4.4 HAZARDS AND HAZARDOUS MATERIALS

This section discusses the use, storage and handling of hazardous materials at John Wayne Airport ("JWA"); it also assesses the Project's potential hazardous materials impacts that could potentially affect human health and/or the environment. Because the Project does not propose any construction or change to the nature of Airport operations, including the on-site storage and delivery of jet fuel, and because the Project would not affect ongoing remedial activities at JWA, the sole hazard associated with the Project relates to the potential release of hazardous materials resulting from the increased transport and use of jet fuel commensurate with the increase in the number of flights. Pursuant to State CEQA Guidelines Section 15150, this EIR hereby incorporates by reference Section 3.11 (Risk of Upset) of EIR 582 (SCH #2001011068), which is available for public review and inspection at the JWA Administrative Offices located at 3160 Airway Avenue, Costa Mesa, CA. As discussed further below, Section 3.11 of EIR 582 contains relevant information regarding the methodology and results of a "risk of upset" analysis for fuel delivery.

As discussed in Section 1.6, EIR Focus and Effects Found Not to be Significant, and in the Notice of Preparation ("NOP")/Initial Study in Appendix A, the Project would not affect implementation of JWA's approved evacuation plan; it would not be located in the vicinity of a private airstrip; nor would it be adjacent to a wildlands area. These topics are not discussed in this section.

4.4.1 REGULATORY SETTING

Since hazards and hazardous materials cover many diverse topics, for ease of readability this section is organized by topic or regulation rather than by jurisdiction.

HAZARDOUS MATERIALS TRANSPORTATION ACT

The Hazardous Materials Transportation Act administered by the U.S. Department of Transportation governs the transport of hazardous materials, such as jet fuel. The California Department of Transportation ("Caltrans") implements the federal regulations published as Title 49 of the *Code of Federal Regulations* ("CFR") and Title 13 of the *California Code of Regulations*. These laws regulate the handling and transport of hazardous waste materials.

FEDERAL AVIATION REGULATION PART 139

JWA has been issued an airport operating certificate pursuant to Part 139 "Airport Certification" (14 CFR 139). To obtain a certificate, an airport must agree to certain operational and safety standards and provide for such things as firefighting and rescue equipment. In conjunction with its Part 139 certificate, JWA's fuel farm is subject to inspection under the Federal Aviation Regulations ("FAR") (14 CFR 139.321). Specifically, this can include inspection of the fuel farm and mobile fuelers; review of JWA files for documentation of quarterly inspections of the fueling facility; and review of certification from each tenant fueling agent about completion of fire safety training.

CERTIFIED UNIFIED PROGRAM AGENCY

Senate Bill ("SB") 1082 (1993) establishes the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, which consolidates, coordinates, and makes

consistent six different hazardous material/waste programs. In 1997, the Orange County Environmental Health Agency ("OCHCA") was designated as the Certified Unified Program Agency ("CUPA") for the County of Orange. As the CUPA, the OCHCA coordinates the regulation of hazardous materials and hazardous wastes in Orange County through the following six programs: Hazardous Materials Disclosure; Business Emergency Plan; Hazardous Waste; Underground Storage Tank ("UST"); Aboveground Petroleum Storage Tank; and the California Accidental Release Prevention ("CalARP").

CALIFORNIA GOVERNMENT CODE, SECTION 65962.5

The provisions in Section 65962.5 of the *California Government Code* are commonly referred to as the "Cortese List" (after the Legislator who authored the legislation that enacted it). The list is a compilation of hazardous waste facilities subject to corrective action pursuant to various provisions of the *California Health and Safety Code.* The list is maintained by the California Department of Toxic Substance Control. The regulation requires the list to be updated as appropriate, but at least annually. As discussed below in Section 4.4.5, Impact Analysis, the Airport is not identified on the Cortese List.

AIRPORT LAND USE COMPATIBILITY PLAN

The State Aeronautics Act and *California Airport Land Use Planning Handbook* identify the requirement for preparation of an airport land use compatibility plan(s) as a fundamental tool used by the Airport Land Use Commission ("ALUC") in fulfilling its purpose of promoting airport land use compatibility. The law (Section 21675[a] of the *Public Utilities Code*) describes the compatibility plans as having two primary purposes:

- To "provide for the orderly growth of each public airport and the area surrounding the airport within the jurisdiction of the commission…" and
- To "safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general".

The ALUC for Orange County, which was established in 1970, adopted the first compatibility plan in 1975. This plan is known as the Airport Environs Land Use Plan ("AELUP"). The original document addressed all the airfields in Orange County. In 2002, the ALUC amended the AELUP and prepared separate compatibility plans for each facility.

The most current AELUP for JWA was adopted April 17, 2008. This plan is intended to provide land use compatibility for the 20-year planning future for JWA; to safeguard the general welfare of the inhabitants in the vicinity of the Airport; and to ensure the continued operation of the Airport. Specifically, the AELUP seeks to protect the public from adverse effects of aircraft noise; to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents; and to ensure that no structures or activities adversely affect navigable airspace.

4.4.2 METHODOLOGY

The effects of the Project related to hazardous materials were assessed by identifying the existing jet fuel-related activities at JWA (i.e., storage, transport, handling, fueling activities, fuel demand); the spill prevention and response protocols; and ten-year spill history. The potential for increased fuel demand to create or result in increased risk of exposing surrounding

populations or the environment to hazardous materials due to operation of the Proposed Project and each alternative was assessed in light of the following: (1) the existing fuel management programs in place at JWA; (2) the number and severity of spills under the existing fuel management program relative to the rate of daily fuel use; and (3) the results of the "risk of upset" analysis prepared as part of the 2002 *Final Environmental Impact Report No. 582 for the John Wayne Airport Settlement Agreement Extension* ("EIR 582"). The specific methodology of the risk of upset analysis is provided below as part of the impact discussion under the "Previous Risk Assessment for Fuel Storage and Transport" heading.

4.4.3 EXISTING CONDITIONS

HAZARDOUS MATERIALS USE

The main activity conducted at JWA that involves the use, storage, and handling of hazardous materials is the fueling of aircraft, airport vehicles, and other ground support equipment (GSE). Only minor maintenance and repairs of commercial aircraft and airport vehicles are allowed at JWA, therefore reducing the number and quantities of other hazardous materials, as well as their potential impacts. Two types of jet fuel are used at JWA: LL100 (AvGas) and Jet-A. Avgas is aviation's equivalent to leaded gasoline, and Jet-A is a heavier kerosene (no lead), which is closer to diesel than gasoline in volatility. AvGas is used by smaller piston engine aircraft (general aviation) and not used by commercial airlines at JWA (Pope 2014). This EIR discusses increases in Jet-A usage, not AvGas, because the smaller "general aviation" aircraft activity is not increasing in any of the Project scenarios. Jet-A is transported to JWA via tanker truck delivery, as discussed below.

There are two "fuel farm" locations at JWA (the location of the fuel farms are shown on Exhibit 2-1, Existing On-Site Uses). The larger facility built in 1991 serves the commercial airlines and is operated by Aircraft Service International Group ("ASIG") for a consortium of airlines ("SNAFuel, Inc."). SNAFuel provides Jet-A fuel to the commercial aircraft and red-dye diesel for their GSE. The "old" fuel farm is located in the southeast corner of the airfield and is operated by the Fixed Based Operators ("FBOs") and JWA for general aviation, their GSE, and other airport vehicles and equipment. The underground fuel tanks located at the fuel farms include Jet-A, AvGas, regular unleaded Gasoline, and Diesel (Pope 2014).

In the late 1980s and early 1990s, multiple JWA FBO tenants with jet fuel tanks at the old fuel farm declared bankruptcy and left JWA to clean up releases of jet fuel to the soil and groundwater. In 1988, the Regional Water Quality Control Board ("RWQCB") issued Cleanup and Abatement Order 88-123 to JWA and the remediation is still on-going. This EIR does not address the old fuel farm remediation as the increased Jet-A usage related to the Project will not be supplied from the old fuel farm. Former Fire Station 33 (366 Paularino) is also undergoing groundwater monitoring from previous impacts, but is also not considered as part of this assessment as it will not be affected as part of the Project (Pope 2014).

As noted previously, changes in fueling operations in support of increased Airport operations are the primary source of potential impacts related to hazardous materials under the Project. Therefore, this discussion focuses on JWA's commercial fueling system.

Fuel Storage

The greatest quantity of hazardous material stored at JWA is Jet-A fuel. Jet-A ("jet fuel", "fuel") has been transported to and used at JWA since 1967. The airline consortium (SNAFuel) currently receives fuel via tanker truck from two refineries located in El Segundo, California and Carson, California. Approximately 60 percent of the jet fuel currently being trucked to the Airport originates in El Segundo and the balance is trucked from Carson. The current suppliers are Tesoro, Chevron, Kinder Morgan, BP, and World Fuel (Pope 2014).

SNAFuel is located on approximately two acres on the west side of the airfield at the northern end, within the security fencing of the airfield.[1] The fuel farm includes three 300,000-gallon, aboveground storage tanks ("ASTs") for the storage of jet fuel. These tanks were constructed as part of the 1985 Master Plan improvements. The fuel tanks have approximately 750,000 gallons of storage capacity because, in all fuel systems, there is a portion of the fuel that is unusable and referred to as "dead fuel". This is fuel that is at the bottom of tanks and not able to be pumped out through normal system operation, along with fuel that resides in pipes, pumps, and filters. The dead fuel represents a static and unchanging amount and therefore is not included in the analysis

The ASTs are each approximately 52 feet in diameter and 21 feet in height. They are constructed of welded steel with a full contact internal floating roof to eliminate vapor space within the tank; this construction minimizes the likelihood of fire or explosion, even though Jet-A fuel is considered to be non-volatile. The three ASTs are connected to a hydrant refueling system by an underground, double-walled, transfer piping system that is equipped with multiple overflow alarms. An approximate 16,431-square-foot dike system for controlling any fuel spills provides a containment capacity that is approximately 132 percent of the volume of a single tank. The entire facility drains into a Petro-pack equipped oil-water separator that has cathodic protection.[2] The separator and the underground pipeline and hydrant system are fully monitored and have leak alarms. The fuel farm also has a self-contained fire alarm and suppression system. All existing tanks at JWA, including those in the commercial fuel farm and old fuel farm, meet current mandated leak protection and detection standards (Pope 2014).

The full capacity of the fuel tanks is not currently being utilized due to the location of some of the existing vents. JWA has plans to modify the lower vents, thereby creating more space for fuel in the tanks. These minor modifications will be completed by 2016 and will increase fuel storage capacity in the existing tanks to 254,000 gallons per tank, for a total capacity of approximately 762,000 gallons.

Additionally, the County of Orange is currently evaluating a privately-initiated proposal by Wickland Pipelines LLC (Wickland) to supply Jet-A fuel to the Airport that would result in other improvements to the fuel farm. This proposal is currently undergoing separate environmental review, as discussed in Chapter 5.0, Cumulative Impacts. The proposal would include construction of two 1.5 million gallon capacity tanks and connection of these large tanks with an underground pipe to a larger pipeline distribution system, in order to increase Airport-related jet fuel storage capabilities and provide for delivery of Jet-A via pipeline. The intent of this

[1] The original fuel farm ("old fuel farm"), located at the southeast corner of the airfield, is used by general aviation aircraft and GSE only. Because the Project would not change the operation of the old fuel farm, references to "fuel farm" hereinafter pertain to the commercial aircraft fueling facility constructed in 1991 unless otherwise specified.

[2] Cathodic protection is used to control the corrosion of a metal surface.

proposed project is to reduce/remove the need to truck fuel from the refinery to the Airport (AECOM 2014a). Because this privately-initiated proposal is not approved, the capacity offered by these tanks is only considered in the cumulative impacts assessment provided in Section 5.

Fuel Transport and Handling

Jet fuel is delivered to the ASTs by tanker truck. Truck unloading operations occur only at night (i.e., between 11:30 PM and 5:30 AM), seven nights a week. JWA has 4 truck unloading positions, which can unload trucks simultaneously to the fuel farm facility. The maximum capability of the existing system is for 32 truck deliveries during the night time hours (between 11:30 PM and 5:30 AM). In 2013, an average of 28 trucks of fuel were delivered to the Airport on a nightly basis.

Jet-A fuel dispensed in commercial operations at JWA has decreased from about 82 million gallons in 2003 to about 62 million gallons in 2012. In 2003, about 1,515 gallons were dispensed per commercial departure. Over the last 10 years, 1,349 gallons were dispensed per commercial departure, on average, and these dispensations have been generally trending down as airlines have continued to look for ways to reduce operating expenses and as aircraft manufacturers have increased fuel efficiencies of aircraft fleets. The last three years have been essentially flat at an average of 1,356 gallons dispensed per departure. The amount of Jet-A fuel dispensed per passenger has also trended down as load factors, on average, have increased at JWA. Other variations could potentially be explained by variations in aircraft types and average trip distances (AECOM 2014a).

The majority of the commercial aircraft are fueled via the aforementioned hydrant system located beneath the commercial terminal apron; however, some small commuter aircraft are fueled via individual fuel trucks. These trucks load fuel from the commercial fuel farm and unload fuel into commuter aircraft parked north and south of the terminal. Commercial ground service equipment ("GSE") is fueled on the airfield with fuel from SNAFuel. General aviation aircraft are fueled at their parking spaces and tie-downs via trucks operating from the old fuel farm. All areas where fuel is stored and where aircraft and vehicles/GSE are fueled drain into Petro-pack equipped oil-water separators (Pope 2014).

On an annualized basis, assuming the completion of the current tank modifications (expected to be completed by 2016), the daily working capacity of the fuel system can accommodate 12.5 annual MAP, based on the following assumptions:

- **Daily working capacity of fuel system:** 254,000 gallons
- **Fuel dispensed per passenger:** 7.4 gallons
- **Daily passenger capacity:** 34,300
- **Annual passenger capacity:** 12.5 MAP

Regulatory Oversight and Fuel Safety

As previously indicated, SNAFuel is located within the secured airfield. All personnel conducting fueling activities at the Airport are required to receive training from the Orange County Fire Authority ("OCFA") that is approved by the Federal Aviation Administration ("FAA"). Furthermore, all fueling operations are subject to Emergency Response, Spill Response, and

Storm Water Pollution Prevention Plans, among others. These plans must meet the approval of the OCFA, JWA, and County and State health and water quality officials (i.e., the RWQCB).

The current Spill Prevention, Control, and Countermeasure ("SPCC") Plan, dated July 2011 and prepared in compliance with 40 CFR Part 112 "Oil Pollution Prevention", outlines the requirements for both the prevention of and response to oil and oil product discharges, which in this case, is jet fuel. JWA has also prepared an Operations Manual to encompass all aspects of fueling operations specific to the JWA fuel farm that applies to member airlines, and for which non-member airlines must execute an agreement to incorporate the Manual into their operations in its entirety.

All fueling facilities have permits from the above-listed agencies to operate, as well as appropriate permits from the South Coast Air Quality Management District regarding fuel-related emissions. The 2013 ASIG inspection records for the fuel farm and associated facilities indicate that all components were determined to be in proper working order with ratings of "Satisfactory", "Clean", and/or "Pass" as appropriate (Pope 2014). Pursuant to the annual requirements for certification of compliance with FAR 139.321, "Handling and Storing of Hazardous Substances and Materials", ASIG documented their review of SNAFuel, which concludes (SNAFuel 2013):

- All personnel are FAR 139 certified.
- The OCFA regularly completes quarterly and annual inspections of the facility.
- All ASIG corporate safety and operations manuals are current.
- All personnel completed annual recurrent training.
- The facility requires the operator on duty to conduct and document hourly inspections to monitor for safety violations, fuel dispensing/receiving operations, possible fuel leaks and facility security.
- The facility has retained an International Organization for Standardization ("ISO") 9001:2008 certification of the past 12 years.[3]

These observations indicate JWA's compliance with applicable regulatory requirements as well as the stringent fuel safety protocols routinely implemented to ensure the risks related to jet fuel transport, storage, and handling are minimized to the maximum extent.

Fuel Spill Management and History

The on-site Airport Rescue and Fire Fighting ("ARFF") Station is notified and called to the scene for all fuel spills. Tanker truck and into-plane (fuel dispensing) operators are primarily responsible for clean-up and containment; however, ARFF personnel will intervene to prevent a fire, contain the spill, and/or prevent spilled fuel from entering the storm drain system. Small spills are cleaned up using absorbent pads and materials stored at the fuel farm and the

[3] ISO 9001:2008 specifies requirements for a quality management system where an organization (1) needs to demonstrate its ability to consistently provide product that meets customer and applicable statutory and regulatory requirements and (2) aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements. All requirements of ISO 9001:2008 are generic and are intended to be applicable to all organizations, regardless of type, size and product provided (ISO 2014).

commercial apron. In the event of a major spill, the OCFA Hazardous Materials Response Team is called to the scene. Clean-up and further containment is the responsibility of the fuel farm, FBOs, and into-plane operators who contract with various spill response companies. JWA also has spill response contractors available on-call 24 hours a day, 7 days a week.

Between 2003 and 2013, there were no fuel spills or other incidents that resulted in releases that extended off the airfield (Pope 2014). All minor spills were contained and properly cleaned up.

4.4.4 THRESHOLDS OF SIGNIFICANCE

In accordance with the County's Environmental Analysis Checklist and Appendix G of the State CEQA Guidelines, the Project would result in a significant impact to hazards and hazardous materials if it would:

Threshold 4.4-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Threshold 4.4-2 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.

Threshold 4.4-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school.

Threshold 4.4-4 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.

Threshold 4.4-5 Be located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport, resulting in a safety hazard for people residing or working in the project area.

4.4.5 IMPACT ANALYSIS

PREVIOUS RISK ASSESSMENT FOR FUEL STORAGE AND TRANSPORT

A complex "risk of upset" analysis was prepared as part of EIR 582, which addressed operation of the commercial fuel farm with an extension of the Settlement Agreement, similar to the Project being evaluated in this EIR. Since the conditions at JWA have not changed, this analysis and the findings would still be applicable to the Project and, as discussed in the introduction to this section, Section 3.11 (Risk of Upset) of EIR 582 is incorporated by reference pursuant to CEQA Guidelines Section 15150. The following provides an overview of the analysis conducted for EIR 582.

The risk of upset analysis prepared for the EIR 582 project evaluated potential public health and safety risks by determining the probability of an accident and the potential severity of consequences associated with three hypothetical accident scenarios:

1. Accidents involving the highway transportation of jet fuel.
2. Accidents involving the uncontrolled release of jet fuel from on-Airport bulk fuel storage tanks due to unspecified causes.
3. Accidents involving aircraft collisions with on-Airport bulk jet fuel storage tanks.

The potential for increased flights to create or result in increased hazards to surrounding populations/environs was evaluated in the following three steps: (1) Hazards Identification, (2) Vulnerability Analysis, and (3) Risk Analysis.

Hazards Identification

Hazards identification provides information on situations that have the potential for causing injury to life or damage to property and the environment due to a materials spill or release. Hazards identification includes information on:

- Types and quantities of hazardous materials used, processed, or stored at a facility;
- Quantities of materials that could be involved in an airborne release;
- Conditions of storage, processing, and use; and
- Potential hazards associated with spills or other releases.

The material of concern for the risk of upset analysis is Jet-A fuel ("jet fuel", "fuel"). The hazard associated jet fuel would be the potential for adverse effects in the event of an uncontrolled, accidental release, either at the JWA site or during highway transport.

Vulnerability Analysis

The vulnerability analysis identifies areas in the community that may be affected or exposed; individuals in the community who may display enhanced sensitivity to certain specific hazardous materials; and which facilities, property, or environments may be susceptible to damage should a hazardous materials release occur. A vulnerability analysis provides information on the following:

- The extent of the vulnerable zones (i.e., an estimation of the area that may be affected in a significant way as a result of a spill or release of a known quantity of a specific material under defined conditions);
- The population, in terms of numbers, density, and/or types of individuals (e.g., facility employees; neighborhood residents; people in hospitals, schools, nursing homes, and/or daycare centers) that could be within a vulnerable zone; and
- Private and public property (e.g., critical facilities, homes, schools, hospitals, businesses, offices) that may be damaged, including essential support systems (e.g., water, food, power, communication, medical) and transportation facilities and corridors.

Risk Analysis

A risk analysis is an assessment of the likelihood (probability) of an accidental release of a hazardous material and the actual consequences that might occur, based on estimated vulnerable zones. In this light, a risk analysis is a judgment of the probability of an accident and the potential severity of associated consequences based on the history of previous incidents, local experience, and the best available current technological information. Risk analyses provide an estimation of the following:

- The likelihood (probability of occurrence) of an accidental release based on the history of current conditions and controls at the facility, consideration of any unusual environmental conditions, or the possibility of simultaneous emergency incidents;
- The severity and number of consequences of human injury that may occur and the associated high-risk groups; and
- The severity of consequences/damage to critical facilities, property, and the environment.

The potential for fire or explosion associated with the Proposed Project Scenarios addressed in the EIR 582 were evaluated using a Gaussian-based model, the Automated Resource for Chemical Hazard Incident Evaluation ("ARCHIE"), which was jointly developed by the Federal Emergency Management Agency ("FEMA") in concert with the U.S. Department of Transportation ("USDOT") and the U.S. Environmental Protection Agency ("USEPA"). The ARCHIE computer program comprises a set of hazard assessment procedures and models that can be utilized to evaluate the off-site consequences of potential discharges or releases of hazardous materials and, thereby, assist in the development of a basis for emergency planning.

The primary purpose of ARCHIE is to provide emergency preparedness personnel with several integrated estimation methods that can be used to assess potential vapor dispersion, fire, and explosion impacts associated with discharges of hazardous materials into the environment. This method of analysis facilitates a better understanding of the nature and sequence of events that may follow an accident and the resulting consequences. For jet fuel, ARCHIE has been used to evaluate the following:

- The discharge rate and duration of a gas or liquid material released from a tank or pipeline;
- The size of liquid product pools that may form on the ground;
- The rate at which a liquid pool will evaporate or boil, and the duration of these phenomena until that point in time at which the pool is depleted;
- The size of the downwind hazard zone that may require evacuation or other public protective action due to the release of a hazardous gas or vapor;
- The thermal radiation hazards resulting from the ignition of a flammable or combustible pool of liquid;
- The size of the downwind area that may be subjected to flammable or explosive concentrations of gases or vapors in the air due to the release of a flammable or explosive gas or vapor—together with the maximum weight of potentially explosive gas or vapors in air that occurs during the incident; and

- The consequences of an unconfined vapor cloud explosion if the flammable gas or vapor in air should explode upon ignition.

The modeled risk analysis utilized FEMA-recommended equipment failure rates to evaluate the potential probabilities and consequences associated with hypothetical jet fuel transport/storage accidents of unspecified origin and associated releases. Hypothetical aircraft-induced accidents involving bulk jet fuel storage tanks on the JWA site were derived from and evaluated on the basis of the on-site fatal accident probabilities calculated in the *Airport System Master Plan for John Wayne Airport and Proposed Orange County International Airport.*

The calculated accident probabilities and severity for the three accident scenarios cited above—(1) fuel transport accidents, (2) bulk fuel storage facility accidents, and (3) aircraft-related bulk fuel storage facility accidents—with Project scenarios involving up to 181 Class A Average Daily Departures ("ADDs") and 13.9 Million Annual Passengers ("MAP") were all judged in EIR 582 not to result in reasonably foreseeable upset and accident conditions involving the release of jet fuel into the environment and thus creating no potential hazard to the public or the environment. Each of these accident scenarios are discussed in more detail below.

Fuel Transport Accidents

The probability for tanker truck transport accidents to result in a release of jet fuel while en route to the JWA site from a fuel supplier in El Segundo was deemed in EIR 582 to be in the High/Likely range for a ten percent cargo loss accident, and in the Medium/Reasonably Likely range for other truck transport accident scenarios. A potential accident consequence severity was developed with output from the ARCHIE program. The severity of jet fuel truck transport-related accidental releases/fires occurring under the Project Scenarios addressed in EIR 582 was deemed to be Moderate.

A High/Likely accident probability (ten percent cargo release) coupled with a Moderate level of severity accident normally would mandate comprehensive planning and preparedness according to the FEMA screening matrix. In this regard, however, there are certain inherent safeguards in place that would preclude or reduce the likelihood of occurrence or severity of jet fuel transport accidents, as discussed in EIR 582 and applicable to the current JWA operations.

First, transportation of hazardous materials is regulated at the federal (Title 49 of the *Code of Federal Regulations* ["49 CFR"]) and State (Title 13 of the *California Code of Regulations* ["13 CCR"]) level. The carrier responsible for the transportation of the hazardous material is required to have a Hazardous Materials Transportation License, which is issued by the California Highway Patrol ("CHP").

Second, since fuel deliveries are from suppliers within California, these intrastate carriers are also subject to CHP's Biennial Inspection of Terminals ("BIT") program. These carriers must receive a satisfactory BIT inspection rating at each terminal from which the hazardous material-transporting vehicles are operated, and the CHP cannot issue a Hazardous Materials Transportation License ("HMTL") unless and until this occurs. Carriers are also required to implement preventive maintenance requirements for their truck fleets. In addition, drivers must make daily inspections of the trucks and keep time records of their driving hours. These records and equipment are subject to inspections by the CHP. Further, the carrier must enroll each driver in the Department of Motor Vehicles ("DMV") pool notice program, which informs the carrier of

driving violations of any of its drivers, either on or off the job, including previous traffic violations.

Third, the County of Orange has established guidelines consistent with State and federal regulations pertaining to hazardous materials to ensure that the risk associated with the use and storage of the materials, after transport to JWA, is minimal. All hazardous materials are handled in full compliance with applicable requirements, and the necessary permits are maintained by the Airport.

Bulk Fuel Storage Facility Accidents

To address potential accidents at bulk storage facilities of this type, FEMA recommends an approach that addresses a single release scenario based on historic equipment failure rates. For the Proposed Project Scenarios addressed in EIR 582, the estimated failure rate for single and double walled petroleum storage tanks is 1.0×10^{-4} per tank-year. The analysis determined the total probability for all project-related bulk jet fuel storage tank accidents to result in a release of jet fuel at the JWA to lie in the Low/Very Unlikely range.

For the accident severity, it was determined in EIR 582 that the vulnerable zone would extend somewhat beyond the northwestern boundary of the JWA site; however, no potentially sensitive receptors have been identified within this area. Localized evacuation of members of the public in the immediate off-site vicinity of such an accident could be initiated as a safety precaution. In addition to the JWA on-site ARFF, emergency response could require additional assistance from other off-site County resources. On this basis, the severity of non-aviation-related accidental releases/fires occurring at the JWA site under the Proposed Project Scenarios was determined in EIR 582 to be Moderate.

Given a Low/Very Unlikely accident probability and a Moderate severity accident, comprehensive emergency planning would be unwarranted and unnecessary for all project scenarios addressed in EIR 582. On this basis, the evaluation determined that there would not be a reasonably foreseeable upset or accident condition involving the release of jet fuel into the environment, thus creating a potential hazard to the public or the environment through the routine use and storage of jet fuel. As a result, the use and storage of jet fuel at the JWA site was deemed not to result in a significant adverse impact to public health and safety under risk of upset conditions.

Aircraft-Related Bulk Fuel Storage Facility Accidents

The potential for aircraft accidents involving the bulk jet fuel storage facility was assessed in EIR 582 by evaluating the probabilities for aircraft accidents to occur at JWA. The JWA bulk fuel storage facility is located within an approximate 2-acre area in the northern portion of the JWA site approximately 320 feet from the centerline of Runway 1L/19R. This location, which is consistent with FAA design standards, was determined in EIR 582 to reduce the probability of an incident to Extremely Low/Very Unlikely. For the alternatives evaluated in EIR 582, probability of an accident for Alternative D (181 Class A ADDs) was estimated to occur less than once in approximately 1.69×10^{8} years. In the event of an occurrence, the severity of aviation-related accidental releases/fires occurring at the JWA site was deemed to range from Major to Catastrophic.

Given an accident scenario with an Extremely Low/Very Unlikely probability of occurrence and a Major to Catastrophic severity, comprehensive emergency planning would be considered unnecessary or optional. EIR 582 determined that it would be unlikely for increased aviation activities to result in reasonably foreseeable upset and accident conditions involving the release of jet fuel into the environment, thus creating a potential hazard to the public or the environment through the routine use and storage of jet fuel. As a result, the use and storage of jet fuel at the JWA site was deemed in EIR 582 not to result in a significant adverse impact to public health and safety under risk of upset conditions.

THRESHOLDS EVALUATION

Threshold 4.4-1 **Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

Threshold 4.4-2 **Would the 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?**

Proposed Project

The Proposed Project would result in an increase in fueling activities to support the increased passenger levels, which could ultimately reach 12.5 MAP. The commercial passenger aircraft would be served by JWA's commercial fuel farm.

Access to the fuel farm, for purposes of Jet-A fuel deliveries, would not be modified as a result of the Proposed Project. Rather, consistent with current practice, the fuel trucks would continue to take I-405 southbound to the Bristol Street exit and then turn south onto Paularino Avenue.[4] The trucks would then proceed through the JWA security gate (where Paularino Avenue ends) and turn left onto Perimeter Road.

The increased fueling activity would increase the statistical likelihood of a spill (i.e., upset and accident conditions). However, because the current Best Management Practices (BMPs) for handling of the fuel would continue to apply, there is not a reasonably foreseeable significant hazard to the public or environment.

No new bulk jet fuel storage facilities would be constructed at JWA as part of the Proposed Project. Though the existing facilities could accommodate the Proposed Project's annual MAP level, when assessing transport of the fuel, the demand for the Average Day Peak Month ("ADPM") is assessed. Since the Proposed Project does not contemplate any change to procedures for transporting jet fuel to JWA via tanker trucks, the fuel required to serve the increased operational levels would be provided by increasing the number of daily truck deliveries of fuel.

[4] Over the past few years due to the reconstruction of the I-405/I-605 interchange, which resulted in frequent night time shut downs for construction, drivers have been using SR-91 to either I-5 or directly to SR-55 and used the Baker Street exit from SR-55 and turn south onto Paularino Avenue. The trucks would then proceed through the JWA security gate.

Table 4.4-1 presents the required fuel capacity; the amount of unused fuel at the end of each day; and the number of additional daytime truck deliveries that are needed to support the passenger activity level of each scenario. As shown in Table 4.4-1, Phase 1 of the Proposed Project would result in an increased demand of approximately 39,000 gallons of fuel daily compared to existing conditions. In Phase 2, the demand would increase by an additional 23,000 gallons per day (or 62,000 more gallons per day than the existing ADPM). Phase 3 would require a total of 280,000 gallons of fuel per day, which is 77,000 gallons more than the existing usage on an ADPM. When compared to existing conditions, the increased demand would result in an additional four tanker truckers per day for Phase 1, six additional fuel tanker deliveries for Phase 2, and eight additional fuel tanker deliveries for Phase 3.

In addition to requiring more fuel, on the ADPM, Phases 2 and 3 would require modifications to the current operations. Currently, one tank of fuel is used as the supply for commercial aircraft refueling. The second tank is used to store fuel that is settling and will be ready for aircraft refueling the following day. The third tank is a "flex" tank. When the demand increases beyond the capacity of the single tank, the third tank would need to be used for storage to meet the peak demand.

Due to settling requirements and the capacity limitations of the existing tanks, it would not be possible to just have the additional trucks deliver during the night time hours. The maximum capability of the existing system is for 32 truck deliveries during the night time hours (between 11:30 PM and 5:30 AM), though currently on average only 28 trucks per day are delivered. As a result, four additional truck loads can be delivered during the night time hours but during the peak month when the demand is greatest, the remaining fuel deliveries would need to start earlier in the evening (i.e., before 11:30 PM). This would be a minor modification to the operations. Fuel delivery would still be required to adhere to all state and federal regulations, as well as the utilization of Best Management Practices, when handling hazardous materials.

Though the handling of hazardous materials is forecast to increase proportionately with the growth of enplaned passengers, Best Management Practices regarding handling and transporting hazardous materials would be utilized to ensure environmental safety.

The increased fueling activity would nominally increase the statistical likelihood of a spill. Minor fuel spills that occurred during these fueling activities would be contained and cleaned following existing procedures discussed above in Section 4.4.2. As discussed above, the risks associated with the fuel delivery and storage practices were previously evaluated and determined not to pose a significant impact. Based on the previous analysis and the limited number of additional trucks, impacts associated with the Proposed Project would be less than significant.

TABLE 4.4-1
AVERAGE DAY PEAK MONTH
FUEL CAPACITY AND TRUCKING REQUIREMENTS

Item	Existing 2013	Proposed Project	Alternative A	Alternative B	Alternative C	No Project Alternative
Phase 1						
MAP Level	9.17	10.8	10.8	10.8	16.9	10.8
ADPM Passengers[a]	27,451	32,742	32,742	32,742	51,258	32,742
Required Gallons of Fuel for Daily Working Capacity	203,000	242,000	242,000	242,000	379,000	242,000
Existing Daily Working Fuel Capacity (in gallons) [b]	254,000	254,000	254,000	254,000	254,000	254,000
Remaining Fuel Capacity at Days' End	51,000	12,000	12,000	12,000	**(125,000)**	12,000
Total Additional Truck Deliveries	0	4	4	4	20	4
Additional Truck Deliveries Outside of Current Delivery Hours (11:30 PM to 5:30 AM)[c]	0	0	0	0	16	0
Phase 2						
MAP Level	9.17	11.8	11.4	13.0	16.9	10.8
ADPM Passengers[a]	27,451	35,774	34,581	39,419	51,258	32,742
Required Gallons of Fuel for Daily Working Capacity	203,000	265,000	256,000	292,000	379,000	242,000
Existing Daily Working Fuel Capacity (in gallons) [b]	254,000	254,000	254,000	254,000	254,000	254,000
Remaining Fuel Capacity at Days' End	51,000	**(11,000)**	**(2,000)**	**(38,000)**	**(125,000)**	12,000
Total Additional Truck Deliveries		6	5	9	20	4
Additional Truck Deliveries Outside of Current Delivery Hours (11:30 PM to 5:30 AM)[c]	0	2	1	5	16	0
Phase 3						
MAP Level	9.17	12.5	12.8	15.0	16.9	10.8
ADPM Passengers[a]	27,451	37,903	38,806	45,484	51,258	32,742
Required Gallons of Fuel for Daily Working Capacity	203,000	280,000	287,000	337,000	379,000	242,000
Existing Daily Working Fuel Capacity (in gallons) [b]	254,000	254,000	254,000	254,000	254,000	254,000
Remaining Fuel Capacity at Days' End	51,000	**(26,000)**	**(33,000)**	**(83,000)**	**(125,000)**	12,000
Total Additional Truck Deliveries		8	9	15	20	4

TABLE 4.4-1
AVERAGE DAY PEAK MONTH
FUEL CAPACITY AND TRUCKING REQUIREMENTS

Item	Existing 2013	Proposed Project	Alternative A	Alternative B	Alternative C	No Project Alternative
Additional Truck Deliveries Outside of Current Delivery Hours (11:30 PM to 5:30 AM)[c]	0	4	5	11	16	0

MAP: million annual passengers; ADPM: Average Day Peak Month.

Boldface text denotes a capacity exceedance.

[a] The ADPM passengers levels are from the *Aviation Forecasts Technical Report* (Table 3.5) and are also provided in Section 3 of this EIR in Table 3-2.

[b] Assumes completion of the ongoing tank modifications.

[c] The maximum number of truck deliveries within the existing, night time delivery hours is 32 truck deliveries.

Source: *Aviation Forecasts Technical Report,* (Table 3-5), AECOM 2014a; *Capacity Analysis Technical Report*, (Table 4-1), AECOM 2014b.

The most probable accident scenario for the bulk fuel storage tanks involves minor leakage or release of jet fuel (e.g., from valves or seals) into the bermed retaining area that surrounds the ASTs, and does not represent a public or environmental health risk. The adopted safety programs currently in operation are able to reduce the potential health risks because the fuel spills are contained and cleaned up and do not enter the Airport drainage system.

Based on review of historical operations that reflect the Airport's stringent fuel safety protocols and associated low incidence of jet fuel releases, the continuation of these protocols in compliance with applicable regulations and permits, and the modeled analysis of potential impacts associated with increased flights as provided for in EIR 582, there is substantial evidence that the increase in ADDs under the Proposed Project would not create a significant hazard to the public or the environment related to increased fueling activity. The Proposed Project would result in a less than significant impact and no mitigation is required.

Impact Conclusion: *The Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. There would be a less than significant impact.*

Alternative A

As shown in Table 4.4-1, Phase 1 of Alternative A would result in an increased demand of approximately 39,000 gallons of fuel daily compared to existing conditions. In Phase 2, the demand would increase by an additional 14,000 gallons per day (or 53,000 more gallons per day than the existing ADPM). Phase 3 would require a total of 287,000 gallons of fuel per day, which is 84,000 gallons more than the existing usage on an ADPM. When compared to existing conditions, the increased demand would result in an additional four tanker truckers per day for Phase 1, five additional fuel tanker deliveries for Phase 2, and nine additional fuel tanker deliveries for Phase 3.

As with the Proposed Project, on the ADPM, Phases 2 and 3 would require modifications to the current operations. Fuel deliveries would need to start earlier in the evening (i.e., before 11:30 PM). Fuel delivery would still be required to adhere to all state and federal regulations, as well as the utilization of Best Management Practices, when handling hazardous materials. Though the handling of hazardous waste is forecast to increase proportionately with the growth of enplaned passengers, Best Management Practices regarding handling and transporting hazardous materials would be utilized to ensure environmental safety.

As discussed for the Proposed Project, based on review of historical operations that reflect the Airport's stringent fuel safety protocols, the continuation of these protocols in compliance with applicable regulations and permits, and the modeled analysis of potential impacts associated with increased flights as provided for in EIR 582, there is substantial evidence that the increase in ADDs under Alternative A would not create a significant hazard to the public or the environment related to increased fueling activity. Alternative A would result in a less than significant impact and no mitigation is required.

Impact Conclusion: *Alternative A would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. There would be a less than significant impact.*

Alternative B

As shown in Table 4.4-1, Phase 1 of Alternative B would result in an increased demand of approximately 39,000 gallons of fuel daily compared to existing conditions. In Phase 2, the demand would increase by an additional 50,000 gallons per day (or 89,000 more gallons per day than the existing ADPM). Phase 3 would require a total of 337,000 gallons of fuel per day, which is 134,000 gallons more than the existing usage on an ADPM. When compared to existing conditions, the increased demand would result in an additional 4 tanker truckers per day for Phase 1, 9 additional fuel tanker deliveries for Phase 2, and 14 additional fuel tanker deliveries for Phase 3.

As with the Proposed Project, on the ADPM, Phases 2 and 3 would require modifications to the current operations. Fuel deliveries would need to start earlier than current practices; given the number of additional tanker truckers that would be required, it is anticipated that fueling would need to commence during daytime hours (i.e., afternoon hours). Fuel delivery would still be required to adhere to all state and federal regulations and utilization of Best Management Practice; however, daytime fuel delivery operations can present several logistical challenges at the Airport, at the refinery, and transportation between the two. The existing fuel farm has physical limitations, with a maximum of four fuel trucks offloading to the fuel farm at any one time. There is also limited space adjacent to the facility for tankers to queue. Though this would not result in a safety risk, with Alternative B, there would need to be established refueling schedules during the day in order to avoid conflict with other refinery customers and delivery schedules.

As discussed for the Proposed Project, based on review of historical operations that reflect the Airport's stringent fuel safety protocols, the continuation of these protocols in compliance with applicable regulations and permits, and the modeled analysis of potential impacts associated

with increased flights as provided for in EIR 582, there is substantial evidence that the increase in ADDs under Alternative B would not create a significant hazard to the public or the environment related to increased fueling activity. Alternative B would result in a less than significant impact and no mitigation is required.

Impact Conclusion: *Alternative B would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. There would be a less than significant impact.*

Alternative C

As shown in Table 4.4-1, Alternative C (all phases) would result in an increased demand of approximately 176,000 gallons of fuel daily compared to existing conditions on an ADPM. When compared to existing conditions, the increased demand would result in an additional 20 tanker truckers per day. Given the number of additional tanker truckers and the limitations of the existing facilities, it is anticipated that near continuous fuel delivery throughout the day would be required. The continuous fuel delivery would present several logistical challenges at the Airport. However, fuel delivery would still be required to adhere to all state and federal regulations and utilization of BMPs and no safety risks are anticipated. As with Alternative B, there would need to be an established refueling schedules during the day in order to avoid conflict at the Airport and with other refinery customers.

The risk of upset analysis evaluated in EIR 582 considered a maximum of 181 ADDs, which is 47 fewer than the maximum of 228 ADDs under this alternative. However, the analysis showed a limited increase in risk with increasing ADDs for the scenarios/alternatives assessed in EIR 582. As such, it can be concluded that the hazards associated with up to 228 ADDs would remain less than significant. Although there would be a statistically higher risk of release than with a lower number of ADDs, this analysis is focused on fuel spills of a severity that constitute an acute or catastrophic public health and/or environmental hazard, which has never occurred at JWA.

As discussed for the Proposed Project, based on review of historical operations that reflect the Airport's stringent fuel safety protocols, the continuation of these protocols in compliance with applicable regulations and permits, and the modeled analysis of potential impacts associated with increased flights as provided for in EIR 582, there is substantial evidence that the increase in ADDs under Alternative C would not create a significant hazard to the public or the environment related to increased fueling activity. Alternative C would result in a less than significant impact and no mitigation is required.

Impact Conclusion: *Alternative C would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. There would be a less than significant impact.*

No Project Alternative

As shown in Table 4.4-1, the No Project Alternative (all phases) would result in an increased demand of approximately 39,000 gallons of fuel daily compared to existing conditions. When

compared to existing conditions, the increased demand would result in an additional four tanker truckers per day. This can be accommodated within the existing operational parameters (deliveries during night time hours).

JWA would continue to manage jet fuel transport, storage, and handling in full compliance with applicable requirements, and JWA would maintain all necessary permits such that there is no impact related to hazardous materials. No mitigation is required.

While there would be no direct impact related to hazardous materials associated with the No Project Alternative, this alternative has the potential (subject to additional discretionary action by the County and preparation of CEQA documentation) to indirectly result in increased ADDs because the Settlement Agreement would no longer be binding. The Board of Supervisors could decide to approve a new Master Plan, which would allow Airport operations to increase. However, as discussed for the Proposed Project and the other alternatives, if Airport operations are expanded in the absence of the Settlement Agreement, it is anticipated that continued management of jet fuel transport, storage, and handling would be in full compliance with applicable requirements and maintenance of all necessary permits. Therefore, an increase in Airport operations under the No Project Alternative would not create a significant hazard to the public or the environment. The No Project Alternative would result in a less than significant impact and no mitigation is required.

Impact Conclusion: *The No Project Alternative would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. There would be a less than significant impact.*

Threshold 4.4-3 Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Proposed Project and All Alternatives

At its closest point, Mariner's Christian School, located at Red Hill Avenue and Fisher Avenue, is approximately ¼-mile west of the Airport and 0.6 miles from the commercial fuel storage tanks. As discussed above, for the Proposed Project and Alternatives A and B, implementation of Phase 3 on the ADPM would represent a worst-case fuel demand and all phases of Alternative C would have the same demand. The maximum capability of the existing system is for 32 truck deliveries during the night time hours (between 11:30 PM and 5:30 AM). This would fill one of the three fuel storage tanks in the commercial fuel farm. To serve the additional fuel requirements, increased daily truck deliveries would be needed to support the increased operational levels. The fuel demand for each alternative is provided in Table 4.4-1. The total number of fuel truck deliveries for the ADPM would be:

- Proposed Project—A total of 36 trucks (4 trucks beyond the capacity for night time delivery);
- Alternative A—A total of 37 trucks (5 trucks beyond the capacity for night time delivery);
- Alternative B—A total of 43 trucks (11 trucks beyond the capacity for night time delivery);

- Alternative C—A total of 48 trucks (16 trucks beyond the capacity for night time delivery); and
- No Project Alternative—A total of 32 trucks (all within the capacity for night time delivery.

For operational purposes, the fuel deliveries that exceed the night time capacity (32 trucks) would need to be delivered when the first fuel storage tank has been emptied. As previously indicated, during the peak month when the demand is greatest, additional truck deliveries would need to started in the evening hours for the Proposed Project and Alternative A (i.e., before 11:30 PM), late afternoon for Alternative B, and near continuous for Alternative C (AECOM 2014b). For the Proposed Project, Alternative A, and the No Project Alternative, fuel would continue to be delivered outside of extended school hours (assumed to generally be from 7:00 AM to 6:00 PM, including after-school activities).

To access the fuel farm, the fuel trucks either exit I-405 at Bristol Street or SR-55 at the Baker Street exit and turn south onto Paularino Avenue. The trucks then proceed through the JWA security gate (where Paularino Avenue ends) and turn left onto Perimeter Road. The trucks then pass the ARFF station and enter the tank farm by making a right turn into the fuel unloading bays. Once the fuel is unloaded, the trucks circle around the fuel tanks and return the same way they arrived via Perimeter Road and Paularino Avenue. As a result, the closest the fuel trucks would come to the Mariner's Christian School facilities is 0.27 miles (as measured from the northern edge of the school property to Paularino Avenue). Therefore, the distance exceeds the ¼ mile identified in the threshold of significance. Therefore, the Proposed Project and the alternatives would result in a less than significant impact related to handling of hazardous materials within one-quarter mile of a school, and no mitigation is required.

Impact Conclusion: *The Proposed Project and all alternatives would have a less than significant impact related to handling of hazardous materials within one-quarter mile of a school. The quantitative risk modeling of increased fueling operations determined this activity would not create a significant hazard to the public, which includes schools and other sensitive receptors, or the environment.*

Threshold 4.4-4 Would the project 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?

Proposed Project and All Alternatives

In Orange County, there are 16 sites on the Hazardous Waste and Substance Site List on the Cortese List (DTSC 2014). The closest site is the Costa Mesa Air National Guard facility in Costa Mesa, which is approximately one mile southwest of the Airport. The Project does not involve any construction activity and would not expose the public to hazardous materials associated with the sites on the Cortese List.

Impact Conclusion: *The Airport site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, neither the Proposed Project nor any of the alternatives would create a significant*

hazard to the public or the environment attributable to undertaking activity on such a listed site. There would be no impact.

Threshold 4.4-5 Would the project be located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport, resulting in a safety hazard for people residing or working in the project area?

Proposed Project and All Alternatives

The assessment to determine if the Project or the alternatives would result in a safety hazard for the people residing or working in the area considers if the Project would necessitate modification to the provisions of the AELUP that have been developed to safeguard the general welfare of the inhabitants of the surrounding areas. The AELUP identifies the runway protection zones/accident potential zones, and Height Restriction Zone and associated navigable airspace, which have been established to minimize intrusion into navigable airspace. Protection of the airspace is important to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents and that no urban features are introduced that would interfere with Airport operations. Neither the Proposed Project nor any of the alternatives would conflict with the provisions of the AELUP. No modifications are proposed to on-site or surrounding land uses as part of the Proposed Project or any of the alternatives; therefore, the Project would not introduce obstructions or other urban encroachment that would affect operations at the Airport with the resulting safety hazard for the people residing or working in the area.

Though the number of flights and passengers served would increase compared to existing conditions, the Proposed Project and all the alternatives assume the operational characteristics of the Airport would remain unchanged. As discussed in Section 3, Project Description, the analysis assumes the continuation of the same fleet mix and take-off/landing patterns. Since the operational characteristics would not change, there would not be a change to the safety compatibility issues addressed in the AELUP. Neither the Proposed Project nor the alternatives would necessitate an amendment to the runway protection zones/accident potential zones, or the Height Restriction Zone and associated navigable airspace. The Project would not directly or indirectly result in any modifications to off-site uses that would result in conflicts with provisions of the AELUP.

Impact Conclusion: *While the Airport site is located within an existing airport land use plan, neither the Proposed Project nor any of the alternatives would result in safety hazards for people residing or working in the project area. Impacts would be less than significant.*

4.4.6 MITIGATION PROGRAM

Compliance with applicable federal, State, and local requirements and the fueling safety programs currently in place at JWA would continue to be applicable as the Project moves forward. As a result, no significant hazardous materials impacts would result from implementation of the Proposed Project and alternatives. Therefore, no additional hazardous materials mitigation measures have been identified.

4.4.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Due to the absence of significant impacts, no mitigation measures are necessary. As a result, there would be no significant unavoidable impacts associated with the Proposed Project and alternatives. A summary of the level of significance for each threshold is provided in Table 4.4-2.

TABLE 4.4-2
SUMMARY OF HAZARDS AND HAZARDOUS MATERIALS IMPACTS

Threshold	Proposed Project	Alternative A	Alternative B	Alternative C	No Project Alternative
Thresholds 4.4-1 and 4.4-2	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
Threshold 4.4-3	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
Threshold 4.4-4	No impact	No impact	No impact	No impact	No impact
Threshold 4.4-5	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact

4.4.8 REFERENCES

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