California. October 2.

¹⁸ ERAS Environmental, Inc., 2002. Phase 1 Environmental Assessment Update, Grant Street Parcels APN 080-150-320 and 080-150-330, Benicia, California. October 23.

¹⁹ State Water Resources Control Board (SWRCB) Geotracker Database, 2006. Website: geotracker.swrcb.ca.gov. September 25. The Geotracker database includes: leaking underground storage tank sites (LUST), registered underground storage tank sites (UST), and sites within the spills, leaks and investigation cleanups program (SLIC).

Solid waste disposal sites identified by the SWRCB with waste constituents above hazardous waste levels outside the waste management unit. List of active Cleanup and Abatement Orders from the SWRCB.

DTSC Hazardous Waste and Substance Site List. Website: www.envirostro.dtsc.ca.gov. The DTSC list includes Federal Superfund National Priority List (NPL) sites, State response sites, voluntary cleanup sites, and school cleanup sites.

Hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

²⁰ Aerial photographs were for the years 1937, 1957, 1965, 1970, 1982, 1992 and 1998. Topographic maps from the United States Geological Survey and other sources were from 1898, 1901, 1902, 1947, 1959, 1968 and 1980.

by Washington Street, Lincoln Street, Tyler Street, Adams Street and Bayshore Road. From the late 1950s until the 1970s, aerial photographs show that few changes occurred in the numbers and types of buildings present. By the 1990s, most buildings south of Tyler and Lincoln Streets had been demolished but many World War II era buildings in the Plan Area remained. In recent years, these buildings have been converted to residential, commercial, and industrial uses, including live-work studios. The nearby Port of Benicia handles primarily agricultural products and vehicles. The largest operation at the port involves receiving, storing and transporting automobiles. The Port is also a pipeline terminal for the Valero Refinery, which receives feedstocks and ships product through the port. The pipeline is located outside of the Plan Area to the north and east.

Given that many structures in the Plan Area were built prior to the 1980s, if they have not been rehabilitated or renovated previously, they may contain hazardous materials such as lead-based paint and ACM. Older buildings may have been heated by furnaces that burned heating oil, which was historically stored in either aboveground or underground tanks near the building being served. If the piping and tank(s) have not been removed, they may be a source of environmental contamination. In addition, current and former site occupants, including the Army, may have stored hazardous materials and/or generated hazardous wastes during normal business practices. As formal recordkeeping of hazardous materials/waste storage and disposal practices is a relatively recent regulatory requirement, there is a potential for older facilities to have had unreported releases of hazardous materials to soil or groundwater, and these materials may persist to the present day. Documented environmental releases, hazardous materials usage and hazardous waste generation within the Plan Area are discussed in the following section.

(2) Documented Environmental Releases, Hazardous Materials Use, and Hazardous Waste Generation. The results of the regulatory agency database search contained approximately 20 sites with reported environmental releases, recent use or storage of hazardous materials, and/or disposal of hazardous waste. The sites are listed in Table IV.E-1. In general, hazardous materials usage and storage is associated with vehicle maintenance and repair facilities and other small businesses. Typical hazardous materials reported in the database search include solvents (such as might be used for metal cleaning, painting or furniture refinishing), waste oil, and fuels. A number of sites historically used underground storage tanks (USTs) to store fuel or other materials and a few of these tanks reportedly leaked. The reported leaking USTs have been investigated by regulatory agencies and, according to the database search results and information on the SWRCB website, all previously reported leaking UST cases in the Plan Area have been remediated, as needed, and closed. Although three of the sites remain on the agencies' databases that currently comprise the Cortese List, all three are reported closed.

Environmental releases at facilities outside of the Plan Area could be carried on-site by groundwater or surface water flows, or by prevailing winds. Based on local topography, the local shallow groundwater and surface water flow direction is presumed to be toward the Carquinez Strait, which lies south of the Plan Area. Prevailing winds within the vicinity of the project site are generally from the northwest to the southwest. However, during the fall and winter, winds can also be from the east-northeast.²¹ Therefore, sites with releases of hazardous materials affecting groundwater or surface

²¹ California Environmental Protection Agency, Air Resources Board, 2002. *Review of Current Ambient Air Monitoring Activities Related to California Bay Area and South Coast Refineries*, March, Attachment B-4: Seasonal Wind Roses at Valero (Benicia) Oil Refinery, year 2000.

Table IV.E-1: Documented Environmental Releases, Hazardous Materials Usage or Hazardous Waste Generation in Plan Area^a

Site Name ^{b, c}	Address	Reason(s) for Regulatory Listing	Notes
Star Motors	986 Adams Street	Hazardous waste generator	Reported waste includes hydrocarbon solvents
Superior Rentals	932 Grant Street	Underground storage tank	UST is reported as inactive
Benicia Arsenal Site – Powder Magazine	Benicia Industrial Park SE CNR Benicia	Environmental release	Site screening by regulatory agency concluded no further action required.
Benicia Mini Storage	711 Jackson Street	Leaking underground storage tank	LUST case reported closed on SWRCB website. UST is reported as inactive.
Auto Styles	711 Jackson Street	Underground storage tank	Status not reported (may be same site as Benicia Mini Storage).
L&R Truck Trailer and Bus Painting	750 Jackson Street	Hazardous waste generator	Reported waste includes hydrocarbon solvents.
Military Family Housing	750 Jackson Street	Hazardous waste generator; environmental release	Reported waste includes oxygenated solvents such as acetone, ethyl acetate and various alcohols. Database search indicated site had been on Cortese List. DTSC and SWRCB websites no longer list site.
UNICO Services, Inc.	1209 Polk Street	Hazardous waste generator	Reported waste identified as oil-containing waste and halogenated organic compounds.
OLIN Corporation	Building 68 Benicia Business Park	Hazardous waste generator; environmental release	Listing is in part due to recordkeeping violations. Site was evaluated for CERCLA action and was deferred to RCRA program. RCRA corrective action evaluation assigned a “low priority” rating to the site.
J.R. Schneider Co., Inc.	849 Jackson Street	Hazardous waste generator; environmental release	Reported waste includes organic and inorganic solids and oxygenated solvents, such as acetone, ethyl acetate, and various alcohols. Database search indicated site had been on Cortese List. DTSC and SWRCB websites no longer list site.
—	1020 Tyler Street	Environmental release	No details on nature of release provided.
—	950 Tyler Street	Environmental release	No details on nature of release provided.
Amports Maintenance Facility	1051 Tyler Street	Underground storage tank	Reported as inactive.
Benicia Industries	1051 Tyler Street	Leaking underground storage tank; Hazardous waste generator;	LUST case reported closed on SWRCB website. Reported waste includes halogenated organic compounds, waste oil and mixed oil, and aqueous solution with less than 10% organic residues.
Glovis America, Inc.	1050 Tyler Street	Hazardous waste generator	Reported waste identified as waste oil and mixed oil.
—	1050 Tyler Street	Environmental release or spill	No details on nature of release provided.
Keith Moon, Fine woodworking	1209 Polk Street, Unit 5	Hazardous waste generator	Reported waste includes oxygenated solvents, such as acetone, ethyl acetate and various alcohols.
—	711 Jackson Street	Drug lab	No details on nature of release or hazardous materials use/storage provided.

Table IV.E-1 *Continued*

Site Name ^{b, c}	Address	Reason(s) for Regulatory Listing	Notes
Benicia Industries, Inc.	2650 Harbor Way	Leaking underground storage tank; Hazardous waste generator	LUST case reported closed on SWRCB website. Reported waste includes hydrocarbon solvents, organic liquids, halogenated organic compounds and PCBs.
Amports	2650 Harbor Way	Leaking underground storage tank	May be same tank as listed for Benicia Industries at same address. SWRCB website contained no separate listing for this business name. Reported as inactive.

^a Information regarding air emissions, which are generated by a few sites, is not included in the table. Typical air emissions included components of vehicle exhaust, hydrocarbons, and other solvents, such as those that might be generated by painting operations.

^b Site names in **bold** were reported on the Cortese List. Some sites may no longer be on the active regulatory databases that currently comprise the Cortese List. See site notes.

^c If site name is blank, only an address was provided by the database search results.

Source: EDR 2007

water north of the project site, and sites emitting airborne contaminants southwest to northwest of the project site (and to a lesser extent sites to the east-northeast), could potentially release hazardous materials that could affect soil, groundwater, air, and/or any surface water conditions at the project site.

Nearby off-site land uses with air emissions include a facility on Bayshore Road, which has reported carbon monoxide emissions (a gaseous product of combustion). Other businesses in the area that handle solvents and other volatile chemicals would have some air emissions. Ships using the Port of Benicia also generate air emissions. These emissions are addressed in the air quality section of the EIR. A car dealership on Oak Road, which is about 1/8-mile north of the Plan Area, has historically had a leaking UST. This site is currently listed as closed. These and other businesses near the Plan Area have historically used, stored, generated, and disposed of hazardous materials. If releases of hazardous materials have occurred from these sites, there is some potential for the releases to migrate and affect soil, groundwater, air and/or any surface water within the project site.

c. Emergency Response and Evacuation Plans. The Benicia Fire Department is responsible for maintaining the City's Emergency Operations Plan (EOP), in accordance with the General Plan.²² The EOP is a multi-hazard plan that identifies procedures for various types of emergencies. It is intended to ensure that City government can continue to function in the event of a disaster. In an emergency, major arterials would serve as principal routes for evacuating people from the disaster zone. These arterials would also serve as routes for moving emergency equipment and supplies. Major identified arterials that could serve the Plan Area include Military East and Adams Street, which run in an east-west direction through the Plan Area, and Park Road, which extends to the north from the Plan Area.²³

The City of Benicia has also implemented the Community Alert and Notification System (CANS), a network of safety sirens and media links to warn and inform the community of potential hazards to public health and safety.²⁴ The Plan Area is within the area that is covered by the sirens in the CANS. Upon activation of CANS, citizens would tune into the appropriate television or radio station to obtain further information in the event of the emergency.

2. City of Benicia General Plan

Applicable goals, policies, and programs related to hazardous materials management, groundwater and surface water contamination, fire hazards, emergency response and other safety hazards from the City of Benicia General Plan are presented below.

Responses to Hazards

- *Community Hazards Goal 4.7:* Ensure that existing and future neighborhoods are safe from risks to public health that could result from exposure to hazardous materials.
 - *Community Hazards Policy 4.7.1:* Actively recruit industries and businesses that sustain environmental quality and have sound, responsible environmental practices and policies, such as best available control technology (BACT), source reduction, reduced use of hazardous materials in production, and reduced waste.

²² City of Benicia, 1999. op. cit. Chapter 4, Community Health and Safety, p. 158.

²³ City of Benicia, 1999. op. cit. Figure 2-5 Circulation Diagram, Chapter 2, p. 56.

²⁴ California Asthma Partners, 2006. www.asthmapartners.org/resources/show_resource/798/. September 26.

- *Community Hazards Policy 4.7.2:* Establish a "Community Right-to-know" program to promote general public understanding of Benicia's toxic problems as they affect current and future generations.
- *Community Hazards Policy 4.7.3:* Protect existing and future development from contaminated sites, hazardous landfill waste and debris, chemical spills, and other hazards including unexploded ordnance and explosive waste.
- *Community Hazards Policy 4.7.4:* Promote enforcement of regulatory requirements over the entire term of monitoring of identified hazardous sites within the City limits, especially sites located in residential neighborhoods and near school playing fields and parks.
- *Community Hazards Policy 4.7.5:* Require that all sites known or suspected to have unexploded ordnance and/or a toxic history be tested and remediated before any development can occur.
- *Community Hazards Policy 4.7.7:* Where environmental testing has been required by State regulatory agencies but is not yet completed, withhold City approvals for site grading and other construction activities until a site evaluation is available that provides a reasonable basis for determining that it is safe to commence such activities.
- *Community Hazards Goal 4.14:* Prevent ground and surface water contamination.
 - *Community Hazards Policy 4.14.1:* Implement non-point source pollution strategies.
 - *Community Hazards Program 4.14.C:* Provide information to the public on provisions of the City's Stormwater Pollution Prevention Plan (SWPPP) program and preparation of SWPPPs for all construction projects of five acres or more. Implement Best Management Practices (BMPs) for stormwater runoff and erosion controls for all development.
- *Community Hazards Goal 4.16:* Require hazardous materials and hazardous waste management handling and disposal procedures that are protective of human health and the environment.
 - *Community Hazards Policy 4.16.1:* Support the Solano County Hazardous Waste Management Plan and its goals, policies, and implementation guidelines for hazardous waste reduction, hazardous waste facility siting, hazardous waste handling and disposal, public education and involvement, and program coordination with regulatory requirements.
 - *Community Hazards Program 4.16A:* As part of the permitting process, ensure that the County reviews the design and operating plans for handling and disposal of hazardous wastes for existing and proposed new businesses.
 - *Community Hazards Program 4.16B:* Contact the Solano County Environmental Management Department annually to confirm that hazardous waste generators in Benicia have been granted permits for handling hazardous substances in compliance with federal and State laws, that they dispose of their wastes in accordance with applicable laws, and that they have filed Hazardous Materials Management Plans and Risk Management and Prevention Plans.
 - *Community Hazards Policy 4.16.3:* Control water runoff that comes from hazardous substance handling or that enters hazardous substance handling areas.
- *Community Hazards Goal 4.17:* Minimize hazardous waste generation.
 - *Community Hazards Policy 4.17.1:* Ensure enforcement of Title 22 California Code of Regulations (CCR) Section 67100 regarding implementation of source reduction plans by hazardous waste generators.
 - *Community Hazards Program 4.17.A:* Contact the Solano County Environmental Management Department each September to confirm that new businesses have filed their source reduction plans, if applicable.
 - *Community Hazards Program 4.17.B:* Situate all new hazardous materials storage and handling areas to minimize the possibility of environmental contamination in the event of an accidental spill.
 - *Community Hazards Program 4.17.C:* Enclose areas where hazardous liquids are handled to minimize any rain or moisture coming into contact with hazardous substances.
- *Community Hazards Goal 4.20:* Reduce health and safety hazards associated with hazardous materials users, hazardous waste generators, and hazardous waste disposal sites and toxic air contaminants.
 - *Community Hazards Policy 4.20.1:* Establish buffer zones between sensitive land uses and those land uses which involve the significant use, storage, or disposal of hazardous materials, hazardous waste, or toxic air contaminants.

- *Community Hazards Program 4.20.E:* Coordinate with the Solano County Environmental Management Department to ensure enforcement of community right-to-know laws (Chapter 6.95 of the Health and Safety Code, Section 25500 et seq.)
- *Community Hazards Program 4.20.F:* Enforce the Hazardous Waste Property and Border Zone Property Law (Health and Safety Code, Article 11, Section 25520 through 25241).
- *Community Hazards Goal 4.22:* Update and maintain the City's Emergency Response Plan.
 - *Community Hazards Policy 4.22.1:* Provide an early community alert and notification system and safe evacuation plan for emergency incidents.
 - *Community Hazards Program 4.22.B:* Develop a siren system to alert and notify the community in an emergency.
 - *Community Hazards Program 4.22.D:* Consider a City radio station to inform residents in the event of an emergency.
 - *Community Hazards Policy 4.22.2:* Develop at least two exit routes, where feasible, for new developments. One of the exits could be a pedestrian route.
 - *Community Hazards Policy 4.22.3:* Provide the public with information on specified emergency evacuation routes.

3. Draft Specific Plan

The Draft Specific Plan contains the following policies and actions related to hazards and hazardous materials management.

- *Infrastructure Policy 2:* Work to safeguard public health, safety and prosperity by providing and maintaining facilities that enable the community to live in harmony with sustainable practices and natural systems.
 - *Infrastructure Action 6.2.8:* Require a soil and/or groundwater analysis prior to new development in areas where there has been prior hazardous materials use or storage, including unexploded ordnance and explosive waste. Monitor and identify potential areas of concern.
 - *Infrastructure Action 6.2.9:* Test and remediate sites known or suspected to have unexploded ordnance or a toxic history before development can occur.
 - *Infrastructure Action 6.2.10:* Work with State and federal agencies to require that any unauthorized hazardous substances be removed.

4. Impacts and Mitigation Measures

This section analyzes the impacts related to hazards that could result from implementation of the Draft Specific Plan. The section begins with criteria of significance, which establish the thresholds for determining whether a project impact is significant. The latter part of this section presents the potential hazards impacts associated with the proposed project. Mitigation measures are provided, as appropriate.

a. Criteria of Significance. The Draft Specific Plan would have a significant impact on public health and safety from hazards and hazardous materials if it would:

- Create a significant hazard to the public or environment through the transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or environment;
- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan; or
- Result in an increased risk of exposure to wildland or urban fire hazards.

b. Less-than-Significant Hazards and Hazardous Materials Impacts.

(1) Transport Use or Disposal of Hazardous Materials and Risk of Upset. Both the construction period and operation period, which would bring new commercial and light industrial businesses to the Plan Area, could increase the volumes and types of hazardous materials transported, stored, used, and disposed within the Plan Area and the possible risk of upset and accidents involving the release of these materials. However, compliance with the General Plan (specifically Goals 4.7, 4.16, 4.17, 4.20 and associated policies and programs), and applicable local, State, and federal regulations for hazardous materials and hazardous waste (including worker training), described above, would avoid or mitigate significant hazardous materials impacts associated with new commercial and light industrial development in the Plan Area. Infrastructure Policy 2 of the Draft Specific Plan, which provides guidance on future hazardous materials usage and public safety within the Plan Area, is consistent with and supports General Plan goals related to hazardous materials.

Construction Period Impacts. Buildings would be demolished or rehabilitated during development of specific sites within the Plan Area. Site workers involved in demolition activities could be exposed to lead-based paint and asbestos-containing building materials, or other hazardous materials. Federal and State regulations govern the demolition or renovation of structures where lead or materials containing lead are present. Federal, State, and local regulations require the removal and proper disposal of asbestos or suspected asbestos-containing materials prior to demolition. Buildings would be inspected for lead-based paint and asbestos prior to demolition or rehabilitation. All lead-based paint and asbestos removal activities are required to be conducted by trained workers under direction of an appropriate health and safety plan to minimize potential exposure. Federal and State regulations also govern the management, transport, and disposal of hazardous materials (including hazardous wastes). Compliance with these laws and regulations would ensure the health and safety of workers and the public and reduce impacts to less-than-significant levels.

Diesel-powered earthmoving equipment, such as graders and excavators, would be used during construction of projects within the Plan Area. Fuels, degreasing agents and other hazardous materials used to operate or maintain the equipment could leak from storage containers or equipment, or be spilled. Other hazardous materials (e.g., paints, curing agents) would be brought into project sites during construction. Transport, storage, or handling of these materials could result in releases to the environment and associated adverse human health effects. Project applicants and their construction managers would be required to comply with local, State and federal hazardous materials regulations. Typical compliance measures include storage of hazardous liquids with secondary containment and preparation of a spill response plan as part of the site-specific construction phase Storm Water

Pollution Prevention Plan (SWPPP). Compliance with the laws and regulations governing the transport, storage and handling of hazardous materials would ensure the health and safety of workers and the public and reduce impacts to less-than-significant levels.

Operation Period Impacts. New commercial and light industrial businesses would be required to store, handle and dispose of hazardous materials and hazardous waste in accordance with local, State and federal laws and regulations. As noted above, local, State and federal regulations govern the management, transport, and disposal of hazardous materials and hazardous wastes. Compliance with these laws and regulations would ensure the health and safety of workers and the public and reduce impacts to less-than-significant levels.

(2) Hazardous Emissions and Hazardous Materials Use Near Schools. There are no existing schools or proposed schools within ¼-mile of the Plan Area.²⁵ The nearest public and private schools are located approximately ½-mile to the west. Therefore, development within the project site would not emit hazardous air pollutants or result in the use of hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school.

(3) Sites Listed Pursuant to Government Code Section 65962.5. Five sites within the Plan Area are listed or have been listed in the past on the lists of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Table IV.E.1). Two of the sites are not currently on the lists and three sites are designated as “closed.”²⁶ As a result, the sites would not create a significant hazard to the public or the environment based on the previously identified site contamination.

(4) Emergency Response and Evacuation. Implementation of the Draft Specific Plan would include mixed use development, including residential uses, in an area that is currently primarily commercial and light industrial, although some live-work units are present. Development of the Plan Area would include the construction of internal streets to enhance circulation. In an emergency, major streets in the Plan Area (Military East, Adams Street, and Park Road) would serve as principal routes for evacuating people. Secondary streets within the Plan Area would be designed to provide access to these streets, which would serve as routes for moving emergency equipment and supplies. The proposed development within the Plan Area would not interfere with an existing emergency response or evacuation plan, given that it would conform to the following City goals/programs: 1) updating of the existing Emergency Operations Plan by the Benicia Fire Department, as required by the General Plan (Goal 4.22 and associated policies and programs); and 2) the City’s notification to new businesses of the CANS as part of obtaining a business license.²⁷

(5) Wildland and Urban Fires. The Plan Area is not located in an area prone to wildland fires; the area is developed and is susceptible to urban fires. As noted in Table IV.E.1, some businesses currently operating within the Plan Area store and use hazardous materials and some of these materials are flammable (e.g., solvents and fuels). Commercial and light industrial development within the Plan Area under the Draft Specific Plan could increase the volumes and types of hazardous

²⁵ Benicia Unified School District, 2007. <http://www.benicia.k12.ca.us>. Great Schools, 2007. <http://www.greatschools.net/city/Benicia/CA>. June 4.

²⁶ Cal EPA, 2007. Cortese List Data Resources, <http://www.calepa.ca.gov/SiteCleanup/CorteseList/default.htm>, accessed June 1.

²⁷ Fiori, 1999. op. cit.

materials stored and used in the area and thus increase the risk of exposure to fires involving these materials. However, compliance with the General Plan (specifically Goals 4.7, 4.16, 4.17, 4.20 and associated policies and programs), and applicable local, State, and federal regulations for hazardous materials (including worker training), described above, would avoid or mitigate significant hazardous materials impacts associated with new commercial and light industrial development. Infrastructure Policy 6.2 of the Draft Specific Plan, which provides guidance on future hazardous materials usage and public safety within the Plan Area, is consistent with and supports the General Plan Goals.

b. Significant Hazards and Hazardous Materials Impacts and Mitigation Measures. One potentially significant impact has been identified and is discussed below.

(1) Accidental Encounter of Hazardous Materials or Waste during Construction.

Businesses that transport, store and handle hazardous materials have operated in the Plan Area in the past and continue to operate there now. In addition to hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Table IV.E.1), there are other businesses in the area that have reported hazardous materials releases or usage, including the storage of fuel or other chemicals in USTs and transport via pipelines. There is some possibility that historic or current businesses in the Plan Area have had unreported releases of hazardous materials. If these materials are encountered unexpectedly during construction they would present a risk to workers, the public or the environment.

Impact HAZ-1: Construction activities may unexpectedly encounter hazard materials or hazardous waste in soil or groundwater. (S)

Mitigation Measure HAZ-1a: If soil, groundwater or other environmental media with suspected contamination (e.g., identified by odor or visual staining) is encountered unexpectedly during construction activities for individual development projects or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered, the applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the SCEHS and implementing actions to determine the nature and extent of any observed contamination. An environmental professional shall oversee the subsequent assessment of the site (including the collection, analysis and interpretation of any samples of soil, groundwater or other environmental media) in accordance with local, State and federal hazardous materials and hazardous waste laws and regulations. The professional shall provide recommendations, as applicable, regarding soil/waste management, worker health and safety training, and regulatory agency notifications. General construction work shall not resume in the area(s) affected until the recommendations have been implemented under the oversight of the SCEHS or other regulatory agency, as appropriate.

Mitigation Measure HAZ-1b: The contractor involved in site grading and site development activities for an individual development project shall ensure that underground pipelines or other underground or aboveground utilities within the project site are identified and clearly marked prior to earthworking activities to avoid unexpected contact with these utilities. Emergency procedures shall be developed by the contractor that can be implemented in the event utilities are ruptured; these procedures shall be reviewed and approved by the City of Benicia Community Development Department, prior to the issuance of a grading or building permit. On-site workers shall be trained in how to implement these procedures. (LTS)

