

4.8

HAZARDS AND HAZARDOUS MATERIALS

4.8.1 INTRODUCTION

The Hazards and Hazardous Materials section of the EIR evaluates the potential for hazards and hazardous materials to be present on the proposed project site or within the near vicinity of the site. In addition, the section discusses potential impacts posed by any such hazards to the environment, as well as to workers during construction of the project. The Impacts section also evaluates the potential use of hazardous materials by future businesses within the innovation center, and the potential for these materials to create a significant hazard to the public. The Hazards and Hazardous Materials section utilized information from the *Davis General Plan*¹, but is primarily based on a *Phase I Environmental Site Assessment (Phase 1 ESA)*² and a *Surface Soil Investigation Report*³ prepared for the proposed project by Wallace Kuhl & Associates (WKA).

4.8.2 EXISTING ENVIRONMENTAL SETTING

The following site description and historical uses are based on the Phase I ESA prepared for the proposed project.

Site Description

The current site conditions at both the MRIC site and the Mace Triangle site are described in detail below.

MRIC Site Conditions

A visual site reconnaissance was conducted by WKA on December 1, 2014. On the day of field reconnaissance, the site was fallow, agricultural land. The majority of the site was bare ground; however, remnants of a row crop were noted in the northwestern portion of the site. A dirt road crosses the project site in an east-west fashion, dividing the site into two portions. The Mace Drainage Channel (MDC) is located along the southern border of the dirt road. A detention basin is located along on the southeastern border of the canal. A fenced area with a control station for the canal and detention basin is located to the northeast of the detention basin. Based on information obtained during an interview conducted by WKA, the detention basin was constructed to temporarily store stormwater from the Mace Ranch area prior to the construction

¹ City of Davis. *Davis General Plan*. Adopted May 2001. Amended through January 2007.

² Wallace Kuhl & Associates. *Phase I Environmental Site Assessment Mace Ranch Innovation Center*. January 6, 2015.

³ Wallace Kuhl & Associates. *Surface Soil Investigation Report Mace Ranch Innovation Center*. December 31, 2014.

of the larger stormwater drainage channel to the east of the site. The MDC has been used as part of the stormwater drainage system for the Mace Ranch area. The fenced area to the northeast of the detention basin was supposed to be a pump station as part of the temporary stormwater drainage system; however, the pump was never installed because the stormwater drainage channel was completed sooner than expected.

Three irrigation wells are located along the western property boundary. One of the wells, observed in the northwestern portion of the site, adjacent to Mace Boulevard, appeared to be inactive. The remaining two irrigation wells, one located on the western boundary of the southern portion of the site, and the other at the southwestern corner of the site, were connected to diesel powered engines on trailers. Evidence of spills or discharges was not observed in the vicinity of either of the trailers. WKA observed rectangular ground markings next to the on-site wells indicating that an item had recently been removed from the site. According to interviews conducted by WKA, a system to supply nutrients to crops was previously connected to the irrigation system, but the system was recently removed.

According to a Preliminary Title Report prepared by Placer Title Company, the site does not have any associated environmental liens. Review of the California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR) website showed that the project site is not located in a designated natural gas field; however, 24 DOGGR wells are located on or within at least one-mile of the site. The MRIC site is not listed on any regulatory agency databases.

Surface Soil Sampling

Soil from the MRIC site was tested for the presence of organochlorine pesticides (OCP), total arsenic, and total lead. Laboratory test results show that OCP was not detected in the soil samples collected from the agricultural use areas, detention basin, or MDC at concentrations above their laboratory reporting limit.⁴ The laboratory reporting limit for each OCP was confirmed as falling below the constituent's California Human Health Screening Level (CHHSL) concentration.

Total arsenic concentrations ranged from 3.5 milligrams per kilogram (mg/kg) to 7.3 mg/kg. The detected concentrations of arsenic cannot be directly compared to the commercial CHHSL (0.24 mg/kg), as naturally occurring arsenic is often detected at concentrations exceeding this threshold. Therefore, the excess cancer risk associated with the detected concentrations at the MRIC Site was calculated and compared to the risk associated with the commercial CHHSL and DTSC's 12 mg/kg threshold for naturally occurring arsenic in soil at sensitive land use properties. The calculation and risk comparison concluded that the risk associated with the maximum detected concentration of total arsenic at the MRIC site and the site's 95 percent upper confidence limit for arsenic fall below the risk associated with DTSC's sensitive land use threshold.

⁴ WallaceKuhl & Associates. *Surface Soil Investigation Report Mace Ranch Innovation Center* [pg. 4]. December 31, 2014.

Laboratory test results show that total lead concentrations at the MRIC site range from 5.4 mg/kg to 7.4 mg/kg. The detected concentrations of total lead fall below the commercial CHHSL for lead (320 mg/kg).

Off-Site Sewer Alignment Alternatives

The two proposed off-site sewer line connection alternatives being evaluated include the northern sewer alignment and the eastern sewer alignment. The northern sewer alignment alternative extends from the northeast side of the MRIC site, northward approximately 0.6-mile, along CR 104. The eastern sewer alignment alternative extends from the east side of the MRIC site, eastward approximately 0.5 miles, along a farm road, to CR 105. The two adjacent parcels where the two sewer alignment alternatives are located have undergone agricultural practices similar to those historically occurring on the MRIC site.

Mace Triangle Site Conditions

Opposite CR 32A is the Mace Triangle site, which is included within the bounds of the project site for annexation purposes only. The Mace Triangle site contains Ikedas Market, a City-owned water tank and Park-and-Ride lot, and agricultural uses. I-80 is located to the south of the Mace Triangle Site. Although a Phase I ESA has not been completed for the Mace Triangle site, known hazardous materials do not exist on the site.

Conditions at Adjoining and Nearby Properties

The project site is bounded to the north and east by agricultural land. Mace Boulevard followed by an Arco gasoline station, University Covenant Church, and vacant land are located to the west of the site. CR 32A is located immediately south of the site, as well as the UPRR tracks. Based on the Phase I ESA, evidence of recognized environmental conditions (RECs) was not found for the adjoining properties.

Union Pacific Railroad

Union Pacific Railroad (UPRR) tracks are located to the south of the MRIC site and the Mace Triangle site, adjacent north of I-80. An at-grade crossing is located east of the City limits at CR 32A/CR 105, which is over half a mile east of the MRIC site. The crossing has signage and gate device for crossing purposes.

Historical Uses

WKA reviewed historical information and interviewed the project's land owners to develop a history of the previous uses of the site and surrounding area in order to evaluate the site and adjoining properties for evidence of RECs. The historical land use research dating back to the early 1900s revealed that the site has been used for growing crops since at least 1957. A former canal was located on the southern portion of the site from at least 1957 to at least 1992 and was filled and graded in 1993. According to interviews conducted by WKA, soil from the excavation of the detention basin was placed within the canal area and the backfill was leveled with

surrounding grade. Another canal has transected the central portion of the site from east to west since at least 1993. A detention basin has been present in the middle of the eastern border of the site since at least 1993.

According to review of the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) website one natural gas well, identified as Bruhn 1, API 11320162, was located on the southeastern portion of the site. However, according to information on the DOGGR website, drilling on the well commenced on September 14, 1972, and the well was abandoned on May 2, 1974.

Environmental Database Search

Nearby properties listed on regulatory agency databases, including the following facilities, were researched further as part of the Phase I ESA:

- Target Property facility at the intersection of 2nd Street and Faraday Avenue, located 0.33 miles west-southwest of the project site;
- Frontier Fertilizer facility located along CR 32A, 0.42 miles west of the project site;
- Mace Ranch Park facility at Mace Boulevard and CR 32A, located 0.45 miles west of the project site;
- A.E. Harter, Inc. facility at 5100 Chiles Road, located 0.2 miles south-southwest of the project site; and
- Holt facility at 5200 Chiles Road, located 0.1 miles south of the project site.

Based on the information reviewed for each of the above listed facilities, the facilities are not suspected of negatively impacting the project site.

Airports

Three airports are located within nine miles of the project site: the Medlock Field, the University of California, Davis (UC Davis) University Airport, and the Yolo County Airport.

Medlock Field Airport

The Medlock Field Airport is located approximately 4.4 miles northwest of the project site. The airport is privately-owned and operated and has been actively used since 1974.⁵

University of California, Davis, University Airport

The UC Davis University Airport is located approximately 5.2 miles southwest of the project site. The airport is operated as a general aviation airport. The airport offers the sale of aviation fuel and rents hangers, open shades and tie downs for aircraft storage. In addition, two fixed base

⁵ SkyVector Aeronautical Charts. *Medlock Field Airport*. 2015. Available at: <https://skyvector.com/airport/69CL/Medlock-Field-Airport>.

operators are located at the airport that provide aircraft maintenance, flight instruction, and aircraft rentals.⁶ While a Comprehensive Land Use Plan (CLUP) has not been prepared for the UC Davis University Airport, an Airport Layout Plan has been prepared. The MRIC site is outside of the flight path.

Yolo County Airport

The Yolo County Airport is located approximately 8.8 miles west of the project site. The Yolo County Airport is a general aviation airport for public use owned and operated by Yolo County.⁷ The airport features a 6,000 foot runway, both full and self-service, hangars, and tie downs. The airport is open seven days a week.

4.8.3 REGULATORY CONTEXT

The term “hazardous substance” refers to both hazardous materials and hazardous wastes. A material is hazardous if the material appears on a list of hazardous materials prepared by a federal, State, or local regulatory agency or if the material has characteristics defined as hazardous by such an agency. If a material appears on a list of hazardous materials prepared by a federal, State, or local regulatory agency, or if a material’s characteristics are defined as hazardous by such an agency, that material is defined as hazardous.

The following discussion contains a summary review of regulatory controls pertaining to hazardous substances, including federal, State, and local laws and ordinances.

Federal Regulations

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

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

⁶ University of California, Davis, Transportation, Airport & Parking Services. *University Airport Information*. 2012. Available at: <http://taps.ucdavis.edu/airport/information>.

⁷ Yolo County. *Yolo County Airport*. 2015. Available at: <http://www.yolocounty.org/general-government/general-government-departments/county-administrator/county-administrator-divisions/airport>.

- Safe Drinking Water Act; and
- Toxic Substances Control Act.

Prior to August 1992, the principal agency at the federal level regulating the generation, transport and disposal of hazardous waste was the USEPA under the authority of the Resource Conservation and Recovery Act (RCRA). As of August 1, 1992, however, the California Department of Toxic Substance Control (DTSC) was authorized to implement the State's hazardous waste management program for the USEPA. The USEPA continues to regulate hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).

CERCLA (the Act) introduced active federal involvement to emergency response, site remediation, and spill prevention, most notably The Superfund program. The Act was intended to be comprehensive in encompassing both the prevention of, and response to, uncontrolled hazardous substances releases. The Act deals with environmental response, providing mechanisms for reacting to emergencies and to chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, the Act establishes a system for compensating appropriate individuals and assigning appropriate liability. The Act is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

State Regulations

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

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

The Cal-EPA and the California State Water Resources Control Board establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable State laws include the following:

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

Within Cal-EPA, DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the State agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law (HWCL).

Local Regulations

The following are the local goals and policies relevant to hazards and hazardous materials.

Davis General Plan

The applicable goals, policies, and standards from the Hazards Chapter of the *Davis General Plan* are presented at the end of the section in Table 4.8-1.

Yolo County Office of Emergency Services

The Yolo County Office of Emergency Services (OES) is the emergency management agency for Yolo County. OES coordinates the County government's response to disaster or other large scale emergency. In 2013, the Yolo County OES began revision of many emergency management plans and systems to enhance the preparedness and response capability of the County. The revisions and enhancements encompass partners throughout the entire County over a multi-year strategy. The final product will be a set of emergency plans that outline responsibilities and provide guidance to local responders.

County of Yolo Emergency Operations Plan

The *County of Yolo Emergency Operations Plan*, revised in December 2013, was developed for each Yolo County department, local special districts with emergency services responsibilities, and in coordination with the cities in Yolo County.⁸ The content is based upon guidance approved and provided by the California Governor's Office of Emergency Services and the Federal Emergency Management Agency (FEMA). The intent of the County's Emergency Operations Plan is to provide direction on how to respond to an emergency from the onset, through an extended response, and into the recovery process.

Yolo County Operational Area Multi-Jurisdictional Hazard Mitigation Plan

Every five years, the local Multi-Hazard Mitigation Plan (MHMP) is updated and submitted to FEMA. The MHMP identifies natural hazards and risks and identifies the hazard mitigation strategy to reduce vulnerability and make the communities of Yolo County more disaster resistant and sustainable.⁹ The MHMP describes strategies that government and private sector organizations may utilize as acceptable and effective mechanisms for mitigating those hazards, within the realistic constraints of capability and priority. The MHMP was developed using the

⁸ Yolo County, Office of Emergency Services. *County of Yolo Emergency Operations Plan*. December 2013.

⁹ Yolo County. *Yolo County Operational Area Multi-Jurisdictional Hazard Mitigation Plan*. December 2012.

FEMA Local Mitigation Plan Review Guide, dated October 11, 2011, and is structured similar to their Plan Review Tool. Natural hazards, including dam failure, drought, earthquakes, flooding, severe weather, volcanic activity, and wildfire, are discussed in the MHMP.

City of Davis Multi-Hazard Functional Planning Guide

According to the City's General Plan, the City of Davis Fire Department maintains the City's Multi-Hazard Functional Planning Guide, which plans for emergency management and evacuation in the event of disasters. The Guide includes operating procedures in the event of a disaster, as well as descriptions of emergency evacuation routes in Davis.

City of Davis Emergency Operations Plan

In recognition of the critical need to make emergency operations planning a priority for all urban areas, the City of Davis City Council approved a Strategic Plan in 2008 to begin an update to the City's 2004 version of the Emergency Operations Plan. The current (January 2010) update of the Emergency Operations Plan was extensive. The plan has been completely restructured and includes expanded Emergency Operations Center (EOC) and Recovery Sections. In addition, the Emergency Operations Plan has been updated to include the National Incident Management System (NIMS), which is a requirement of the Federal Government.

The Davis Emergency Operations Plan is an essential document for emergency management. The plan provide a framework for response and emergency management systems, defines roles and responsibilities of the City's emergency response organization, and provides triggers for implementation of the plan during disasters, all of which, along with training and exercises, prepare the emergency organization to respond effectively when Davis is impacted by a disaster. The plan also fulfills federal and State planning requirements for continued Homeland Security Grant eligibility.

4.8.4 IMPACTS AND MITIGATION MEASURES

The section below describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential project-specific impacts related to hazards and hazardous materials. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they would result in a significant adverse impact on the environment. For the purposes of this EIR, an impact is considered significant if the proposed project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or 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, create a significant hazard to the public or the environment;
- For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands; or
- Conflict, or create an inconsistency, with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigating environmental effects related to hazards and hazardous materials.

Issues Not Discussed Further

The nearest existing school to the project site is Pioneer Elementary School, which is located approximately 0.26-mile south of the project site. In addition, Frances Harper Junior High School is located approximately 0.28-mile west of the site. Because the project is not within one-quarter mile of an existing or proposed school, the project would not result in any impacts associated with emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

The proposed project is not located on a site that is on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Thus, the project would not create any hazard to the public or the environment associated with hazardous materials sites.

The project site is not located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport. The project is not within the vicinity of a private airstrip. Accordingly, a safety hazard for people residing or working in the project area associated with private airstrips would not occur as a result of the proposed project.

For the aforementioned reasons, the impacts discussed above are not analyzed further in this EIR.

Method of Analysis

Evaluation of potential impacts of the proposed project associated with hazards and hazardous materials was primarily based on the Phase I ESA prepared for the proposed project. The standards of significance listed above are used to delineate the significance of any potential impacts.

Phase I ESA Methodology

The purpose of the Phase I ESA was to evaluate the proposed project site for evidence of potential RECs resulting from current and/or former site activities as defined by the American Society of Testing and Materials (ASTM) Standard E 1527-13. The Phase I ESA was performed in general conformance with the ASTM Standard E 1527-13. The following tasks were conducted as part of the Phase I ESA:

- Site reconnaissance for visual evidence of surface contamination and potential sources of subsurface contamination on December 1, 2014;
- A visual inspection of the adjoining properties for evidence of RECs;
- Interviews with the key site manager, major occupants, past and present owners, operators, and government and/or agency personnel, as available;
- A records review, including the following:
 - Physical setting documents to determine regional geology, general soil information, and local and regional groundwater conditions;
 - Historical information, including but not limited to, Sanborn maps, topographic maps, aerial photographs, ownership records, building department records, local street directories, zoning and land use records, and prior assessments, as available;
 - Environmental records, including federal, state, tribal, and county regulatory agency lists that will help identify RECs on the site and the adjoining properties; and
 - Based on the outcome of the database search, review of specific regulatory agency files for identified contaminated facilities in order to evaluate whether the listed facilities are hazardous materials threats to the site;
- A preliminary screen for vapor encroachment conditions on the site per ASTM E2600-10;
- Review of the completed ASTM E 1527-13 User Questionnaire (Questionnaire) regarding Recorded Environmental Liens, activity and use limitations (AULs), relationship of the purchase price to the fair market value of the site, and any specialized knowledge of the site; and
- Review of environmental liens and AULs reports, as provided.

Surface Soil Investigation

The purpose of the surface soil sampling was to evaluate surface soil within the MRIC site for concentrations of OCP, total arsenic, and total lead that would pose a threat to human health under a commercial land use exposure scenario. WKA developed a soil sample collection plan

using the DTSC Interim Guidance for Sampling Agricultural Properties (Third Revision), dated August 7, 2008. The DTSC Guidance calls for 200 soil sample locations being distributed over the MRIC site.

The MRIC site was initially divided into 200 approximately equally sized sections to meet the DTSC Guidance. WKA selected approximately 10 percent of the recommended sample locations for analysis of OCP and approximately 10 percent of the recommended sample locations for analysis of total arsenic and total lead. Thus, 34 soil sample locations were selected. The 34 shallow soil samples were collected from a depth between zero and six inches below ground surface on November 24, 2014. Twenty four of the samples were collected within the agricultural use areas of the MRIC site, four soil samples were collected within the stormwater detention basin, and the remaining six samples were collected from the MDC.

Excelchem Environmental Labs, a California State Water Resources Control Board certified laboratory, conducted the requested laboratory analyses. OCP laboratory analyses were performed on 28 of samples that were analyzed as seven composited samples constructed using a four-to-one ratio and that the remaining six samples were analyzed as discrete samples. In addition, 13 discrete soil samples were analyzed for total arsenic and total lead. Each sample comprising a composited sample or analyzed as a discrete soil sample was collected from locations within the agricultural use, detention basin, or canal areas of the MRIC site.

Project Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison with the standards of significance identified above. The discussions and mitigation measures presented below apply to both the MRIC and the Mace Triangle unless otherwise stated.

4.8-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Based on the analysis below, the impact is *less than significant*.

A significant hazard to the public or the environment could result from the routine transport, use, or disposal of hazardous materials, or through a reasonably foreseeable upset and accidental release of hazardous materials into the environment. Typically, projects that involve the routine transport, use, or disposal of hazardous materials are industrial in nature. The potential for the MRIC and Mace Triangle to create a significant hazard to the public or the environment through the routine use, transport, or disposal of hazardous materials is discussed separately below.

MRIC

The proposed project consists of innovation center uses, including research, office, and manufacturing uses, with supportive commercial uses such as a hotel/conference center, and ancillary retail, as well as park areas on the MRIC. The possibility exists for future

manufacturing and research/research and development uses with the MRIC to involve the use of potentially hazardous materials.

Businesses that may involve use and/or storage of hazardous materials are reviewed by the Davis Fire Department. If a prospective business submits a business license application to locate within an innovation center building with existing tenant space, the Fire Department would review the proposed business license application to determine which chemicals would be used during business operations, as well as where the applicant intends to store any hazardous materials. The California Fire Code would serve as the regulatory vehicle by which the Fire Department would review the business license application, and any tenant improvements, to determine whether all aspects of hazardous materials use and storage would comply with Fire Code requirements. This would include Fire Department review of the proposed on-site fire suppression system, as fire suppression system requirements are specific to the type of chemicals that would be utilized on-site. Prior to issuance of a certificate of occupancy for a prospective business, the Fire Department would conduct an on-site inspection to verify whether the proposed on-site fire suppression system, and materials storage and use areas, comply with Fire Code regulations.

Other prospective innovation center businesses that are proposed within yet-to-be constructed on-site buildings, would be reviewed by the Fire Department during plan check submittal and review. As described above, during the plan check process, the Fire Department would review the proposed improvements for compliance with the Fire Code. In addition, any future on-site uses involving the handling, storage, or treatment, in any fashion, of hazardous materials, as defined in Section 40.01.010 of the City of Davis Municipal Code would be required to comply with all applicable federal, State, and local hazards regulations. Compliance with such would ensure that any toxics are adequately handled and managed.

Mace Triangle Site

The City of Davis has included the Mace Triangle within the overall project boundaries for purposes of annexation. However, this EIR includes an analysis of potential additional growth under the proposed Planned Development, including potential new development on the agriculture and Ikedas parcels. Additional urban development in the future would be subject to further City review in connection with discretionary entitlements and any proposed businesses would be reviewed by the Fire Marshal to determine consistency with Fire Code. Accordingly, an increase in the potential for the land uses within the Mace Triangle to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials would not occur.

Conclusion

Overall, implementation of the proposed project would not create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials, and impacts would be considered *less than significant*.

Mitigation Measure(s)

None required.

- 4.8-2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment associated with the existing on-site wells, canals, nearby uses, or soil contamination. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.**

On-Site Wells

Potential upset or accident conditions involving the release of hazardous materials into the environment associated with wells are discussed for the MRIC site and the Mace Triangle site separately below.

MRIC

According to the Phase I ESA prepared for the proposed project, two active irrigation wells with associated diesel powered engines on trailers were identified on the proposed project site. Evidence of spills or discharges was not observed in the vicinity of either of the trailers.

The proposed project would be supplied domestic water from the City by new connections to the existing water infrastructure in the vicinity of the project site. While three irrigation wells are located along the western boundary of the MRIC site, the project applicant proposes to install a new irrigation well in the west-central portion of the site, within the proposed park area adjacent Mace Boulevard. Accordingly, development of the proposed project would not require use of the existing on-site irrigation wells, and the wells would need to be properly abandoned. Without proper abandonment of the existing wells, the potential exists for upset or accident conditions to occur involving the release of hazardous materials into the environment associated with the existing on-site wells.

Mace Triangle

The Phase I ESA prepared for the proposed project did not investigate the Mace Triangle property. Thus, whether existing on-site wells exist on the site cannot be verified at this time. Future development of the Mace Triangle site would require submittal of a Phase I ESA in order to identify any on-site hazard, including on-site wells, and include recommendations, as necessary, for mitigation (see Mitigation Measure 4.8-2(c) below).

On-Site Canals

MRIC

A former canal was located on the southern portion of the MRIC site. The former canal was located on the site from at least 1957 to at least 1992 and was filled and graded in 1993. According to interviews conducted by WKA, soil from the excavation of the detention basin was placed within the canal area and the backfill was leveled with surrounding grade. A record of these operations is not available. As a result, WKA is not aware whether any trash or other debris was within the canal at the time it was backfilled. WKA has recommended that if any debris is encountered within the former canal on APN 033-630-009 during construction activities, WKA should be called to evaluate potential impacts to the site.

Mace Triangle

On-site canals are not located on the Mace Triangle site; therefore, no discussion is necessary.

Nearby Uses

The following discussion pertains to the existing uses in the vicinity of both the MRIC site and the Mace Triangle site.

Nearby Hazardous Materials Sites

To confirm that nearby known or suspected contaminated properties would not have any negative impacts on the project site, vapor encroachment screening was conducted at the project site. The vapor encroachment screening consisted of performing a Search Distance Test to identify if any known or suspect contaminated properties are surrounding or upgradient of the project site within a specific search radii, and a Chemicals of Concern (COC) Test (for those known or suspect contaminated properties identified within the Search Distance Test) in order to evaluate whether or not COC are likely to be present. Based on the completion of the vapor encroachment screening, vapor encroachment conditions do not or are not likely to exist at the project site.

UPRR

The City of Benicia released a Draft EIR for the Valero Benicia Crude by Rail Project (Valero Project), dated June 2014.¹⁰ The Valero Project proposes daily shipments of 70,000 barrels of crude oil originating at unidentified sites in North America that would be shipped to and assembled at the UPRR Roseville Yard into two daily 50-car trains to

¹⁰ Environmental Science Associates. *Valero Benicia Crude By Rail Project Draft Environmental Impact Report, SCH # 2013052074, Use Permit Application 12PLN-00063*. June 2014.

the Valero Benicia Refinery in Benicia. Each train would pass through the cities of Roseville, Sacramento, Davis, Dixon, Vacaville, Fairfield, Suisun City, and Benicia. Due to the comments submitted on the Draft EIR, including a letter from the City of Davis, the City of Benicia has determined that sections of the Draft EIR need to be updated and recirculated. The anticipated release of the Recirculated Draft EIR for public comment is June 30, 2015.¹¹

Within the City of Davis, the shipments would travel along the UPRR line, of which three active sidings exist that run parallel to 2nd Street and I-80. The primary concerns presented in the comments submitted by the City of Davis on the Valero Project are associated with the Valero Project using a portion of the UPRR line that travels through the downtown core of the City, where a curve in the tracks exists. The City is concerned not only about the potential hazardous materials being transported through such a populated area of the City, but also about how the train operators intend to negotiate the existing curve in the rail line (with a 30-mile-per-hour speed limit) and potentially utilize a 10-mile-per-hour crossover immediately east of the curve in either direction. Concerns are also brought forth regarding navigation over the Richards undercrossing, a private crossing at Arboretum Drive, where accidents have occurred in the past. The City's main areas of concern are located more than 2.3 miles west of the proposed project site.

The portion of the UPRR line that runs parallel to I-80 within the project site vicinity is located approximately 66 feet from the southern border of the Mace Triangle site, and 106 feet from the southeastern border of the MRIC site. While conceptual building locations have not been identified for the Mace Triangle site due to the fact that no new or expanded development is proposed at this time, this EIR recognizes the possibility for future development on the Mace Triangle site. Any future development would require subsequent final planned development discretionary approvals by the City and Site Plan review. With respect to the MRIC site, the nearest buildings are located approximately 256 feet from the tracks, due to the intervening CR 32A and proposed green space setback/buffer.

The potential for crude oil train incidents is not anticipated to be an issue for this portion of the UPRR tracks due to the fact that the tracks alongside the Mace Triangle site are straight and are not located in close proximity to any upcoming curves. The tracks are also relatively flat, with little to no change in elevation, such that if a train carrying crude oil was stopped along this portion of the tracks, it would not be subject to gaining momentum should the brakes not be applied properly (i.e., a case of human error). An at-grade crossing is located east of the City limits at CR 32A/CR 105, which is over half a mile east of the proposed project site. The crossing has the appropriate signage and gate device to ensure adequate safety at the crossing. In the unlikely event of a train accident at this at-grade crossing, neither the MRIC site, nor the Mace Triangle site, would be

¹¹ City of Benicia. *Valero Crude Oil by Rail*. Available at: http://www.ci.benicia.ca.us/index.asp?Type=B_BASIC&SEC={FDE9A332-542E-44C1-BBD0-A94C288675FD}).

expected to be impacted given the distance of these portions of the overall project site from the at-grade crossing. In addition, according to the Rail Risk and Response online mapping tool available by the California OES,¹² the City of Davis, or the proposed project site, is not within any mapped high hazards areas associated with oil by rail. Accordingly, upset or accident conditions involving the Valero Project's trains would not be expected to affect the proposed project site.

Therefore, the proposed project would not be subject to a significant hazard associated with any upset and accident conditions involving the release of hazardous materials into the environment associated with existing nearby uses, and impacts would be considered less than significant.

Soil Contamination

Potential upset or accident conditions involving the release of hazardous materials into the environment associated with soil contamination are discussed for the MRIC site and the Mace Triangle site separately below.

MRIC

The MRIC site is currently and has historically been used for agricultural operations. Agricultural operations generally involve the use of pesticides and/or herbicides, as well as diesel-fueled farming equipment. Significant pesticide contamination to cropland is commonly associated with inorganic pesticides, as well as large farm headquarter facilities or agricultural dusting airstrips where the storage and repeated mixing of chemicals and the rinsing of application equipment have occurred. The MRIC site and current operations would not be considered a large farming headquarter facility and is not an agricultural dusting airstrip. Nonetheless, the potential exists for the presence of persistent pesticide residues due to application during historical agricultural activities on-site. Therefore, a Surface Soil Investigation Report was prepared by WKA for the MRIC site, which included evaluation of surface soil within the MRIC site, detention basin, and canal for concentrations of organochlorine pesticides (OCPs), total arsenic, and total lead that would pose a threat to human health under a commercial land use exposure scenario.

A total of 34 soil samples were collected by WKA for the characterization of the presence of OCPs in the soil. According to the laboratory analysis results, OCP was not present in any soil samples at concentration exceeding reporting limits. Thus, OCP concentrations in the on-site soils would not pose a risk to human health. WKA also collected 13 soil samples to characterize the presence of total arsenic and lead in the soil. The maximum concentration of arsenic detected in the on-site soils was below the applicable threshold (12 mg/kg) for a sensitive land use. In addition, the associated increase in cancer risk associated with the maximum concentration of arsenic at the site

¹² California Office of Emergency Services. *Interactive Tool: Rail Risk & Response Map*. Available at: <http://www.caloes.ca.gov/HazardousMaterials/Pages/Oil-By-Rail.aspx>. Accessed March 2015.

was calculated to be within the Cal-EPA typical range of acceptable exposure levels. Lead concentrations at the MRIC site range from 5.4 mg/kg to 7.4 mg/kg, which is below the 80 mg/kg threshold for residential exposure and the 320 mg/kg threshold for commercial exposure.

Based on the results of the Surface Soil Investigation Report, the on-site soils would not 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.

Off-Site Sewer Alignment Options

The two off-site sewer pipe alignments are located within agricultural areas immediately north and east of the MRIC site. These adjacent sites have undergone agricultural practices similar to those historically occurring on the MRIC site. Therefore, any contaminant concentrations that may be found within sewer pipe alignment soils would be expected to be similar to the levels detected in the MRIC site soils, all of which were found to be acceptable.

Mace Triangle Site

Only the easternmost parcel of the Mace Triangle site is currently in agricultural production. However, given the agricultural history of the easternmost parcel, persistent pesticides may be present in the Mace Triangle site soils, which could result in adverse effects to construction workers. Therefore, prior to future development of the Mace Triangle, soil sampling shall be completed by the Phase I ESA.

Conclusion

In summary, the proposed project would not create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials related to nearby uses or potential soil contamination. As stated on page 4.8-13 of this section, the applicant intends to install a new well for landscape irrigation. Therefore, it is assumed that the existing wells would be removed.

Impacts related to a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials associated with wells would not occur related to the Mace Triangle site. However, without soil sampling to determine whether or not contaminated soils exist on the Mace Triangle site, future development of the Mace Triangle could create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. In addition, without proper abandonment of the existing wells on the MRIC site, the proposed project could create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials related to the wells. With implementation of the mitigation measures below, impacts related to on-site wells and canals would be *less than significant*.

Mitigation Measure(s)

MRIC

- 4.8-2(a) *Prior to any ground disturbance activities within 50 feet of a well on the project site, the applicant shall hire a licensed well contractor to obtain a well abandonment permit for any wells not anticipated to be used from the Yolo County Environmental Health Services Department, and properly abandon the on-site wells, pursuant to review and approval by the City Engineer and the Yolo County Environmental Health Services Department.*
- 4.8-2(b) *If any debris is encountered within the former canal on APN 033-630-009 during construction activities, as shown on the construction plans for the MRIC site, the contractor shall contact the project applicant, who shall retain the services of a qualified environmental hazard firm, to evaluate the debris to determine whether it poses any environmental contamination risks. A written evaluation shall be submitted to the City of Davis Department of Community Development and Sustainability. If the debris is trash or other non-hazardous material, then the contractor shall dispose of the debris and no further mitigation shall be required. If the debris is associated with signs of soil staining or odors indicative of hazardous materials, the environmental hazard firm shall conduct additional evaluation, including but not necessarily limited to soil sampling. If soil samples detect concentrations of hazardous materials above applicable Regional Screening Levels (RSL), then the soils shall be remediated and disposed of at a landfill licensed to accept hazardous waste. If constituent concentrations are below RSLs, then no further mitigation shall be necessary.*

Mace Triangle

- 4.8-2(c) *In conjunction with submittal of a final planned development and/or tentative map for any parcel in the Mace Triangle, the applicant shall submit a Phase I Environmental Site Assessment for that parcel, which shall evaluate on-site conditions, including but not limited to the presence of any wells, evidence of soil staining, or odors indicative of hazardous substances.*

In addition, due to the past agricultural operations on the easternmost parcel, a soil sampling program shall be implemented to assess potential agrichemical impacts to surface soil within the easternmost parcel, as follows:

A soil sampling and analysis workplan shall be submitted for approval to Yolo County Environmental Health Department. The sampling and analysis plan will meet the requirements of the Department of Toxic Substances Control Interim Guidance for Sampling Agricultural Properties (2008).

If the sampling results indicate the presence of agrichemicals that exceed commercial screening levels, a removal action workplan shall be prepared in coordination with Yolo County Environmental Health Department. The removal action workplan shall include a detailed engineering plan for conducting the removal action, a description of the onsite contamination, the goals to be achieved by the removal action, and any alternative removal options that were considered and rejected and the basis for that rejection. A no further action letter will be issued by County Health for the proposed commercial development upon completion of the removal action. The removal action shall be deemed complete when the confirmation samples exhibit concentrations below the commercial screening levels, which will be established by the agencies.

If any stained soil or odor-impacted areas are encountered during the Phase I ESA, then soil sampling of these areas shall be included in the above soil sampling workplan, and depending upon the sampling results, included in the removal action workplan as well.

4.8-3 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Based on the analysis below, the impact is *less than significant*.

According to the City's General Plan, the City of Davis Multi-Hazard Functional Planning Guide states that all major roads are available for emergency evacuation routes in the event of a disaster, depending on the location and type of emergency that arises. Major roads identified for evacuation include Russell Boulevard, SR 113, I-80, Richards Boulevard, CR 102/Pole Line Road, Mace Boulevard southbound, CR 32A, Covell Boulevard/CR 31, "F" Street/CR 101A, and North Sycamore Frontage Road.

The proposed project does not involve any operations or changes to the existing roadway network that would impair implementation or physically interfere with the City's Multi-Hazard Functional Planning Guide or the County's Emergency Operations Plan or MHMP. Construction activities affecting any of the identified evacuation routes will be both temporary and subject to traffic controls. Therefore, overall, the proposed project would have a ***less-than-significant*** impact related to emergency response or emergency evacuation plans.

Mitigation Measure(s)

None required.

4.8-4 Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. Based on the analysis below, the impact is less than significant.

As noted previously, the project site is bounded to the north and east by agricultural land. Mace Boulevard followed by an Arco gasoline station, University Covenant Church, and vacant land are located to the west of the site. CR 32A is located immediately south of the MRIC Site. The Mace Triangle Site contains Ikedas Market, a City-owned water tank and Park-and-Ride lot, and agricultural uses. The agricultural uses to the north and east of the MRIC Site would continue after project development is complete. During certain portions of the year, the fields could contain dry grasses/hay that may pose a risk with respect to ignition of dry vegetation. The proposed innovation center buildings would be set back from adjacent agricultural land, which would help minimize threats from wildland fires.

According to the County's MHMP, fire is of concern to the County, not only for destructive tendencies, but also because of the potentially dangerous smoke produced. Fires could occur as a result of system failure (downed power lines), human action (arson), natural occurrence (lightning strike), and accidental occurrence (i.e. hazardous materials, motor vehicle accident, industrial explosion, etc.). During the fire season, generally July through September, Yolo County and its municipalities are called upon to fight a large number of vegetation fires, especially along the major highways and railways that are interspersed throughout the County. The interface of residential and business development near highways that have dry, un-mowed vegetation along medians and shoulders are especially vulnerable.

To quantify the potential risk from wildland fires, the California Department of Forestry (Cal Fire) has developed a Fire Hazard Severity Scale which uses three criteria in order to evaluate and designate potential fire hazards in wildland areas. The criteria are fuel loading (vegetation), fire weather (winds, temperatures, humidity levels, and fuel moisture contents) and topography (degree of slope). According to Cal Fire maps for Yolo County, the City of Davis, including the project site, is not within a state or local fire hazard severity zone.^{13,14} Therefore, implementation of the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, and impacts would be *less than significant*.

Mitigation Measure(s)

None required.

¹³ CAL FIRE. Yolo County FHSZ Map, State Responsibility Area (SRA). Adopted November 2007.

¹⁴ CAL FIRE. Yolo County FHSZ Map, Local Responsibility Area (LRA). Adopted June 2008.

4.8-5 Conflict, or create an inconsistency, with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigating environmental effects related to hazards and hazardous materials. Based on the analysis below, the impact is *less than significant*.

Table 4.8-1 lists the applicable City of Davis General Plan policies related to hazards and hazardous materials and includes a discussion of the proposed project's consistency with the policies. As demonstrated in the table, the project is consistent with the relevant policies of the City of Davis General Plan. Accordingly, the proposed project would not conflict, or create an inconsistency, with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigation environmental effects related to hazards and hazardous materials, and impacts would be *less than significant*.

Mitigation Measure(s)

None required.

Table 4.8-1 City of Davis Policy Discussion	
Policy	Project Consistency
Chapter 19, Hazards, of the Davis General Plan	
Policy HAZ 3.1 Provide for disaster planning.	As discussed above, the proposed project would not impair implementation or physically interfere with the City’s Multi-Hazard Functional Planning Guide or any other disaster planning efforts.
Policy HAZ 4.1 Reduce and manage toxics within the planning area.	<p>Any future on-site uses involving the handling, storage, or treatment, in any fashion, of hazardous materials, as defined in Section 40.01.010 of the City of Davis Municipal Code would be required to comply with all applicable federal, State, and local hazards regulations. Compliance with such would ensure that any toxics are adequately handled and managed.</p> <p>In addition, as noted previously, businesses that may involve use and/or storage of hazardous materials are reviewed by the Davis Fire Department. If a prospective business submits a business license application to locate within an innovation center building with existing tenant space, the Fire Department would review the proposed business license application to determine which chemicals would be used during business operations, as well as where the applicant intends to store any hazardous materials. The California Fire Code would serve as the regulatory mechanism by which the Fire Department would review the business license application, and any tenant improvements, to determine whether all aspects of hazardous materials use and storage would comply with Fire Code requirements. Prior to issuance of a certificate of occupancy for a prospective business, the Fire Department would conduct an on-site inspection to verify whether the proposed on-site fire suppression system, and materials storage and use areas, comply with Fire Code regulations.</p>
Policy HAZ 4.2 Provide for the proper disposal of hazardous materials in Davis.	Any hazardous materials associated with project operations would be required to be disposed of in accordance with all applicable federal, State, and local regulations. Specifically, the USEPA regulates the disposal of hazardous waste through RCRA and CERCLA. In addition, the State regulates hazardous materials and the management of hazardous waste

(Continued on next page)

**Table 4.8-1
City of Davis Policy Discussion**

Policy	Project Consistency
	<p>through the following State laws:</p> <ul style="list-style-type: none"> • Public Safety/Fire Regulations/Building Codes; • Hazardous Waste Control Law; • Hazardous Substances Information and Training Act; • Air Toxics Hot Spots and Emissions Inventory Law; • Underground Storage of Hazardous Substances Act; and • Porter-Cologne Water Quality Control Act.
Policy HAZ 4.3 Reduce the potential for pesticide exposure for people, wildlife, and the environment.	Surface soil testing was conducted for soils on the MRIC site to determine the extent of contaminated soil associated with potential pesticides related to historical agricultural uses on the site. According to the results of soils testing, the concentrations of contaminants of concern were below applicable screening levels. In addition, Mitigation Measure 4.8-2(c) requires the completion of a Phase I ESA prior to future development of the Mace Triangle site. As part of the Phase I ESA, soil sampling and an analysis workplan would be required for the Mace Triangle Site. If the sampling results indicate the presence of agrichemicals that exceed commercial screening levels, a removal action workplan would be prepared for the Mace Triangle site in coordination with Yolo County Environmental Health Department. Thus, the proposed project site would not expose people, wildlife, or the environment to pesticides, and a finding of substantial compliance with this policy can be made.
Policy HAZ 4.5 Minimize impacts of hazardous materials on wildlife inhabiting or visiting the Davis area.	As discussed above, all project-specific impacts related to hazards and hazardous materials would be reduced to less-than-significant levels with incorporation of mitigation measures. Any urban pollutants generated on-site, which become entrained in stormwater runoff leaving the site, would be treated in the on-site drainage system prior to leaving the site. This would ensure that any hazardous materials do not enter off-site areas where habitat might exist. Therefore, impacts of hazardous materials on wildlife in the area would not occur with the proposed project, and a finding of substantial compliance with this policy can be made.

(Continued on next page)

**Table 4.8-1
City of Davis Policy Discussion**

Policy	Project Consistency
Policy HAZ 5.1 Reduce the combined load of pollutants generated in the City's wastewater, stormwater, and solid waste streams. Such pollutants include, but are not limited to toxic and hazardous substances.	Any hazardous materials associated with project operations would be required to be disposed of in accordance with all applicable federal, State, and local regulations. See discussion for Policy HAZ 4.5.