

3.7 Hazards and Hazardous Materials

This section provides an overview of the presence of hazardous materials near the Project site, the potential for impacts during construction activities for future development, and the regulatory setting applicable to environmental protection and health and safety. Issues related to public health and safety includes the use and storage of hazardous materials and disposal of hazardous wastes. Additionally, this section identifies potential impacts related to wildland fire and aviation hazards. A description of existing aviation operations at Nut Tree Airport is included in Chapter 2, “Project Description.” A discussion of land use regulations applicable to the Airport is included in Section 3.9 “Land Use.”

As used in the EIR, the term “hazardous materials” refers to both hazardous substances and hazardous wastes. Factors that influence the health effects of exposure to hazardous material include the dose to which the person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility.

The California Code of Regulations (CCR) defines a hazardous material as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either: (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10). Hazardous wastes are hazardous materials that no longer have practical use, such as substances that have been discarded, discharged, spilled, contaminated, or are being stored prior to proper disposal. Hazardous materials and hazardous wastes are classified according to four properties: toxicity, ignitability, corrosivity, and reactivity (CCR, Title 22, Chapter 11, and Article 3). In some cases, past site activities could have resulted in spills or leaks of hazardous materials to the ground, resulting in soil and/or groundwater contamination.

3.7.1 Environmental Setting

Historical Land Use

The Project site is predominately located on Nut Tree Airport, with various parcels of land within the City of Vacaville’s jurisdiction also proposed for acquisition. The overall Project site is part of an area that has been historically known as Nut Tree Ranch. Dating back to 1855, Nut Tree Ranch has been used for a variety of agricultural and commercial purposes. In 1952, a narrow gage tourist railroad was added to take visitors through the Nut Tree’s orchards. In 1955 the Nut Tree Airport was constructed. The airport was situated adjacent to the north side of Nut Tree, and the railroad was extended to bring flyers from the new airport to the Nut Tree complex of shops and restaurants. Over the years the runway was lengthened and support facilities and services added for flyers. In 1970, the airport was donated to Solano County.

Present-day surrounding land uses include a mix of commercial and light industrial complexes. To the southeast of the Airport is the Nut Tree Plaza, which includes a variety of restaurants and

shops. A Lowe's store is also located immediately east of the Airport. A variety of light industrial facilities are located further to the northeast of the Nut Tree Plaza, with a mix of warehouses, equipment rental centers, and miscellaneous distribution centers wrapping around the Airport property to the northeast, north, and northwest. Land to the west of the Airport is predominately open space that is bisected by the Putah South Canal. Centennial Park, which includes a variety of soccer fields, baseball fields, and tennis courts, is located to the southwest of the Airport.

Environmental Records Review

ESA conducted a search of available environmental records provided by Environmental Data Resources, Inc (EDR). This search was conducted in order to identify potentially hazardous conditions at the project site. The database search was conducted within a one-mile radius to identify sites within a number of regulatory agency databases. It should be noted that potential sites of past historic hazardous materials usage, storage, and/or contamination might have occurred prior to the activation of agency maintained databases. In addition to the Project site, the records search results found that three other sites are listed within a one-mile radius. The identified sites, including the Project site, were listed on a number of databases. **Table 3.7-1** identifies and describes the regulatory databases within which the Proposed Project site was listed.

**TABLE 3.7-1
REGULATORY AGENCY DATABASES**

Database	Type of Record	Agency
ON-SITE		
CA FID UST	Facility Inventory Database (FID). The FID contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board.	California EPA
NPDES	National Pollutant Discharge Elimination System. A listing of NPDES permits, including storm water.	State Water Resources Control Board
HAZNET	Facilities that generate hazardous waste.	California EPA
FINDS	Facility Index System. Facility information and "pointers" to other sources that contain more detail.	U.S. EPA
RCRA-SQG	Small Quantity Generators (SQG). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). SQGs generate between 100 kg and 1,000 kg of hazardous waste per month.	EPA
EMI	Emissions Inventory Data	California Air Resources Board
CHMIRS	California Hazardous Material Incident Report System Reported hazardous material incidents	Office of Emergency Services
UST	Active Underground Storage Tank (UST) facilities gathered from the local regulatory agencies.	State Water Resources Control Board/ County
SWEEPS UST	Statewide Environmental Evaluation and Planning System	State Water Resources Control Board
WDS	Waste Discharge System	State Water Resources Control Board

**TABLE 3.7-1
REGULATORY AGENCY DATABASES**

Database	Type of Record	Agency
OFF-SITE		
NPDES	National Pollutant Discharge Elimination System. A listing of NPDES permits, including storm water.	State Water Resources Control Board
UST	Active Underground Storage Tank (UST) facilities gathered from the local regulatory agencies.	State Water Resources Control Board/ County
HAZNET	Facilities that generate hazardous waste.	California EPA
SWEEPS UST	Statewide Environmental Evaluation and Planning System	State Water Resources Control Board
HIST UST	Hazardous Substance Storage Container Database	State Water Resources Control Board
Notify 65	Reported releases that could impact drinking water.	State Water Resources Control Board
RCRA-LQG	RCRA - Large Quantity Generators. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.	U.S. EPA
ENVIROSTOR	Database that identifies known contamination or sites for which there may be reasons to investigate.	Department of Toxic Substances Control

SOURCE: EDR, 2012.

In addition to the records search described above, a review to determine if Nut Tree Airport is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 was conducted. Specifically, the California Department of Toxic Substance Control's (DTSC's) Hazardous Waste and Substances Sites (Cortese) List was searched. The Cortese list accesses a variety of data sources, including:

- A list of Hazardous Waste and Substances sites from DTSC's EnviroStor database;
- A list of Leaking Underground Storage Tank Sites by County and Fiscal Year from the Water Board's GeoTracker database;
- A list of solid waste disposal sites identified by the Water Board with waste constituents above hazardous waste levels outside the waste management unit; and
- A list of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

The Proposed Project site did not appear in any of these databases (CAEPA, 2012).

Airport Hazardous Materials

An airport generally contains a variety of hazardous materials, including oils, degreasers, solvents, batteries, hydraulic fluids, lubricants, and thinners. As a small, general aviation airport, with only one Fixed Based Operator (FBO), Nut Tree Airport does not store large quantities of these types of materials.

Fuel Storage Facility

The Airport's fuel storage facility, which is owned and operated by Solano County, is located on the southeast side of the aircraft parking apron. Currently, aviation fuels are stored in two underground storage tanks: one 10,000-gallon 100LL AvGas tank and one 10,000-gallon Jet-A tank. AvGas is delivered by a 500-gallon truck, and Jet-A fuel is delivered by a 3,000-gallon truck. Solano County is responsible for maintaining the storage tanks to current Environmental Protection Agency (EPA) standards.

Asbestos-Containing Materials

Asbestos is a naturally occurring mineral that can be hazardous to human health if it becomes airborne. Due to their small size, asbestos particles are easily inhaled. Inhaled fibers can become lodged in the lung or go to other parts of the body. Asbestos fibers can cause local inflammation and disrupt cell division in the lungs. Some of the diseases associated with asbestos exposure include lung cancer, mesothelioma, and asbestosis.

Existing structures on Nut Tree Airport property primarily consist of box hangars, T-hangars, and an airport administration building. The majority of box hangars was built between 1985 and 1995, and is therefore unlikely to have been constructed with asbestos-containing materials (ACMs). Similarly, the airport administration building and the northern-most T-hangars were built in 1995, and would not have been constructed with ACMs. However, the southernmost T-hangars (closest to County Airport Road) were built between 1974 and 1979, and therefore may have been constructed with ACMs. An asbestos survey has not been conducted for these facilities.

Lead-Based Paint

Human exposure to lead has been determined to be an adverse health risk. Sources of exposure to lead include dust, soils and paint. As described in the discussion above, three T-hangars on Airport property were constructed during between 1974 and 1979. Given construction practices during this period, it is possible that these structures may contain lead-based paint; however, a formal survey for lead-based paint has not been conducted at these buildings.

Potential Receptors

The sensitivity of potential receptors in the areas of known or potential hazardous materials contamination is dependent on several factors, the primary factor being an individual's potential pathways for exposure. The airport employees and employees of other companies based at Nut Tree Airport would have the greatest potential for exposure to groundwater and/or soil contamination.

The closest sensitive receptors to the Proposed Project site are residential properties located approximately 1,900 feet west from the Airport property boundary to their closest point. A place of worship is located approximately 2,200 feet west of the airport. Sensitive receptors are also located southwest of the Airport, approximately 2,500 feet southwest from the Airport property boundary off the approach end to Runway 02. There is also an elementary school (Edwin Markham Elementary School) located approximately 2,800 feet southwest of the airport boundary. Also to the southwest

of the Airport are recreational fields associated with Centennial Park that lie between the approach end of Runway 02 and the residential properties to the southwest.

Wildland Fires

Wildland fire safety has become an increasingly significant hazard concern in California as increased development occurs in the foothills and mountain areas, and subsequent fire control measures have affected the natural cycle of the ecosystem. Suppression of natural fires allows the understory to become dense, creating the potential for larger and more intense wildland fires. Climate and landscape characteristics are among the most important factors influencing hazard levels. Weather characteristics such as wind, temperature, humidity and fuel moisture content affect the potential for fire. Of these four, wind is the dominant factor in spreading fire since burning embers can easily be carried with the wind to adjacent exposed areas, starting additional fires. Landscape characteristics such as steep slopes also contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Human activities such as smoking, debris burning, and equipment operation are the major causes of wildland fires.

According to the California Department of Forestry and Fire Protection (CDF) Fire and Resource Assessment Program (FRAP) fire threat data, fire threat is a combination of two factors: 1) fire frequency, or the likelihood of a given area burning, and 2) potential fire behavior (hazard). These two factors are combined to create the following threat classes:

- Little or No Threat or No Surface Fuels
- Moderate
- High
- Very High
- Extreme

A range of wildland fire hazards are found throughout Solano County. According to the *Solano County General Plan*, the Project site is characterized by a moderate threat of wildland fire. Similarly, areas immediately west, north, and east of the site are also characterized by a moderate threat of wildland fire, while areas south of the Airport are considered to have a low threat of wildland fire (Solano County, 2008).

3.7.2 Regulatory Setting

Hazardous materials and health and safety are subject to numerous laws and regulations at federal, State, and local levels of government.

Federal and State

Hazardous Materials and Waste Handling

The federal Resource Conservation and Recovery Act of 1976 (RCRA) established a “cradle-to-grave” regulatory program for governing the generation, transportation, treatment, storage, and disposal of hazardous waste. Under RCRA, individual states may implement their own hazardous waste programs in lieu of RCRA as long as the state program is at least as stringent as federal RCRA requirements. In California, the Department of Toxic Substance Control (DTSC) regulates the generation, transportation, treatment, storage, and disposal of hazardous material waste. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

Hazardous Materials Transportation

The U.S. Department of Transportation regulates hazardous materials transportation on all interstate roads. Within California, the state agencies with primary responsibility for enforcing federal and state regulations and for responding to transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). Together, federal and state agencies determine driver training requirements, load labeling procedures, and container specifications. Although special requirements apply to transporting hazardous materials, requirements for transporting hazardous waste are more stringent, and hazardous waste haulers must be licensed to transport hazardous waste on public roads.

Worker Safety

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the work place. The California Division of Occupational Safety and Health (Cal-OSHA) and the federal Occupational Safety and Health Administration are the agencies responsible for assuring worker safety in the workplace.

Cal-OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices. At known contaminated sites, a site safety plan must be prepared to protect workers. The site safety plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

Local

Solano County

The following policies from the *Solano County General Plan* Public Health and Safety Element are applicable to the Proposed Project:

Policy HS.P-20. Require that structures be built in fire defensible spaces and minimize the construction of public facilities in areas of high or very high wildfire risk.

Policy HS.P-21. Prohibit non-farm-related development and road construction for public use in areas of extreme wildfire risk.

Policy HS.P-26. Minimize the risks associated with transporting, storing, and using hazardous materials through methods that include careful land use planning and coordination with appropriate federal, state, or County agencies.

Policy HS.P-28. Encourage the use of programs and products by businesses that will result in a reduction of hazardous waste and materials.

Solano County Department of Resource Management, Environmental Health Services Division

The Solano County Department of Resource Management, Environmental Health Services Division is the Certified Unified Program Agency (CUPA) for all cities and unincorporated areas within the county. The CUPA program was created to consolidate and make consistent the various environmental and emergency response regulations applicable within a jurisdiction to minimize the number of inspections and fees businesses must comply with. The Solano County CUPA:

- Conducts the permitting and inspection of businesses that handle certain quantities of hazardous materials/waste;
- Inspects businesses for compliance with the Hazardous Waste Control Act, in conjunction with the Hazardous Materials Business Plan Program;
- Responds to complaints of illegal disposal of hazardous waste; and
- Addresses emergency response to incidents involving hazardous materials through the Hazardous Materials Management Plans.

3.7.3 Analysis, Impacts, and Mitigation

Significance Criteria

For the purposes of this EIR, implementation of the Project would be considered to result in significant hazardous impacts if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site that 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 the environment;

- Be 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, would the project result in a safety hazard for people residing or working in the project area;
- Be located within the vicinity of a private airstrip and 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; or
- Expose people or structures to a significant risk of loss or injury involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Methodology and Assumptions

This impact analysis focused on a variety of hazards (i.e., use of hazardous materials, airport safety hazards, etc.) or hazardous conditions associated with existing conditions and the construction and operation of the Proposed Project. The evaluation was made in light of the Proposed Project, applicable regulations and guidelines, and the preliminary regulatory agency database findings. This assessment was limited to a qualitative evaluation of environmental concerns associated with the potential presence of hazardous conditions at and near the Project site. This analysis did not include any sampling, site specific review, laboratory analysis, or inspection of the Project site. A search of available environmental records was conducted to see if the project site, or any surrounding uses, has been listed in any regulatory databases for hazardous materials (see **Appendix I**).

Impacts and Mitigation Measures

Impact 3.7-1: Could the Proposed Project create a significant hazard to the public or the environment from the transportation, use, or disposal of hazardous materials? (*Less Than Significant*)

Phase I Projects

Construction

Phase I of the Proposed Project would include the construction of a variety of runway and taxiway system improvements; including the translation of Runway 2/20 by 200 feet to the northeast (on the Runway 20 end), removal and construction of existing and new exit taxiways on each end of the runway; rehabilitation of the pavement on segments of Taxiway A and G, the installation of new Precision Approach Path Indicators (PAPIs) at the end of Runway 02, construction of a new taxiway at the end of Runway 20, and replacing existing lights on the runway and taxiways. The runway safety area (RSA) for Runway 20 will also be “stabilized”, which will involve grading and re-seeding a 240-foot by 250-foot area at the end of Runway 20. Additionally, light poles and fencing currently located within the object free area (OFA) east of the runway will be relocated, as will the Automated Surface Observing System/Automated Weather Observing System (ASOS/AWOS). Landside development in Phase I of the Proposed Project will include the construction of solarized shade hangars on the existing aircraft parking apron; construction of a 221,000 sf apron south of the existing one; construction of a 100,000 sf corporate hangar; and

replacement of existing apron lighting and the installation of a new rotating beacon. In addition to these airport-related projects, the Proposed Project includes the development of several non-aviation commercial and light industrial uses on several different areas totaling approximately 9.5 acres. Lastly, Phase I also includes the improvements of existing box and T-hangars located north of the administration building.

Hazardous materials would be used in varying quantities during Project construction. Construction, operation and maintenance activities would store and use hazardous materials such as fuels, oils and lubricants, paints and paint thinners, batteries, heavy metals and cleaners (which could include solvents and corrosives in addition to soaps and detergents). Construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities, transportation accidents, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in adverse health effects. Solano County, contractors, and others would be required to use, store, and transport hazardous materials in compliance with standards set forth by the RCRA, Cal-OSHA, the Solano County Department of Resource Management, Environmental Health Services Division, and the *Solano County General Plan* during Proposed Project construction and operation. Adherence to these required standards would offset potential effects associated with exposure to hazardous materials; therefore, potential impacts associated with the transportation, use, or disposal of hazardous materials during the construction of Phase I projects is considered less than significant.

As described previously, the Phase I of the Proposed Project would also include the renovation of existing Airport facilities; including three rows of T-hangars that were constructed in a period between 1974 and 1979. Given their age, it is likely that ACMs were used in their construction. Should contractors encounter these types of materials during the renovation process, Solano County would be required to comply with regulatory standards enforced by the Yolo-Solano Air Quality Management District (YSAQMD); including Rules 9.9 and 4.3. Rule 9.9, "Asbestos," is applicable to all renovations and demolitions within the YSAQMD and sets forth specific work standards and practices designed to limit the emissions of asbestos to the atmosphere. Such practices may include, but are not limited to, site surveys, wetting of regulated ACMs, and physical barriers. Furthermore, consistent with YSAQMD's Rule 4.3, Solano County would be required to pay a fee for each demolition/renovation submitted to YSAQMD. Adherence to these rules and other applicable standards set forth by RCRA, Cal-OSHA, and the Solano County Department of Resource Management, Environmental Health Services Division will ensure that potential hazardous impacts associated with the renovation of asbestos-containing structures would remain less than significant.

In summary, potential impacts associated with the use, transport, or disposal of hazardous materials during construction of Phase I projects are considered to be less than significant.

Operation

Operation of Phase I projects would include the use of the proposed 100,000 sf hangar, as well as the proposed non-aviation facilities. Operation of the proposed hangar would likely result in the

use of a variety of hazardous materials; including degreasers, solvents, batteries, hydraulic fluids, lubricants, and thinners. With respect to proposed non-aviation uses, the types and quantities of hazardous materials typically associated with commercial and light industrial uses are assumed to be applicable to the Proposed Project. In conformance with *Solano County General Plan* policy HS.P-26, the County will be responsible for ensuring that all hazardous materials are stored, treated, and disposed of in accordance with state and federal law by coordinating with applicable regulatory agencies; including seeking appropriate permitting for the storage of hazardous materials of a certain quantity from the Solano County Department of Resource Management, Environmental Health Services Division, and the approval of an updated Storm Water Pollution Prevention Plan (SWPPP) by the Central Valley Regional Water Quality Control Board (CVRWQCB). Given the measures identified above, any potential hazard to the public or the environment from the transportation, use, or disposal of hazardous materials associated with operation of these proposed facilities is considered less than significant.

In addition to the operation of the facilities identified above, the Proposed Project would result in an increase of aircraft operations. Fueling for these aircraft would be accommodated by two existing underground fuel storage tanks: one 10,000-gallon 100LL AvGas tank and one 10,000-gallon Jet-A tank. Under Phase I of the Proposed Project, no expansion of the existing fuel tanks is needed; therefore, additional permitting for these facilities is not required. Therefore, increased aircraft operations associated with Phase I of the Proposed Project would have no impacts related to the use or transportation of hazardous materials.

In summary, impacts associated with the use, transport, and disposal of hazardous materials related to the operation of the Proposed Project, including the use of new aviation-related and non-aviation related facilities, as well as an increase of aircraft operations, would be less than significant.

Project Build-out

Phase II of the Proposed Project includes the development of approximately 313,000 sf of hangar space, expansion of the existing multi-use arrival/departure facility, and rehabilitation of existing airfield pavement. Phase III projects includes the extension of Runway 2/20 by 600 feet, construction of approximately 116,000 sf of hangar space, rehabilitation of existing airfield pavement, and the acquisition of land adjacent to the northern and western portions of Airport property.

Similar to Phase I of the Proposed Project, construction of Phase II and III projects would make use of a variety of hazardous materials; the use and transportation of which would be regulated by the standards set forth by the RCRA, Cal-OSHA, the Solano County Department of Resource Management, Environmental Health Services Division, and the *Solano County General Plan* policies. Operation of the Proposed Project under Phases II and III would also result in the use of hazardous materials, as FBOs and aircraft operators utilizing proposed hangar facilities would likely use a variety of lubricants, degreasers, hydraulic fluids, and other materials. In conformance with *Solano County General Plan* policy HS.P-26, the County will be responsible for ensuring that all hazardous materials are stored, treated, and disposed of in accordance with state and federal law by coordinating with applicable regulatory agencies; including seeking appropriate

permitting for the storage of hazardous materials of a certain quantity from the Solano County Department of Resource Management, Environmental Health Services Division. Furthermore, improvements associated with Phases II and III of the Proposed Project would also require an update to the Airport's SWPPP pursuant to CVRWQCB standards.

Aircraft operations are also forecasted to grow, reaching a total of 127,330 by 2031. This forecasted increase, however, would not result in the need to expand existing aircraft fuel facilities beyond current conditions. Therefore, future aircraft operations would not result in impacts associated with the use or transportation of hazardous materials.

In summary, full build-out of the Proposed Project (Phases I, II, and III) would result in the use, transportation, and disposal of a variety of hazardous materials during construction and operation of the project's various elements (as identified in Chapter 2, Project Description). As described in the discussion above, use, transport, and storage of hazardous materials during the construction process is regulated via standards set forth by the RCRA, Cal-OSHA, the Solano County Department of Resource Management, Environmental Health Services Division, and the *Solano County General Plan*, while exposure to and disposal of hazardous materials (e.g., ACMs) is regulated by rules set forth by YSAQMD. Similarly, operation of all phases of the Proposed Project would be overseen by Solano County, who is responsible for ensuring that all FBOs, Airport tenants, and non-aviation tenants, use, store, and dispose of hazardous materials in compliance with all applicable, Federal, state, and local guidelines. In conclusion, potential impacts associated with the use, transport, and disposal of hazardous materials as a result of the Proposed Project are considered less than significant.

Mitigation Measures: None required.

Impact 3.7-2: Could the Proposed Project 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? (*Potentially Significant*)

Phase I Projects

Construction

Construction activities for the Proposed Project would involve ground-disturbing activities such as grading, trenching, and excavation. As described in the Environmental Setting discussion above, the Proposed Project site, while appearing in a number of regulatory agency databases as a user and generator of certain types of hazardous waste (e.g., aircraft fuel), the site was not listed on CAEPA's Cortese list as a hazardous waste and substances site. Therefore, the likelihood of encountering contaminated soils or groundwater during construction of all phases of the Proposed Project is considered to be low.

Construction during Phase I of the Proposed Project would also involve the renovation of several existing structures. In particular, three T-hangars identified for remodeling were constructed

between 1974 and 1979. Given the age of construction, there is a high potential for construction crews to encounter non-friable suspect ACMs, as well as lead-based paint. Any exposure to hazardous materials could pose a health risk to construction workers and the general public. As described in Impact 3.7-1, should contractors encounter these types of materials during the renovation process, Solano County would be required to comply with regulatory standards enforced by the YSAQMD; including Rules 9.9 and 4.3. In particular, per Rule 9.9.301 requires that, prior to renovation, Solano County must contract an EPA-approved building inspector to thoroughly survey the structures for any ACMs. Should the inspector identify the presence of ACMs within the structures, steps for removing and disposing of these materials, as outlined in YSAQMD's Rule 9.9 must be followed, and fees (per Rule 4.3) paid.

As described previously, given the age of some of the T-hangars identified for renovation, the potential for these structures to contain lead-based paint is high. Accidental disturbance of these materials could result in a potentially significant hazard to both construction workers and the public. Therefore, implementation of Mitigation Measure 3.7-1, which would require a Phase I environmental site assessment be conducted prior to the start of construction, is required. A Phase I environmental site assessment will determine the presence of lead-based paint, and, if discovered, recommend appropriate actions for the safe removal of these materials. By following this measure, potential hazardous impacts to workers and the public related to the disturbance of materials containing lead-based paint would be mitigated to less-than-significant levels.

Adherence to these regulations and the mitigation measure described above prior to the renovation of the existing T-hangars that were constructed between 1974 and 1979 will ensure that significant impacts to the public or the environment through upset and accident conditions involving the release of hazardous materials into the environment remain less than significant.

Operation

Operation of Phase I projects will primarily consist of the use of the proposed 100,000 sf south corporate hangar, use of the proposed apron expansion for aircraft parking, and the forecasted increase in general aviation aircraft operations. Use of airport-related facilities would be regulated by Solano County Code, particularly Chapter 2.4, Airports and Aircraft, which governs business practices and aircraft operations at Nut Tree Airport. Furthermore, the operation of general aviation aircraft on Airport property, both currently and forecasted, shall be done so according to safety regulations set forth by the Federal Aviation Administration (FAA), including but not limited to Advisory Circular (AC) 91-73A: *Part 91 and Part 135, Single-Pilot Procedures During Taxi Operations*. Operation of all non-aviation facilities would also be required to follow all applicable state and local regulations for the handling of hazardous materials. Therefore, adherence to the standards identified above during operation of the proposed facilities and aircraft would ensure that potential impacts to the public or the environment through upset and accident conditions involving the release of hazardous materials into the environment are considered less than significant.

Project Build-out

Full build-out of the Proposed Project would include the construction of additional hangars, expansion of the existing multi-use arrival/departure facility (Phase II, III), and the extension of Runway 2/20 by 600 feet (Phase III). Aircraft operations are also expected to increase during each phase, reaching a total of 127,330 by 2031. Similar to construction of Phase I projects, construction for Phase II and III projects would involve ground-disturbing activities such as grading, trenching, and excavation. Construction activities are regulated by state and local guidelines, which would require contractors and works to use, store, and transport hazardous materials in compliance with standards set forth by the RCRA, Cal-OSHA and the the Solano County Department of Resource Management, Environmental Health Services Division. Adherence to these standards will ensure that impacts associated with a potential construction-related upset and release of hazardous materials into the environment remains less than significant.

Similar to Phase I, operation of Phase II and III projects will include the use of proposed aircraft hangars by airport tenants and the operation of general aviation aircraft. Use of these facilities will be administered by Airport management, and will be subject to all applicable County regulations; including, but not limited to County Code Chapter 2.4, Airports and Aircraft. Furthermore, operation of all aircraft will be subject to applicable FAA, State, and local regulations. In summary, adherence to all applicable regulations described above, as well as implementation of Mitigation Measure 3.7-1, will ensure that construction and operation of all phases of the Proposed Project would have a less-than-significant impact related to the upset and release of hazardous materials into the environment.

Mitigation Measure

Measure 3.7-1: Lead-Based Paint Remediation. Prior to the start of constructing activities, a Phase I environmental site assessment shall be conducted to determine the presence and extent of lead-based paint. The assessment shall be in accordance with Title 17, Division 1, Chapter 8 of the California Code of Regulations. Should this assessment determine that lead-based paint is present; a lead-based paint abatement plan shall be prepared to remove all lead-based paint prior to demolition activities. A health and safety plan shall be developed by a certified industrial hygienist for potential lead-based paint present during demolition of existing structures. The health and safety plan shall then be implemented by a licensed contractor for all phases of remodeling activities.

Impact Significance after Mitigation: Implementation of the prescribed mitigation would remediate hazards from any lead-based paint identified on the Project site and minimize the impact of creating a hazard to the public or environment to a less-than-significant level.

Impact 3.7-3: Could the Proposed Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (*Less Than Significant*)

Phase I Projects and Project Build-out

Implementation of all Phases of the Proposed would include various improvements and additions to the runway and taxiway system, the construction of new aircraft storage hangars, renovation of existing T-hangars and the multi-use arrival/departure facility, the development of several non-aviation land uses, the construction of a new taxiway at the end of Runway 20, and the acquisition of several parcels of land contiguous to the existing Airport property boundary. As described in previous impact discussions in this section, construction of all phases of the Proposed Project would utilize a variety of hazardous materials, as would the operation of proposed aviation and non-aviation facilities. Airport tenants that may occupy proposed facilities shall primarily utilize hazardous materials such as lubricants, oils, and hydraulic fluids for the maintenance of aircraft, and therefore overall quantities of hazardous materials that may be stored and used on the project site as a result of the Proposed Project are anticipated to be low. Lastly, general aviation aircraft operations, which emit pollutants into the air as they taxi to-and-from the runway and during flight, are forecasted to increase.

The closest school to the Proposed Project site is the Solano County Community College, which is planned by the City of Vacaville to be located approximately .5 mile to the northeast of the Airport. An elementary school (Edwin Markham Elementary School) is also located approximately 2,800 feet (.53 mile) southwest of the airport boundary. Given the distance between the Proposed Project site and the nearest schools (both existing and planned), as well as the types uses proposed for the project site potential impacts associated with hazardous emissions or the potential release of hazardous materials are considered less than significant. (See Section 3.2, Air Quality, for a discussion of potential air quality impacts associated with the Proposed Project.)

Mitigation Measures: None required.

Impact 3.7-4: Would the Proposed Project be located on a site that 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 the environment? (*No Impact*)

Phase I Projects and Project Build-out

As described in the Environmental Setting discussion above, a review of CAEPA's databases indicated that the Proposed Project site was not listed on the Cortese list; as compiled by the DTSC pursuant to Government Code Section 65962.5. Therefore, a significant hazard to the public or the environment, caused by development on hazardous materials site, would not occur as a result of implementation of the Proposed Project. There is no impact.

Mitigation Measures: None required.

Impact 3.7-5: Would the Proposed Project be 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, would the project result in a safety hazard for people residing or working in the project area? (*Less Than Significant*)

Phase I Projects and Project Build-out

The Proposed Project is primarily located on Nut Tree Airport property; within the influence area of the *Nut Tree Airport / Land Use Compatibility Plan* (ALUCP). Development projects within the ALUCP's influence area are subject to the land use compatibility policies set forth by Solano County; the purpose of these policies is to guide development so land uses around the Airport are compatible with aircraft operations. In doing so, risks to those living and working in the vicinity of Nut Tree Airport associated with the hazard of a potential aircraft accident are reduced. The primary ALUCP policies that address hazards to people are safety and airspace protection policies.

As explained in greater detail in Section 3.9, Land Use (see Impact 3.9-2), the Proposed Project is located in several airport safety zones, as delineated in the 1988 ALUCP; including Safety Zones A, B, C, and E. While the types of land uses proposed in all phases of the Proposed Project are generally acceptable within the safety zones in which they would be located; specific details, particularly with respect to the intensity (people per acre) of proposed non-aviation uses, were not known at the time this EIR was prepared. Therefore, Mitigation Measures 3.9-1a and 1b, which would require project details be submitted to the Solano County Airport Land Use Commission (ALUC) prior to the start of construction, will ensure that all project components meet the safety requirements of the ALUCP.

Similarly, all elements of the Proposed Project must meet the height standards set forth in the ALUCP. The ALUCP's height standards are based on Federal Aviation Regulation (FAR) Part 77: *Safe, Efficient Use, and Preservation of the Navigable Airspace*. Solano County would be required to participate in FAA's 7460-1 review process in order to ensure that proposed structures would not penetrate the Airport's navigable airspace and create a hazard for both air travelers and people on the ground. Therefore, potential impacts related to height hazards within Nut Tree Airport's navigable airspace are considered less than significant.

Installation of shade hangars that include solar panels has the potential to generate glare that can affect pilots operating aircraft. Proposed solar panels would likely be photovoltaic (PV) style panels.¹ While the FAA has not established set guidance on the use of solar panels, several airports in California, including Fresno-Yosemite International Airport, Mineta San Jose Airport, and San Francisco International Airport utilize solar panels on their property. According to a 2010 study, no serious complaints were made from pilots regarding glare impacts from existing solar PV installations. This anecdotal evidence suggests that either glare is not occurring during times of operation, or if it is occurring, it is not a negative effect for pilots (HMMH, 2010, pg. 41). While impacts related to glare for the solarized shade hangars are not anticipated to be significant, the FAA will also review the installation of the solar panels as a part of the 7460-1

¹ The primary types of PV technologies applicable to airports are those associated with crystalline silicon panels (HMMH, 2010).

review process. Therefore, potential hazards to pilots operating aircraft from glare from the proposed solarized shade hangars are considered less than significant.

As previously described in this section, general aviation aircraft operations are forecasted to increase **from 101,500 under the Master Plan baseline (2011) condition, to the Proposed Project to 127,330 by 2031**, at an annual growth rate of 1.1 percent (Solano County, 2012). This growth in aircraft activity will also coincide with a 200-foot translation of Runway 2/20 to the northeast (Phase I), and a 600-foot extension of Runway 20 to the northeast (Phase III).

With respect to forecasted increases in aircraft operations, overall growth in general aviation operations over the next 20 years remain relatively marginal. **Proposed modifications to the runway would result in a runway threshold shift of 200 feet within the first five years (to address object free area issues directly adjacent to the runway) and change in length from 4,700 feet (existing) to 5,300 by 2031. The existing west side aircraft operating traffic pattern would not change as part of the project.**

Aircraft at General Aviation airports including the Nut Tree Airport normally operate from one-quarter mile to three-quarters of a mile from a runway depending on a various factors including, but not limited to, aircraft type, other aircraft, and weather conditions. Because implementation of the Proposed Project would not shift the extended runway centerline either west or east, aircraft in the traffic pattern that turn to land on Runway 20 will largely continue to remain west of I-505 along the centerline of Runway 20. The FAA published traffic pattern for the Airport is a standard left pattern for Runway 2 and a right pattern for Runway 20 keeping air traffic generally west of I-505 (FAA Airports/Facilities Directory covering the Nut Tree Airport, August 22 – October 17, 2013).

A runway threshold shift of 200 feet, and a longer-term possible 600-foot runway extension, proposed in the Master Plan may result in a slight shift in the aircraft traffic pattern north of Runway 20. An east or west shift in the existing traffic pattern is not expected to occur as a result of the project. Changes to the length of Runway 2/20 ~~at Nut Tree Airport~~ ~~or~~ and the forecasted growth in aircraft operations would not significantly alter the way in which the Airport currently operates **and not alter the overall area of operation by aircraft currently utilizing the Airport and operating in the west-side traffic pattern for the Airport. Changes in length to Runway 20 would not alter the final approach or departure alignment for Runway 20 / 2, respectively. Under current conditions, landing aircraft utilizing Runway 20 in the normal west-side traffic pattern turn from base leg (perpendicular to runway) to final leg (aligned with runway centerline) and generally remain west of I-505. The common traffic pattern and practice for aircraft departing from Runway 2 is similar in that aircraft remain west of I-505 when within the common traffic pattern, or depart straight out and turn west or east upon reaching the FAA published traffic pattern altitude of 1,117 feet mean sea level (1,000 feet above ground level).**

Runway use percentages, traffic patterns, and time of day percentages **as a result of the Proposed Project** would all remain **similar to** as they currently are in the baseline condition **and do not represent a change in normal Airport operations that would expose existing land uses to an**

increased risk of an aircraft accident occurring. Furthermore, extension of the runway does not shift Nut Tree Airport's Part 77 surfaces such that new terrain or man-made objects would penetrate the Airport's navigable airspace. As identified on Figure E2 in the Master Plan (Chapter E), only existing terrain is identified as an interference with Nut Tree Airport's navigable airspace; **otherwise, buildings currently located north of the Airport would not enter navigable airspace as a result of the proposed runway extension.** Therefore, the shift in the Part 77 surfaces associated with the proposed runway extension would not result in existing structures being considered an obstruction to aircraft in flight.

Lastly, while aircraft accidents do occur, they are a statistical rarity. According to National Transportation Safety Board (NTSB) records for the Nut Tree Airport, during the 24 year period covering January 1988 to January 2012, there were four off-airport landings without injury or fatality of persons or damage to structures or buildings. In 2010, in the United States, there were a total of 1,435 general aviation accidents, which translated to less than seven accidents for every 100,000 flying hours (NTSB, 2012).

While the Proposed Project would result in increased operations at Nut Tree Airport, forecasted growth is marginal (1.1 percent annual growth rate) and would not constitute a change in total operations such that a significant increase in the risk of an aircraft accident would occur.

Given **the marginal forecasted growth of aircraft operations and** that no **significant** changes to the traffic patterns or to the types of operations (general aviation) occurring at Nut Tree Airport would result from implementation of the Proposed Project, potential safety impacts to people living and working in the vicinity of the Airport as a result of proposed runway changes and forecasted growth of operations is considered less than significant.

In summary, while the Proposed Project is considered to be generally consistent with the compatibility criteria set forth in the ALUCP, implementation of Mitigation Measures 3.9-1a through 1b will ensure that all phases of the project are consistent with applicable safety and airspace protection criteria. In doing so safety hazards for those living and working in the vicinity of Nut Tree Airport and the Proposed Project would be less than significant. **Furthermore, forecasted growth in operations and changes to the runway length from existing conditions would not result in significant changes to the risk of an aircraft accident occurring. Therefore, potential safety hazards for those living and working in the vicinity of the Airport as a result of the Proposed Project are considered less than significant.**

Mitigation Measures: None required.

Impact 3.7-6: Would the Proposed Project be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area? (*No Impact*)

Phase I Projects and Full Build-out

The Proposed Project is located within and around the boundaries of Nut Tree Airport, a public-use airport owned and operated by Solano County. The Proposed Project is not located within two miles of a private airstrip; therefore, people working or residing in the vicinity of the project site would not be exposed to safety hazards associated with a private airstrip. There is no impact.

Mitigation Measures: None required.

Impact 3.7-7: Could the Proposed Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (*Less Than Significant*)

Phase I Projects and Full Build-out

The Proposed Project includes the development of aviation and non-aviation related facilities within the existing boundaries of Nut Tree Airport. Aviation-related facilities would be accessed via County Airport Road, which dead-ends into Airport property, while certain non-aviation facilities may be accessed either by East Monte Vista Avenue or Piper Drive. East Monte Vista Avenue is a four-lane arterial and a designated truck route that connects Nut Tree Road to Vaca Valley Parkway. Piper Drive is a two-lane collector road that connects Cessna Drive to East Monte Vista Avenue (City of Vacaville, 2010). Proposed non-aviation uses would access City roads via standard driveways that would be designed according to City of Vacaville development standards. Construction of non-aviation uses along East Monte Vista Avenue and Piper Drive may cause minor, construction-related delays on these roads; however, these delays would be temporary and would not prevent vehicles from utilizing the roads during the construction process. Furthermore, the construction of additional roadways or emergency access roads would not be required as a part of the Proposed Project. Given that all phases of development associated with the Proposed Project would remain on Airport property, and would only result in temporary, construction-related delays along East Monte Vista Avenue and Piper Drive, impacts to a City of Vacaville emergency response or evacuation plan is considered less than significant.

Nut Tree Airport maintains an Emergency Response Plan that provides procedures that are to be followed in the event of an emergency incident, which includes a communication system that notifies all the relevant agencies, service providers, and anyone else that would be involved in the emergency response. Implementation of the Proposed Project, particularly elements associated with the 200-foot translation of Runway 2/20 in Phase I and the 600-foot extension in Phase III, would require updates to the Airport's Emergency Response Plan. Such an update will ensure that impacts related to inconsistencies between the physical changes to the airfield and the Airport's Emergency Response Plan does not occur. In summary, potential conflicts between the Proposed

Project and an emergency response or evacuation plan implemented by either Solano County or the City of Vacaville are considered less than significant.

Mitigation Measures: None required.

Impact 3.7-8: Would the Proposed Project expose people or structures to a significant risk of loss or injury involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (*Less Than Significant*)

Phase I Projects and Full Build-out

The Proposed Project site is currently graded and contains a variety of paved areas and structures. Surrounding uses around the Airport include open space to the west, industrial and commercial uses to the northwest and north, office complexes and open space to the east, commercial uses to the southeast, and open space to the south. According to the California Department of Forestry and Fire Protection (CDF), the Proposed Project site contains a “moderate” threat of wildland fire (Solano County, 2008).

Construction

Construction activities associated with all phases of development of the Proposed Project could provide the greatest threat of igniting a fire on adjacent lands through welding, re-fueling or use of other fuel-motorized equipment. Construction activities would be required to adhere to state required fire safety measures that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire-suppression equipment that must be provided onsite for various types of work in fire-prone areas. Furthermore, facilities development as a part of the Proposed Project shall be constructed in accordance with all relevant UBC, CBC and local standards related to fire mitigation. With adherence to state and requirements, during the design and construction of the proposed facilities the wildland fire threat to the Proposed Project is a less than significant impact.

Operation

Operation of the Proposed Project would include the use of new hangars, an expanded multi-use arrival/departure facility, and non-aviation commercial and light industrial facilities. Furthermore, aircraft operations are expected to increase from 101,500 (current) to 127,330 by 2031. Use of all aviation-related facilities by tenants will be overseen by Airport management, and will be required to follow applicable Solano County Code. In particular, Airport tenants will be required to adhere to Chapter 2.4, Airports and Aircraft, of County Code, which sets forth guidelines for the operation of aircraft, business activities, and fire safety. Furthermore, the operation of general aviation aircraft on Airport property shall be done so according to safety regulations set forth by the FAA, including but not limited to AC 91-73A: *Part 91 and Part 135, Single-Pilot Procedures During Taxi Operations*. Lastly, proposed non-aviation land uses will be required to adhere to all applicable State and County standards for safety. Given the project’s location within an area

designated only as a “moderate” threat for wildland fires, as well as adherence to all applicable codes and standards described above, potential impacts associated with exposure of people or structures to a risk of loss or injury involving wildland fires, are considered less than significant.

Mitigation Measures: None required.

Cumulative Impacts

Impact 3.7-9: Could implementation of the Proposed Project result in a cumulatively considerable impact to the transportation or use of hazardous materials; the release of hazardous materials; or the creation of hazards to the public? (*Less Than Significant*)

Hazardous materials impacts are generally site-specific and not affected by cumulative development in a project’s regional area. Construction activities associated with future projects identified in **Table 2-7** will likely make use of hazardous materials, or may have the potential to release hazardous materials into the environment. However, the use of any hazardous materials would be localized to specific construction sites and is regulated under specific federal state, and local policies, and therefore not cumulatively considerable. Similarly, operational use of hazardous materials may occur with some industrial land uses identified in Table 2-7. Due to the fact that any storage, creation, use, or disposal of hazardous materials would be regulated through applicable federal, state, and local standards, cumulative impacts related to the operational use of hazardous materials is considered less than significant. Lastly, transportation of hazardous materials for projects in the vicinity of Nut Tree Airport would be regulated by applicable government regulations and would likely utilize a variety of routes depending on the location of the project or land use. Therefore, construction or operation of future projects would not have a cumulative effect on the same set of sensitive receptors through the transportation of hazardous materials.

During construction of the Proposed Project, it is anticipated that limited quantities of miscellaneous hazardous substances would be brought onto the Proposed Project site. In addition, Proposed Project operations will include use of fuels and other hazardous materials typically associated with equipment use and servicing. Because compliance with Federal, State, and local regulations for the transport, use, or disposal of hazardous materials is required, the increase in the potential exposure to public health and safety hazards would not be significant, or have a significant contribution to a potential cumulative impact when considered with other projects identified in **Table 2-7**. Therefore, significant cumulative impacts related to hazardous wastes would not be cumulatively considerable.

Forecasted operations at Nut Tree Airport are expected to reach 127,330 by 2031. Operation of these aircraft would be subject to all applicable safety regulations, as set forth by FAA and local regulations. Furthermore, local compatibility guidelines, such as those established in the ALUCP, have set forth land use standards that have guided development in the vicinity of Nut Tree Airport such that densely population and sensitive land uses (i.e. residential, hospitals, places of worship, and high intensity commercial uses) remain out of critical aircraft movement areas beyond the ends of Runway 2/20. Given aviation safety standards, local airport land use compatibility

guidelines, and the general infrequency of an off-airport aircraft accident occurring, cumulative hazard impacts associated with future Airport operations is considered less than significant.

In summary, the Proposed Project, in consideration with other past, present, and reasonably foreseeable projects (as identified in **Table 2-7**), would result in a less-than-significant cumulative impact related to the transportation or use of hazardous materials; the release of hazardous materials; or the creation of hazards to the public.

3.7.4 References

- California Environmental Protection Agency, 2012. Cortese database, www.calepa.ca.gov/SiteCleanup/CorteseList/default.htm, accessed on October 21, 2012.
- City of Vacaville, 2010. City of Vacaville General Plan Update – *Transportation and Circulation in Vacaville Technical Memorandum*, September 2010.
- Environmental Data Resources, Inc. 2012. *The EDR Radius Map Report*. October 18, 2012.
- National Transportation Safety Board (NTSB), 2012. *Review of U.S. Civil Aviation Accidents, Calendar Year 2010*. October 10, 2012.
- Solano County, 2008. *Solano County General Plan*, Public Health and Safety Element, Figure HS-9: Wildland Fire Hazard Areas. Adopted August 5, 2008.
- Solano County, 2012. *Draft Nut Tree Airport Master Plan*. Updated in 2012.
- HMMH, 2010. Technical Guidance for Evaluating Selected Solar Technologies on Airports. November 2010.

This Page is Intentionally Left Blank